
Climate Crisis Working Group
Meeting #3

Agenda

Wednesday, October 13th

- Meeting 2 Summary (5 minutes)
- Review agenda and next meetings (5-10 minutes)
- Review of current City plans and actions (10 minutes)
- Ideas for action steps - successes and failure (10-15 minutes)
- Preliminary identification of barriers (10 minutes)
- Discuss example of climate successes and failures (60 minutes)
    - Why did the initiative succeed/fail?
    - Are the barriers the right ones, and can steps to overcome them be identified?
- What are we missing that's important? (5-10 minutes)
- Snapshot of next meeting's goals and homework

Meeting 2 Summary

Discussed/identified Key Actors

- **City of Cambridge: City Manager & Staff and City Council**
- **Higher Education: Harvard, MIT, Lesley**
- **Developers, architects, other construction industry players [Unions, firms]**
- **Property owners: Large commercial, Large residential, Small residential**
- **Residents - renters and owners**

Discussed how to best identify actions to take

- **Work on understanding barriers so progress can be made**
- **Will build on existing work**
- **Will add to existing lists if implementable meaningful action**

Meeting Goal: Review Refine Work Plan

- **Today: agenda next page**
  - **Meeting #4 :** Deeper dive/discussion on how to make progress on a limited number of issues to tackle. [BEUDO, Electrification, so far.]
  - **Meeting 5:** Finish discussion of a few big actions AND specify quick actions/low-hanging fruit. [brainstorm ideas from no gas leaf blowers to all EV city cars to no street cleaning warning truck]
  - **Meeting #6:** Review/refine action plan - by actor with clear next steps

Comments, concerns, or thoughts?

Current City Actions - Buildings

Custom Retrofit Program in Residential Buildings

*Scheduled Full Implementation *: Early 2020 [Pilot 2017-19]*
Status: Implemented ? not clear on goals or impact.

BEUDO Performance Requirements

Scheduled Implementation: Early 2019*
Status: Delayed, in process no draft for review yet

Upgrades at Transaction Points

Scheduled Implementation: Early 2020*
Status: Delayed

Net Zero Requirements for New Construction

Scheduled Implementation: N/A*
Status: Feasibility stage - delayed several years

Updated Green Building Requirements

Scheduled Implementation: 2017*
Status: Delayed (partially implemented)

Net Zero Requirements for Municipal Buildings

Scheduled Implementation: Early 2021*
Status: Implemented

Scheduled implementation date determined through original NZAP target table - April 29, 2015

Current City Actions - Energy Supply

Carbon-free Thermal Energy
Support transition to low-carbon thermal energy. Support individual de-carbonization and study how to transition away from fossil fuel infrastructure.
Scheduled Implementation: n/a*
Status: Feasibility stage - not clear what is happening

On-site and Off-site Renewable Electricity Access
On-site: Offer no-cost option for building owners to participate in development of solar projects.
Off-site: Procure off-site renewable energy projects based on certain criteria.
Scheduled Implementation: n/a*
Status: Feasibility stage

Rooftop Solar Ready Requirements
Pursuing a requirement for on-site renewable energy for new buildings, focusing on solar. New deadline: by 2022, all roofs on new construction should include solar PV and/or thermal.
Scheduled Implementation: 2017-2020*
Status: Delayed
Green Roofs required now

Scheduled implementation date determined through original NZAP target table - April 29, 2015

