

# Home Electrification 101

What is Home (Beneficial) Electrification and why does it matter?

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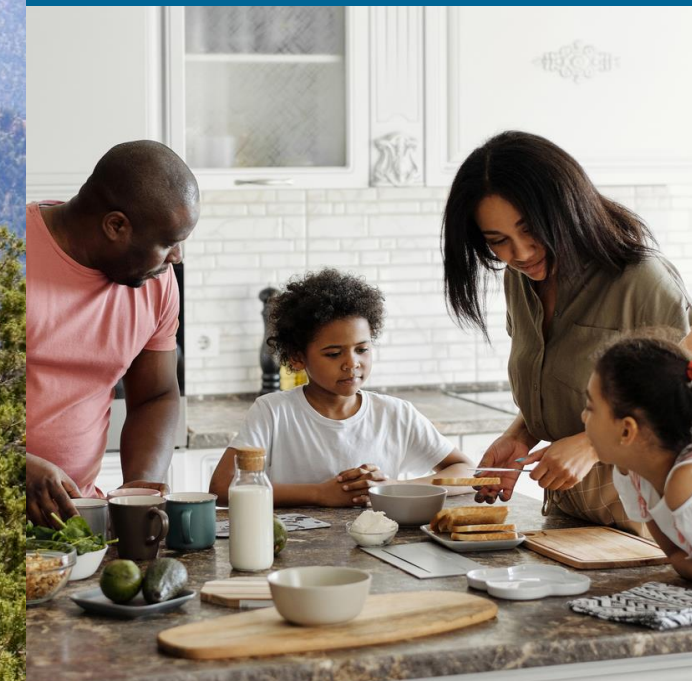


# Tackling Climate Change



# Tackling Climate Change

- It's now
- It's here
- It's concrete
- It's relevant to each person in some way
- We can do something about it.



# Home Electrification 101

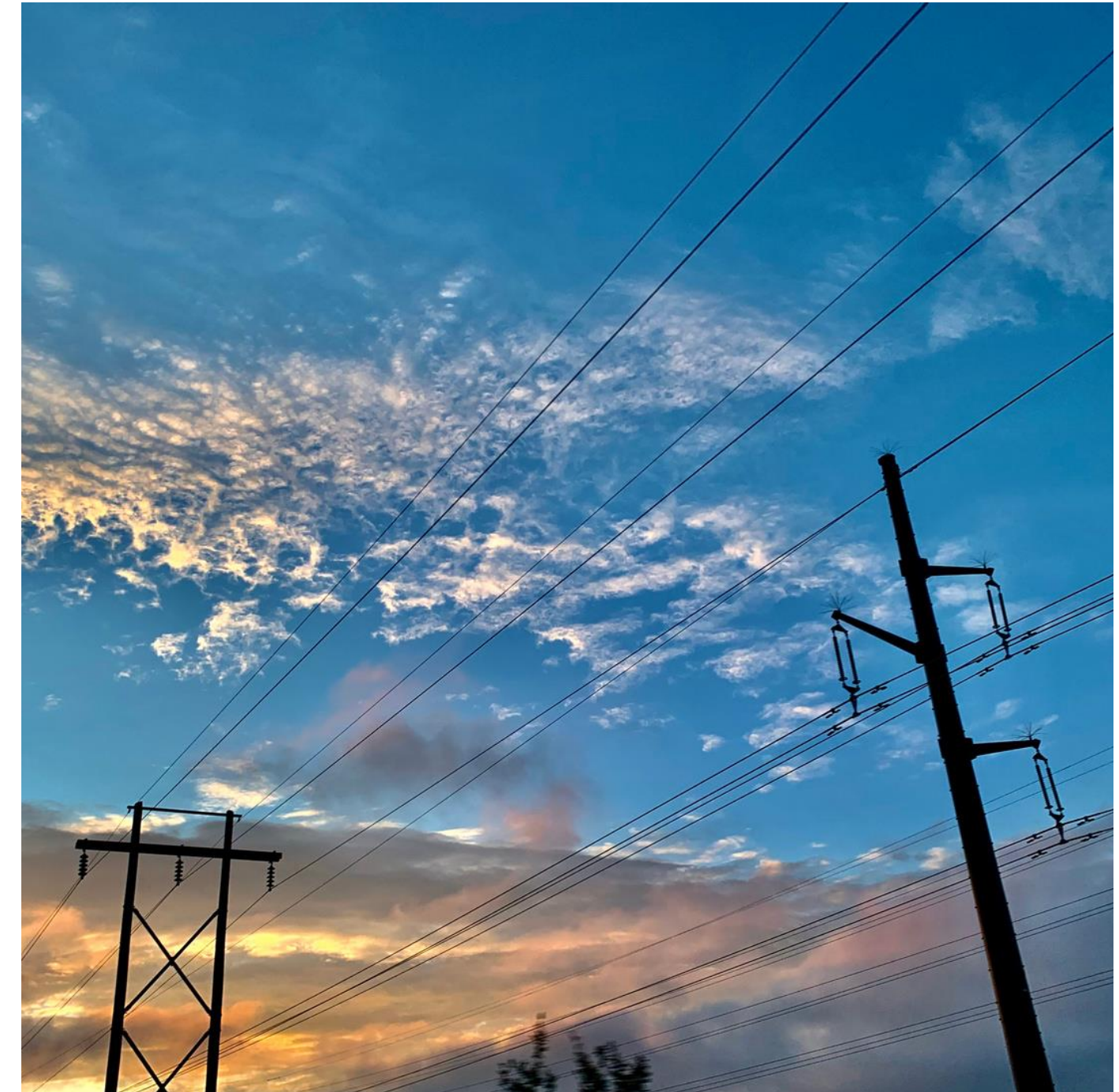
- Introduction
- Home Electrification 101
- Efficient Electric Appliances
- Putting HE to work!



