

Providence Whole House + Electrification Pilot Program

Rhode Island Energy Efficiency Council

**June 18, 2026
3:00 pm**

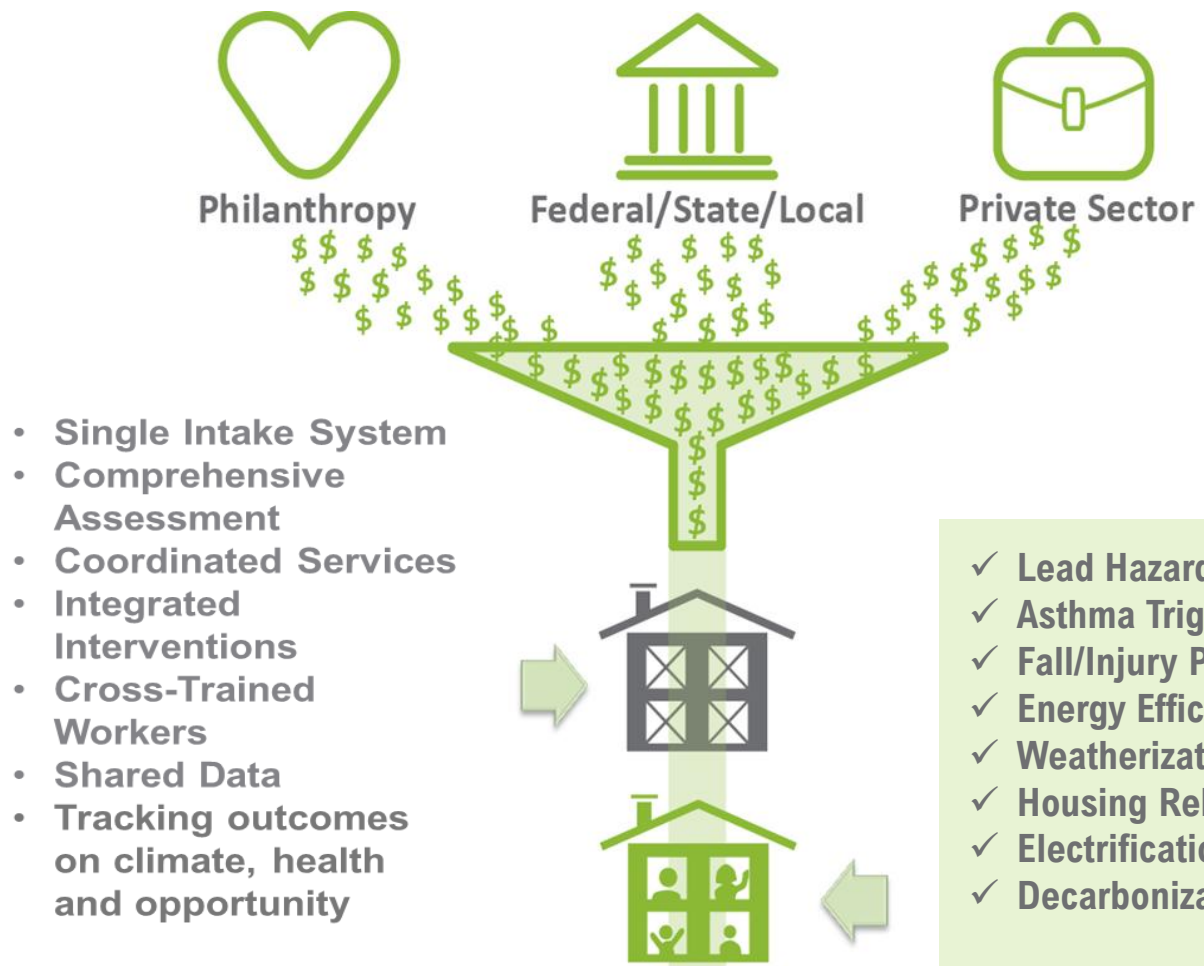
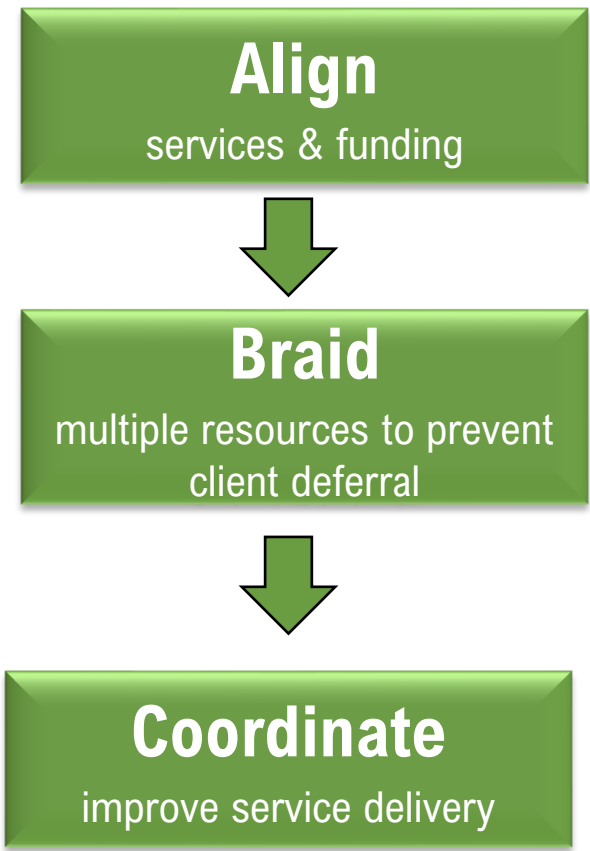
Mission