Current City Actions - Selected Other

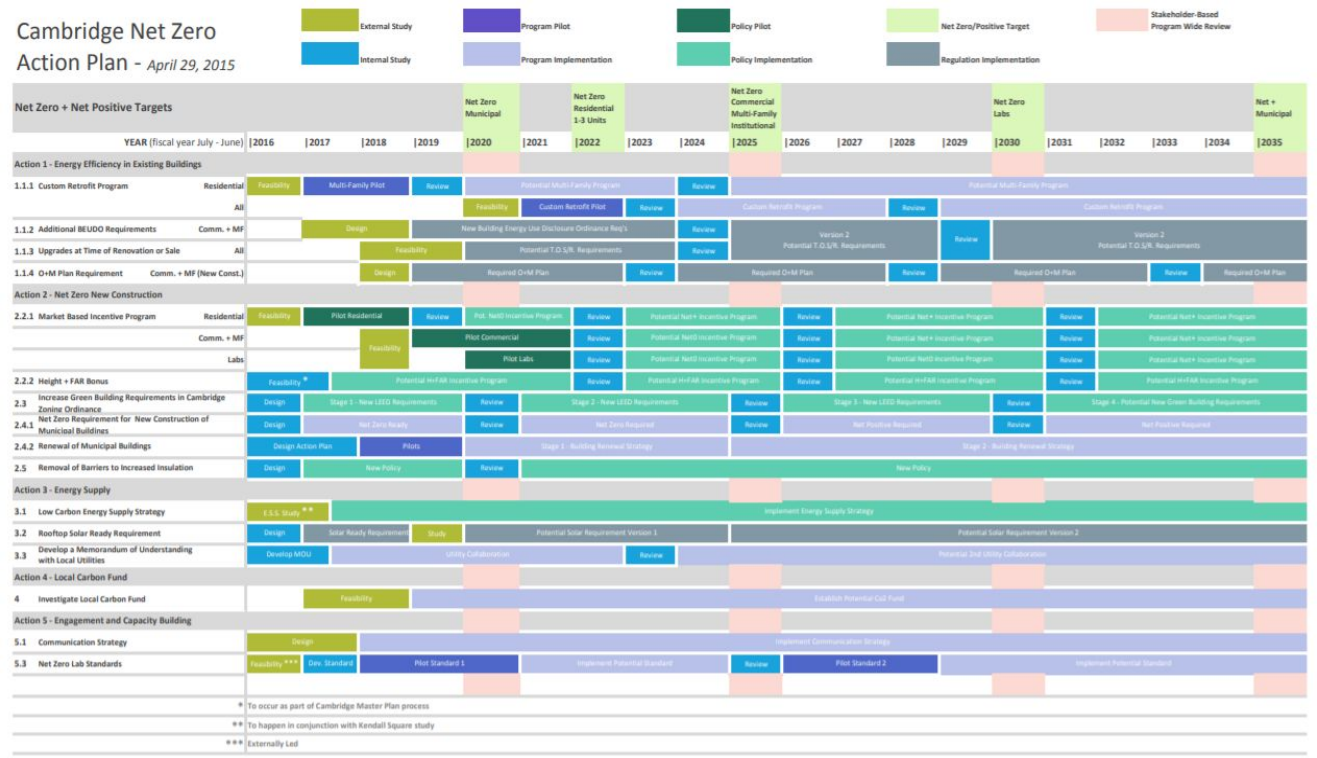
Local Carbon Fund
Community Choice Aggregation 3.0. Allows for widespread energy efficiency and electrification improvements. Provides funding and access to help implement clean energy projects. Pilot study complete.
Scheduled Implementation: 2019*
Status: Not clear

Net Zero Labs Standards
Create energy efficiency standards for labs. Work with stakeholders (research institutions, industrial hygienists) to create new energy use standards. Currently in design stage.
Scheduled Implementation: Pilot in 2020-21,*
Status: Delayed - not clear if pilot happened?

Communication Strategy
Implementation of communication strategy ongoing. Next steps are stakeholder engagement activities.
Scheduled Implementation: 2018*
Status: Implemented but no measure of effectiveness

Scheduled implementation date determined through original NZAP target table - April 29, 2015

Most actions city has taken part of NZAP.



In 2015, the NZAP was implemented
Strength: set timelines
Weakness: no specific or measurable goals

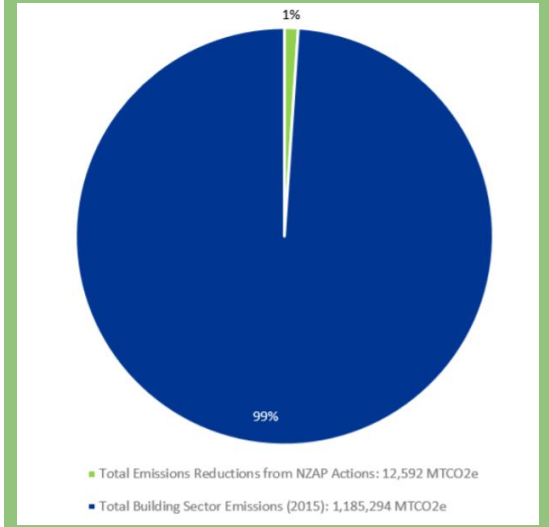
RESULT: *To date, almost no deadline was met*