# Home Electrification 101

Home Electrification achieves one or more of three outcomes, without adversely affecting any of them:

1. Saves customers money from lower energy and fuel bills.
2. Improves public health and air quality from reduced air pollution.
3. Enhances power grid operations and reduces associated costs putting downward pressure on utility rates.



# Home Electrification 101

1. Grid is moving to a carbon-neutral electricity mix.
2. Home Electrification facilitates the use of more of that clean electricity.
3. This results in beneficial outcomes for all.
  - Health outcomes improve
  - Less GHG emitted
  - Unlocks value for customers
  - Opens new business ventures.



An aerial photograph of a city, likely Denver, Colorado, taken during the golden hour of sunset. The city is densely packed with buildings, and the Colorado State Capitol building is prominent in the center-right. In the background, a range of mountains with snow-capped peaks stretches across the horizon under a clear blue sky. The foreground shows a residential area with houses and trees. A blue semi-transparent box is overlaid on the bottom left of the image, containing white text.

# Why does it matter?

Outdoor Air Quality: Around 40% of the United States carbon emissions come from our homes and the vehicles we drive.

Source: "Electrify Everything in Your Home," by Joel Rosenberg (pg.2)

# Why does it matter?

Indoor Air Quality: Natural gas combustion in the home has significant negative health implications and impacts to indoor air quality.



Gas Stove



Furnace



Gas Dryer



# Efficient Electric Appliances - Reduce Energy Costs, Save \$

- 1.** Water Heating
- 2.** Clothes Drying
- 3.** Stovetop and Oven
- 4.** Space Heating
- 5.** Vehicle Charging



# Heat Pump Water Heater

## Checklist:

- Upfront Costs\*
  - \$1,500 DIY/\$4,000 inst.
- Annual Operating Savings
  - \$
- Easy or Hard
  - Easy
- % of Home Emissions
  - 10%
- Improves Air Quality
  - In & Out



# Electric Clothes Dryer

## Checklist:

- Upfront Costs\*
  - \$1,000-\$2,000
- Annual Operating Savings
  - \$\$
- Easy or Hard
  - Easy
- % of Home Emissions
  - 3%
- Improves Air Quality
  - In & Out



# Electric Cooking

- Buy a \$50+ portable induction burner now, and plan to have a 240V/40A outlet installed before you replace your stove

## Checklist:

- Upfront Costs\*
  - \$1,500 DIY/\$4,000 inst.
- Annual Operating Savings
  - \$
- Easy or Hard
  - Easy
- % of Home Emissions
  - 10%
- Improves Air Quality
  - In & Out