GHHI addresses the social determinants of health through the creation of healthy, safe and energy efficient homes. By delivering a standard of excellence in its work, GHHI aims to eradicate the negative health impacts of unhealthy housing for children, seniors and families to ensure better health, economic and social outcomes for low-income communities.



GHHI Model: Aligning Resources for Holistic Housing Retrofits in Occupied Homes

- Adoption of Whole House Approach
- Supports housing and community stability, increased housing values, wealth transfer



Elements of a Healthy Home

1. Keep it dry
2. Keep it well-ventilated
3. Keep it safe
4. Keep it contaminant free
5. Keep it pest free
6. Keep it clean
7. Keep it well maintained
- 8. Make it energy efficient**
- 9. Make it all-electric**
- 10. Make it decarbonized**

Pilot Overview and Progress to Date

Our Challenge

1. In Providence, CAPP defers approximately 120 units per year due to health and safety barriers that prevent weatherization.
2. Statewide just over 40% of income eligible units are deferred due to pre-weatherization barriers.
3. As a result, many households that could benefit most from weatherization and energy efficiency investments are unable to access needed services.
4. RI EWG has flagged lack of Pre-Weatherization Barrier remediation as a major equity issue.

Providence Whole House + Electrification Pilot Overview

- Target Population: Low-income Providence households deferred from CAPP's Weatherization Program due to Health and Safety Hazards.
- Unit Production Objectives:
 - 45 units remediated and completing weatherization
 - Of the 45 units, at least 6 will receive Electrification/Electrification Readiness measures.
- Funding Sources: Regional Greenhouse Gas Initiative & HUD Healthy Homes Production Grant
- Key Milestones
 - Dec. 2025 - Apr. 2027 Unit Production
 - 45 units remediated and completing Weatherization at CAPP.
 - Subset of 6 units receiving electrification measures
 - Dec. 2027 - Evaluation Completed

RGGI Eligibility & Services

MANDATORY PROGRAM ELIGIBILITY CRITERIA:

- Must have been deferred from Wx program and must agree to return to Wx Program after deferral issues have been resolved.
- Must sign RI Energy Release granting access to utility records.
- Property located in the City of Providence.
- Homeowner or tenant occupant meets the HUD income requirements of below 80% AMI.



ELIGIBLE PROPERTIES WILL:

- Receive free environmental home assessments.
- Receive free healthy homes hazard reduction interventions to address health and safety barriers.
- Receive in-home resident education.
- Receive additional housing, asthma, and social support services as needed.
- Be referred back to CAPP for Weatherization & EE Services.
- Be evaluated for potential electrification (at least 6 units).
- Participate in ongoing data collection to support program evaluation.