Status: Most steps Delayed from 1-4 years

Results of NZAP after 5 years: almost no impact

Table 5-1: Summary of Performance by Action

Action	Parameter	Estimated Emissions Savings (MTCO2e)
Customer Retrofit Program (NZAP Action 1.1.1.)	Electricity and Gas Savings from Participating Projects	0
Article 22 Green Building Requirement (NZAP Action 2.3)	Estimated energy savings beyond code	8,705
Renewal of Municipal Buildings (NZAP Action 2.4,2)	Electricity and Gas Savings from Participating Projects	1,504
Rooftop Solar Ready Requirements (NZAP Action 3.2)	Capacity of Installed Systems & System Production	2,383
Cambridge Community Electricity Aggregation – Green+ Product	Purchase of 100% Renewable Electricity consumption	0
	Total	**12,592**



2020 NZAP 5 year review:

Strength: External review, summary a call to change course.
Weakness: No sense of why most goals were not met.
RESULT: *No action plan or learning*
Status: Next Plan will be released in next few days

Individual Interviews - Top Ideas

Ideas
Advance/fast-track BEUDO requirements
Community aggregation - Opt-out of community aggregation program instead of opt-in
Electrify buildings (cambridge community electricity program, on-site renewables, etc.)
Create third-party that has enforcement authority outside of the City Manager
Mobilize citizen involvement
Work with Eversource infrastructure to move toward thermal/away from gas
Eco-restoration, particularly soil
Outreach to residents regarding current initiatives

Other ideas:

- Set embodied carbon standards
- De-clutter Cambridge website
- Lobby state to develop stretch building code
- Increase tree density
- Prepare advice and information for renters regarding energy efficiency
- Electrify city's vehicle fleet
- Eliminate parking minimums and institute parking maximums
- Tax all buildings for GHG emissions
- De-pave as many places as possible
- Participate in state docket to decarbonize gas (DPU2080)
- Create tax reduction incentive program for businesses that provide public transportation benefits
- Fast-track bus/bike lanes, incentivise people to get rid of cars