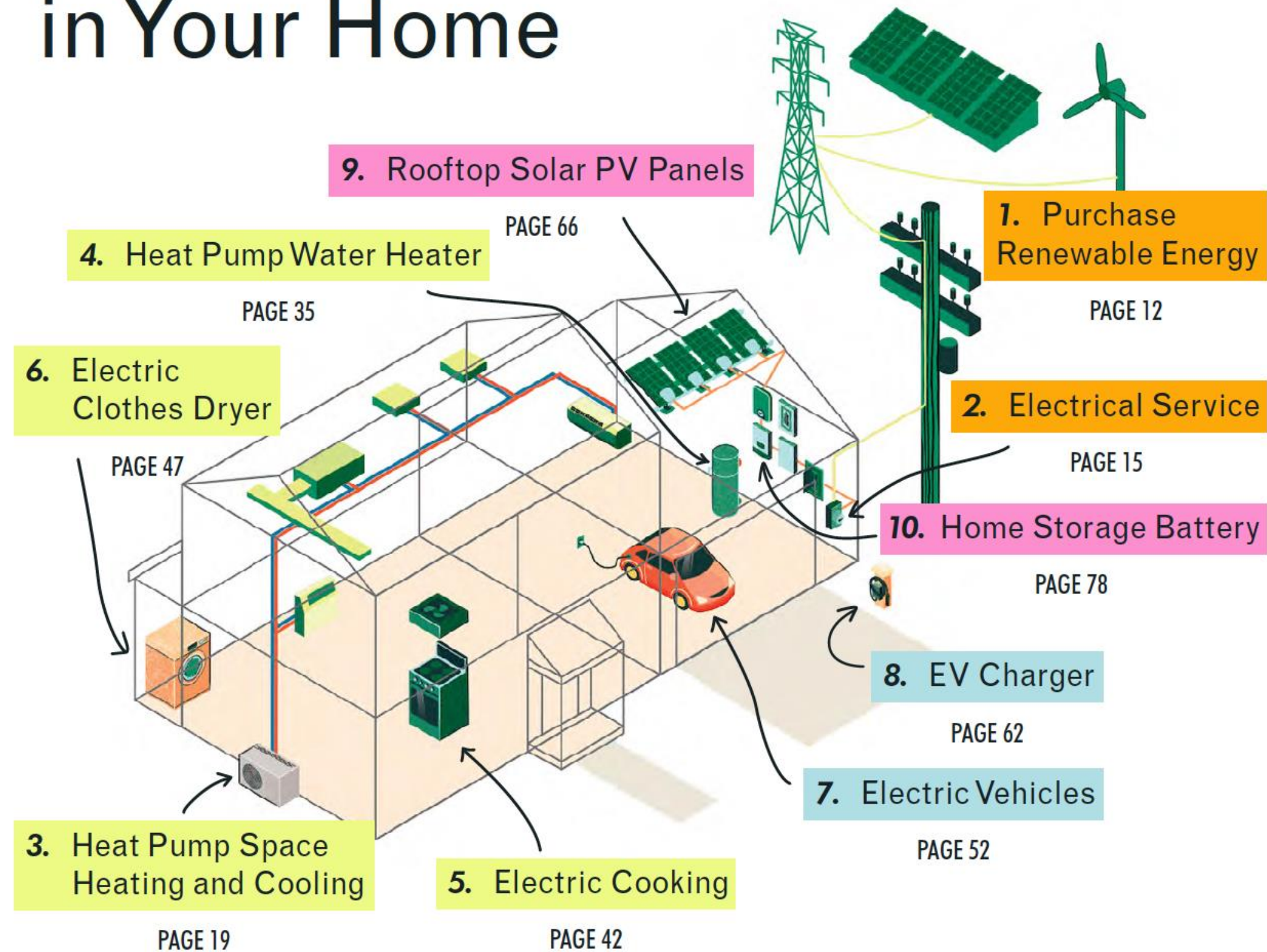
# Heat Pump Space Heating and Cooling

## Checklist:

- Upfront Costs\*
  - \$1,000 DIY/\$20,000+ inst.
- Annual Operating Savings
  - \$\$\$
- Easy or Hard
  - Hard
- % of Home Emissions
  - 25%
- Improves Air Quality
  - In & Out



# Where to Electrify Everything in Your Home



"Biggest **impact you can make** is by electrifying everything in your home?"