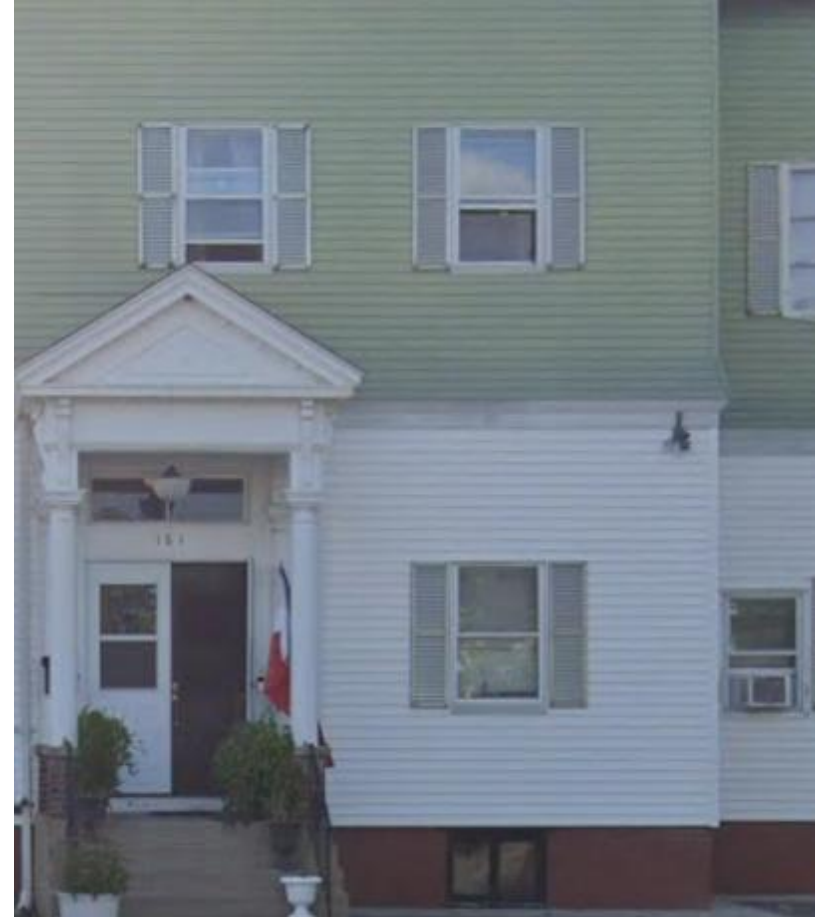
Health and Safety Measures Include:

- Mold
- Asbestos
- Radon
- Electrical Hazards, including and especially knob and tube wiring.
- Plumbing/moisture issues
- Safety Hazards
- Household Injury Hazards
- Pest Infestation
- Lead Based Paint Hazards
- Roofing Repair or Replacement, if necessary
- Structural Defects
- Foundation Disrepair and Water Intrusion
- Excessive Debris or Clutter
- Other Conditions Deemed to be Hazardous or Preventing Wx or EE Measures to be Conducted.



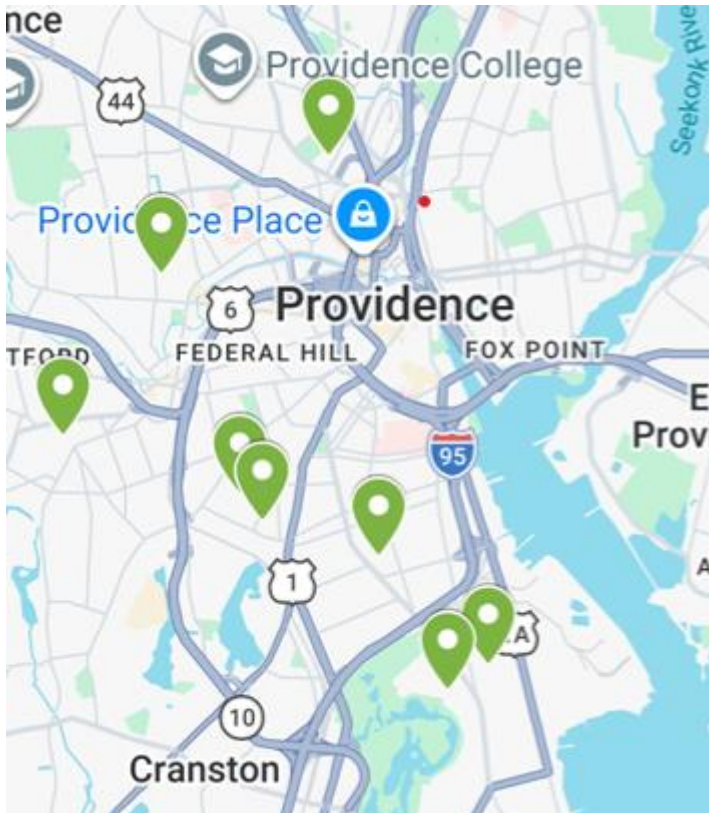
Additional RGGI Funded Wx Measures in Units Include:

- Insulation
- Duct Sealing In Conditioned Spaces
- Windows
- Appliances
- Stoves
- Health and Safety Related Appliance Replacements
- Energy Recovery Ventilators
- Panel Upgrades
- Window Heat Pump Units
- Other Allowable EE measures that exceed WAP cost caps but could result in more complete weatherization.



Current Program Status

- CAPP 250+ units referred going back to beginning of 2024.
- 51 units are currently in pipeline for RGGI investment.



- 34 RGGI eligible units underway or completed to date:
 - Total Health & Safety Completed: 26 Units
 - 4 three family
 - 2 two family
 - 10 single family
 - Total Units Underway (Under Contract, In Progress): 8 Units
- For 26 Completed Units (Health & Safety only)
 - Total Spend: \$492,452 (HUD & RGGI)
 - Average Total Spend: \$18,940.46
 - Average RGGI Spend: \$11,537.26
 - Average HUD Spend: \$7,403.20
- RGGI units sent back to CAPP to date for Wx: 26
- RGGI units completed Wx: 2 (4 units currently undergoing work)
- First set of releases have been sent back to RI Energy to secure energy/cost utilization data.

Pre-Weatherization Barriers & Average Cost Per Measure

	Knob & Tube Wiring	Mold	Asbestos	Roof Leak / Water Intrusion	Oil Tank Leak	Excessive Clutter / Debris
# of Units Addressed	23	3	2	2	3	1
Average Cost Per Measure	\$17,472	\$4,300	\$3,350	\$17,967	\$3,383	\$500



Funding & Scope of Work

Unit Background: An elderly homeowner of a 2 - family home was referred to GHHI by CAPP after a severely leaking oil tank left her without heat.

Key Assessment Findings:

- Damaged oil tank
- No heat
- Knob & tube wiring throughout the home
- Poor ventilation

Status: Through GHHI's partnership with CAPP, the oil tank was replaced, and essential health and safety hazards were resolved. With those barriers removed, CAPP was able to complete weatherization and EE measures.

Wx Context: The project achieved a Savings-to-Investment Ratio (SIR) of 7.17, meaning for every weatherization dollar invested, the measures are projected to return over seven dollars in energy savings. That translates to 97 MMBtu in annual savings and 2,607 MMBtu over the lifetime of the measures.





Funding & Scope of Work

Total Cost
\$22,964



- Green & Healthy Homes Initiative – Rhode Island
 - HUD: \$4215
 - RGGI: \$4050
- CAPP
 - Wx: \$10424
 - AMP: \$4275



Healthy Home & Safety Interventions

- Oil Tank Removal & Replacement
- ASHRAE Exhaust Fan Installation

Weatherization/EE

- Attic Air Sealing & Insulation
- CO Smoke Combo Alarm
- Door Sweep & Weatherstrip
- Electrical Work/K&T
- Gable Vent & Gutter Extension
- Retrofit Access Hatch Seal
- Seal Chimney Chase
- Sill & Wall Insulation
- Updated Freezer, Refrigerator, Washer

Electrification

- Electrification and electrification-readiness measures coming soon!