Successes and Failures

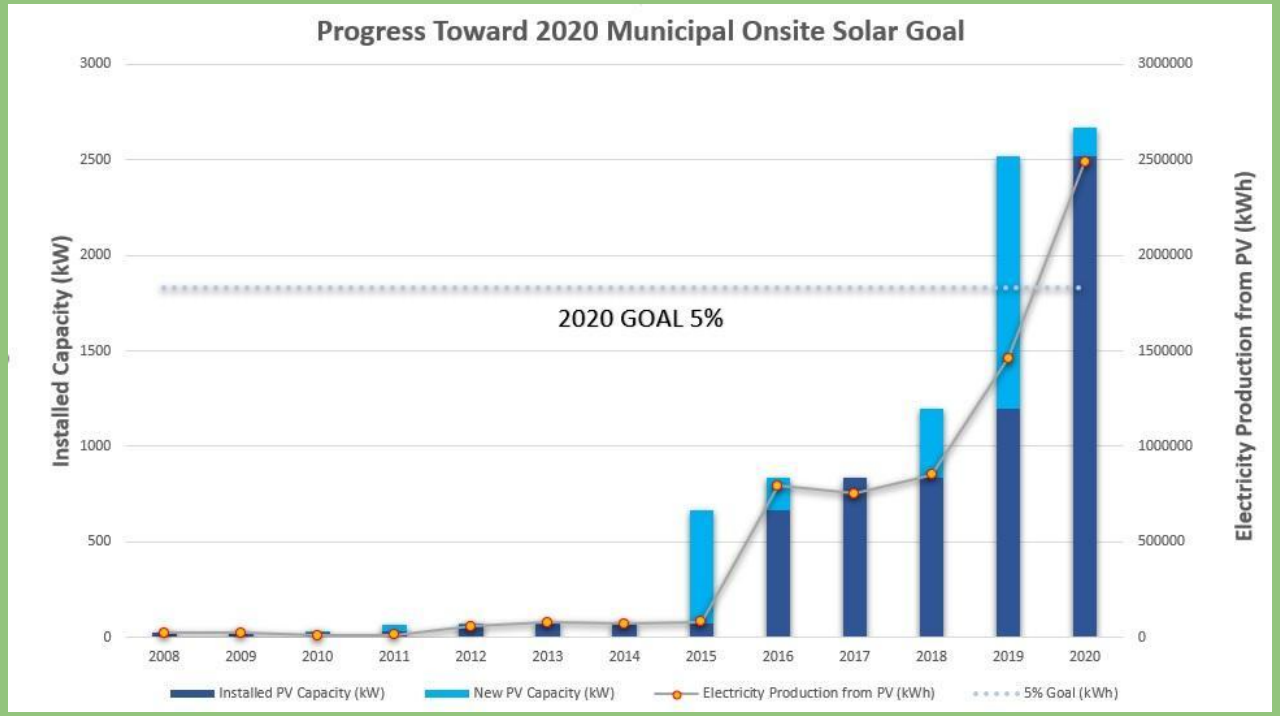
Areas of success: goals met

- **City's onsite renewable energy**
- **Waste reduction**
- **Municipal reduction in emissions**

Areas of challenge: most climate programs have not met expectations, almost all are delayed 1-3 years and many never had explicit goals

- **Local carbon fund**
- **Electrical aggregation program**
- **Installation of solar across the city**
- **EV penetration, installation of EV chargers on light poles**
- **Fully electrified buildings - commercial, labs, large residential, homes**
- **BEUDO amendments - still in formation**
- **....**

Success - City On-site Renewables



- 2015 goal: City will generate 5% of electricity it uses through on-site renewable systems by 2020
- 2019: 5% target reached

Cambridge reduced municipal energy use by 11.3% between 2008 - 2020

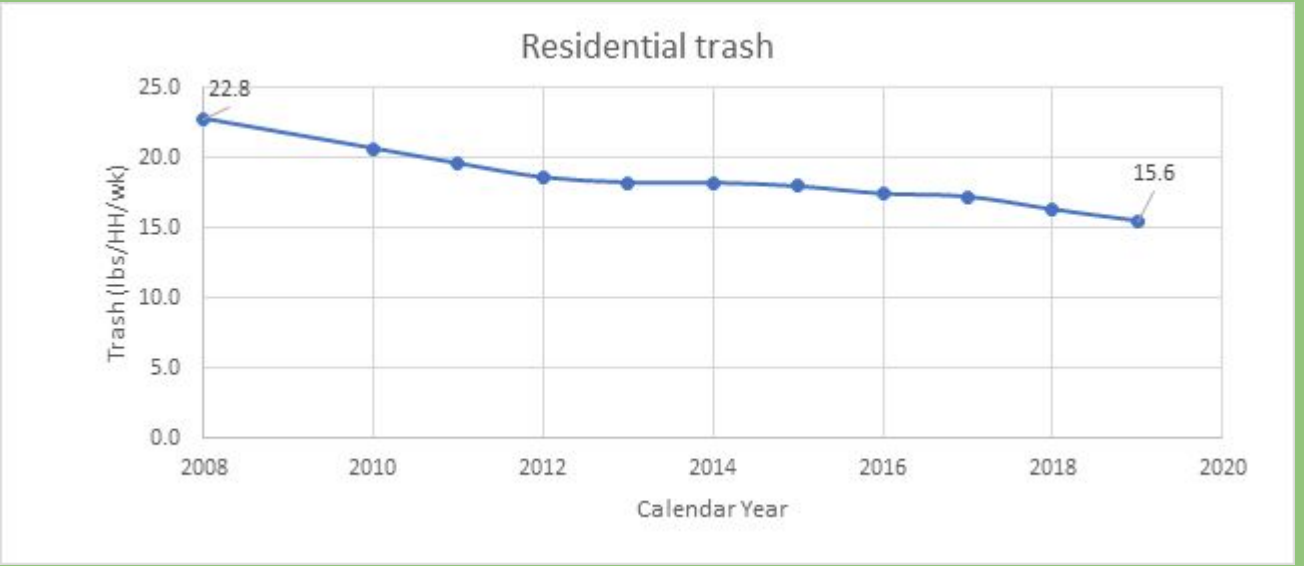
Cambridge has installed 2,520 kW in solar energy capacity at city facilities to date.