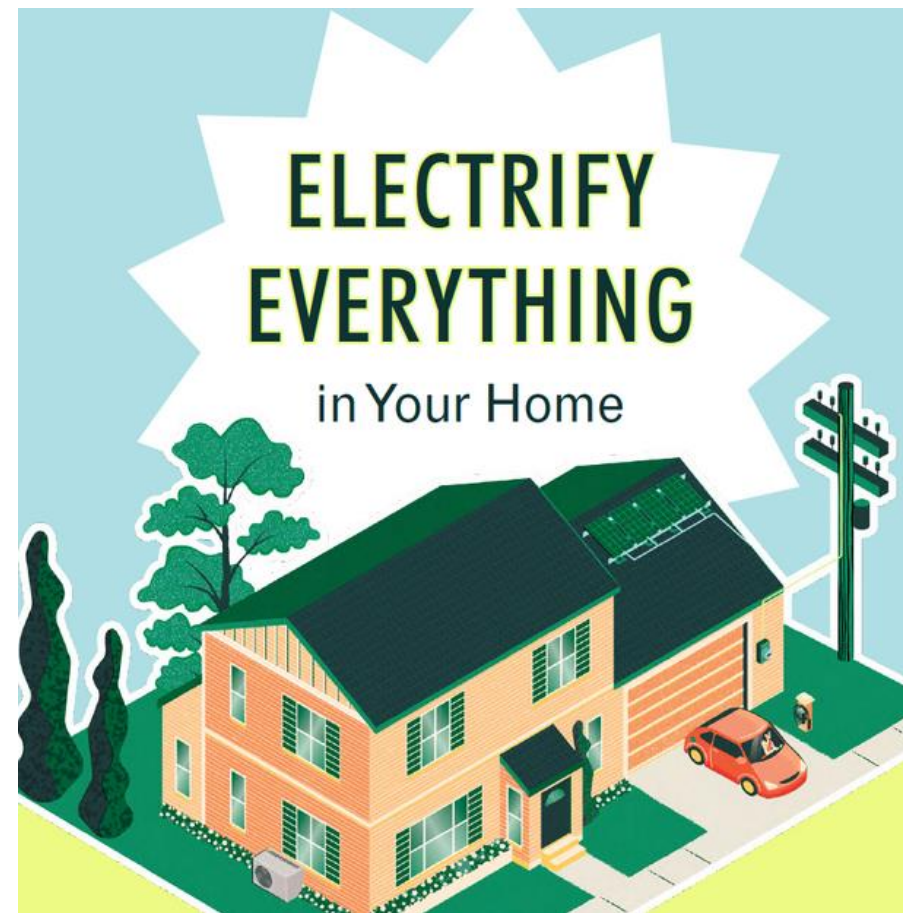
Replace any appliances currently burning fossil fuels and install new efficient electric machines."

*\*via "Electrify Everything in Your Home," by Joel Rosenberg (pg.3)*

# Easy as 1-2-3



Efficiency First!



Adopt Electric Appliances



Use Renewable Energy

# Equitable Electrification

- What do we mean when we say equity?  
Equal access, eliminate barriers and redistribute resources.
- What do we mean about electrification?  
Updating your appliances and transportation to be electric.
- How can ensure that all residents in Salt Lake are provided access to increased electrification in their communities? It takes a village.



EQUITY



# Challenges of Home Electrification

- Access – Large upfront costs prohibit many from taking action.
- Affordability – In some SLC neighborhoods, as much as 1/3 of residents are at risk of displacement. How can we increase access without contributing to displacement and housing affordability?
- Awareness – Many people are unaware of where these conversations take place. In addition, electrification is new to many people. We need to increase awareness of the forums where these discussions take place and the technology enabling the transition.



# Home Electrification Successes

## **Access to electric transportation:**

- Electric rideshare service "raiteros" - using EVs to get to work.
- Subsidized EV car sharing service – car share service with lower rates for LMI individuals.
- Rocky Mountain Power – Electric Vehicle Infrastructure Program: Make-ready funds.

## **Access to funding for cost-saving appliances:**

- Tariff on-bill financing – Use your utility bill as a line of credit.
- Deferred payment loan financing program – use your mortgage as an interest-free loan.

## **Access to education and new careers:**

Building electrification requires more tradespeople who are trained to install heat pumps and weatherize buildings. In addition, transportation electrification is requiring a new generation of mechanics.

- Weber State University has an EV Mechanic boot camp.
- APS, a local HVAC distributor, conducts a Heat Pump Certification course.



# Contact Information

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