Electrification

Electrification Overview: Principles

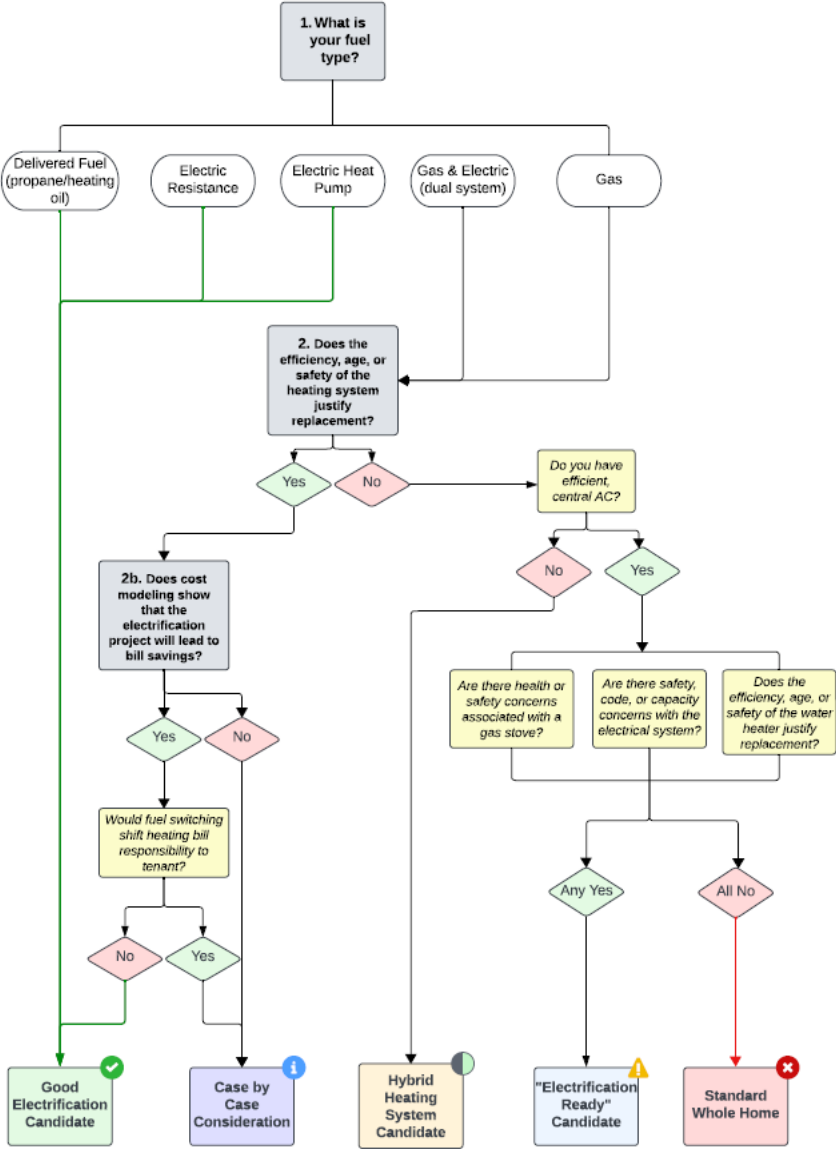
1. Do not add to household energy costs
2. Create long-term and short-term benefits for residents
3. Prioritize households that will see health benefits from air quality improvements
4. Collect diverse data metrics and build capacity for program scale
5. Empower residents and improve overall living conditions in the home

Electrification Measures Will Include:

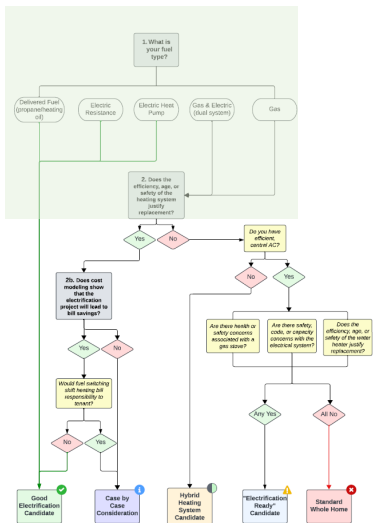
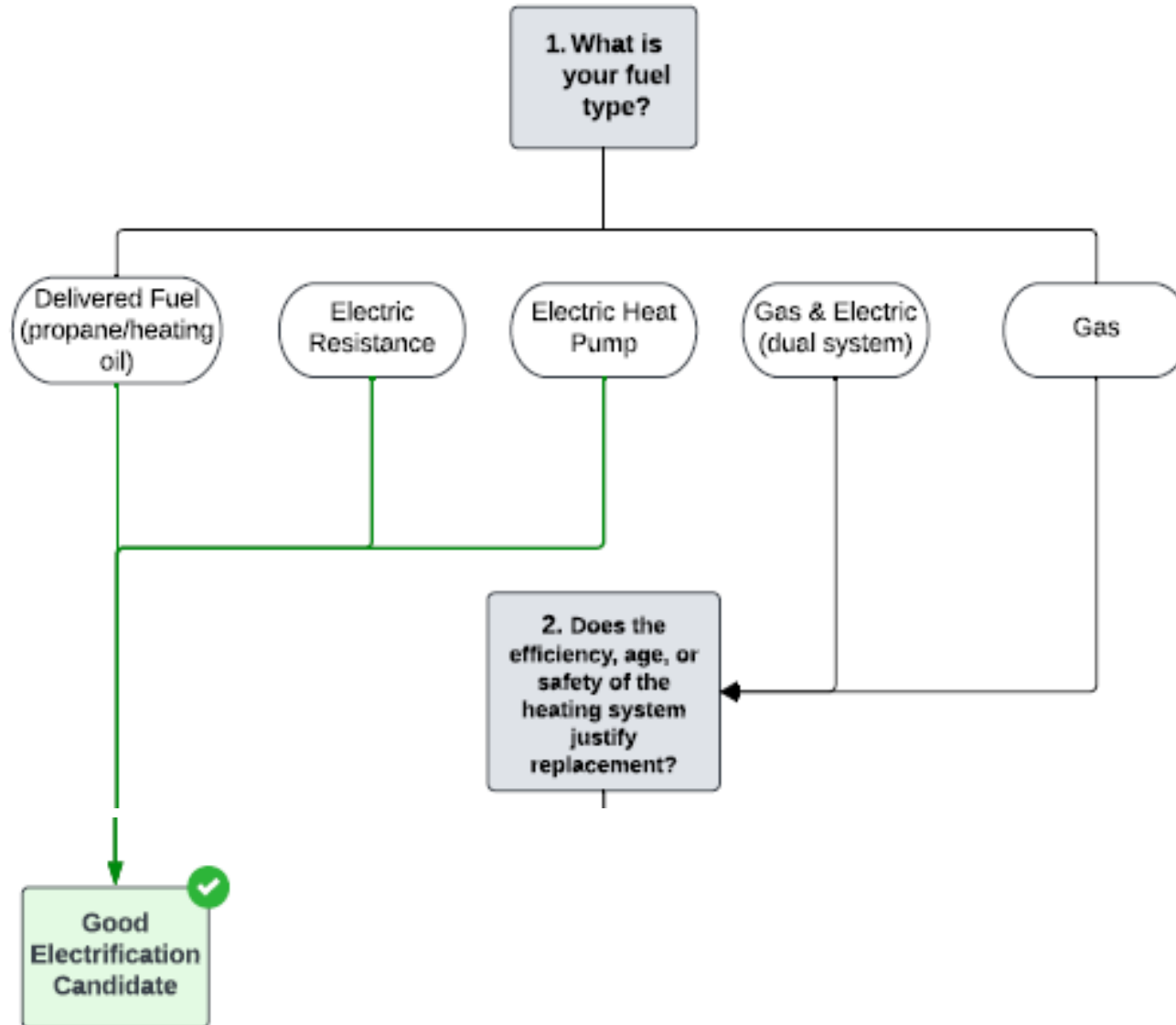
- HVAC System Replacement
- Water Heater Replacement
- Stove Replacement
- Dryer Replacement
- Electrical Upgrades
- Old System Removal and Disconnection.