Successes - Waste Program

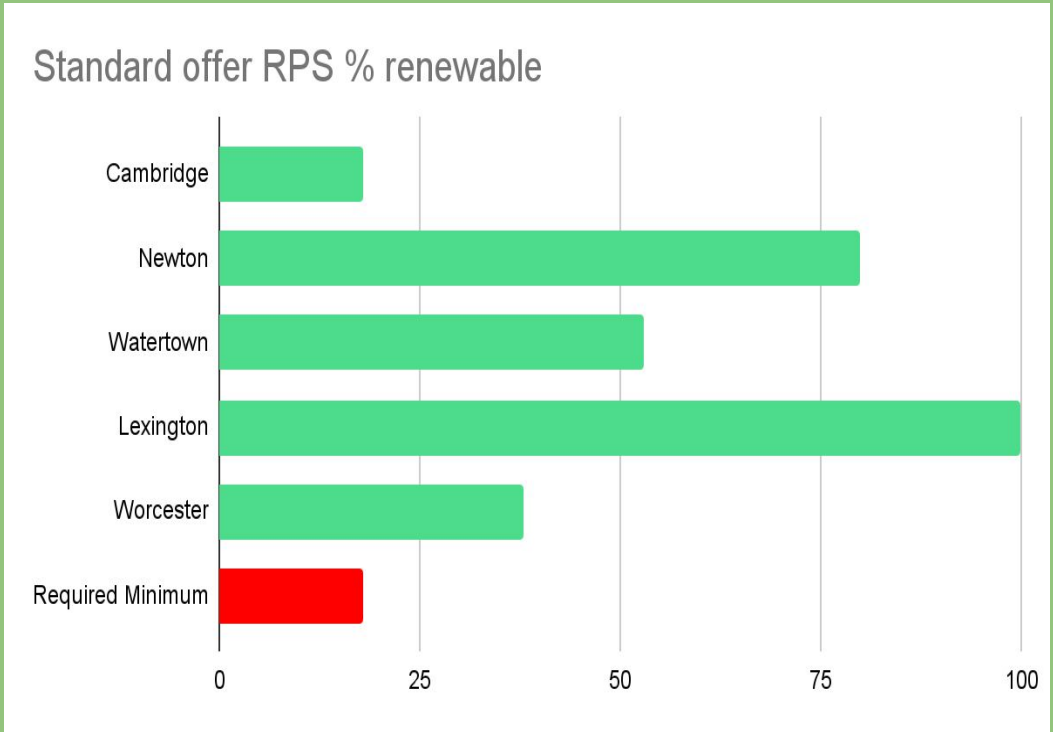
- 2009 goal: Reduce trash by 30% by 2020 and 80% by 2050
- 2019: Trash reduction goal achieved one year early
  - Trash reduced by 32% - 15.6 lbs per household

How did this succeed?

- Improved curbside recycling
- Expansion of curbside composting program
- Educational campaigns to shift behavior - encouraging reduction and reuse of materials before disposal

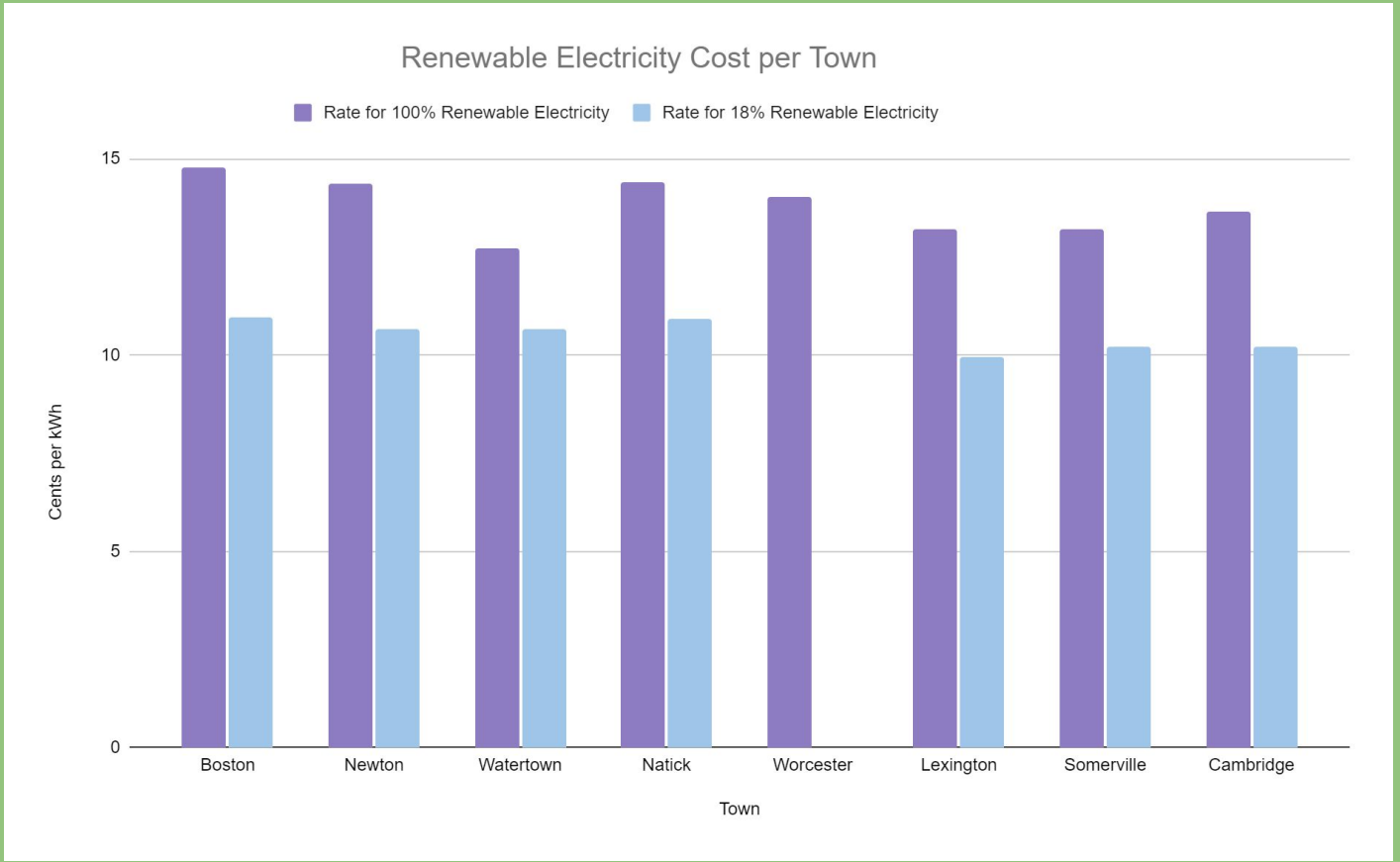


CCE & Renewables: Not Meeting Expectations



- Cambridge behind other cities
- Less than 5% of accounts sign up for 100% renewable opt-up option
- Adder yields $600K/year, equivalent to only 2.5%/year renewable → still lower RPS
- MIT invested in Power Purchase Agreement in 2016, built by 2017. Plant offsets 17% of emissions

CCE & Renewables: Not Meeting Expectations



Zero Emissions Buildings (Including BEUDO)

- City overall needs to reduce emissions by 60% in next 9 years -by 2030 per state goal. Cannot get there with new buildings alone, cannot get there without dramatically changed actions
- Cambridge missed goal for BEUDO performance standards
- Cambridge now behind Boston: in implementation, applicability, [above 50 units v 35], and shorter timelines
- Don't know how many buildings are net zero capable, meaning all electrified

<u>Questions to inform discussion:</u>
What happened with Cambridge Compact for sustainable future?
Has modeling been done of timeline in Cambridge plans - to see if emissions reduction goals are met?

Barriers

MINDSET

- Climate-forward programs are not updated often enough
- Fear of opposition from wealthy stakeholders (homeowners, developers, etc.)
- Lack of political leadership and understanding of malleability of climate policy
- Climate isn't prioritized by City Manager
- Difference in understanding as to actions and their impact

MANDATE

- Unwillingness to enforce mandates
- Structure of Cambridge government doesn't mean council recommendations are implemented
- Mandates are necessary in an emergency
- All ideas have to pass through multiple layers - legal, CM, etc.
- High level barrier - state laws can override local (like building code)

MONEY

- Not enough money allocated for climate programs
- Equity concerns
- Funding is available - just needs to be identified and allocated

Discussion

- What made successes possible?
- Are barriers identified to date the right ones?
- How to overcome barriers?

Check in: are we making progress? Anything we've missed?

- What and who have we left out?
- What are we not yet thinking about?

For Next Time:

- We will share the ideas on actions from interviews
- Plan is to review the top level most impactful ideas - should each CCWG member do a pitch for their idea?
- Create an action plan for highest-rated ideas

Thank You!