Electrification Overview: Decision Tree



Electrification Overview: Decision Tree



Moving to implementation this Summer

- We have identified 8 potential WH+E units for future electrification utilizing Fuel Oil.
- Meeting with CAPP to leverage HEAR Incentives into Electrification (and other WH) Units.
- Working with RIOER and Abode Energy to coordinate CHRI funded Heat Pump installation in Electrification units alongside HUD, RGGI, Wx, AMP, and HEAR resources.

Data Collection and Evaluation



Program Evaluation Framework



PRE/POST DESIGN AT HOUSEHOLD
LEVEL



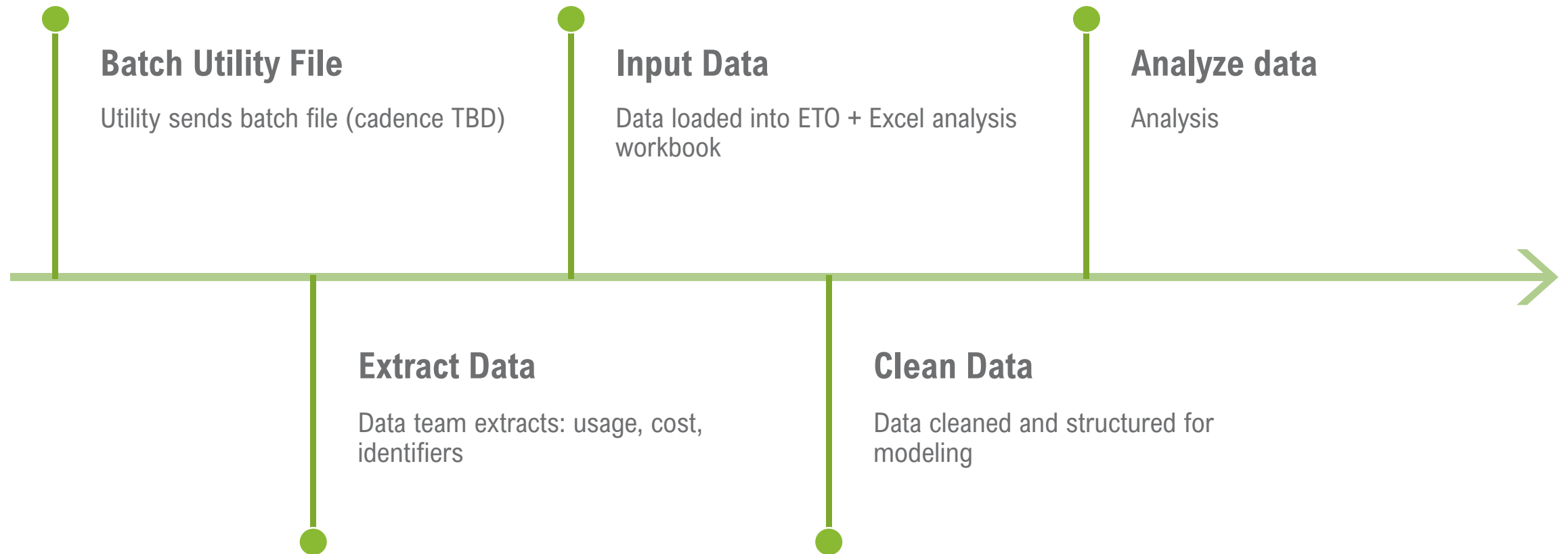
MIXED DATA SOURCES: UTILITY BILLING
+ CLIENT NON-ENERGY BENEFIT (NEB)
DATA



LONGITUDINAL TRACKING ACROSS
MULTIPLE TIMEPOINTS

Energy Data Inputs

- Batch utility billing data from Rhode Island Energy
- Monthly kWh/therms and cost data includes service period dates for alignment pre-and-post installation



Non-Energy Benefits (NEBS) Design

- **Captured via standardized ETO touchpoint**
- **Structured survey fields within ETO**
- **Surveys linked to unique participant ID**

Cadence of collection: Project start, 3, 6, 12-month follow-ups

Domains

- Thermal comfort
- Respiratory health
- Injury prevention
- Financial stress
- Housing stability

Comments & Discussion