

# Building Tune-Up Accelerator



City of Seattle Office of Sustainability & Environment (OSE)

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# Project Summary

## Timeline:

Start date: September 1, 2016

Planned end date: August 31, 2019

## Key Milestones

1. A minimum of 5 qualified service providers have received training (by 2/28/18) and have sufficient capacity to conduct 100 building assessments and to implement operational improvements
2. Utility agreements w/ Seattle City Light in place for min. of 70 buildings (by 2/28/18)

## Budget:

### **Total Project \$ to Date:**

- DOE: \$378,337
- Cost Share: \$699,173

### **Total Project \$:**

- DOE: \$1,358,152
- Cost Share: \$1,812,097

## Key Partners:

City of Seattle OSE
Seattle City Light
Smart Buildings Center
Pacific Northwest National Laboratory
U. of Washington Integrated Design Lab

## Project Outcome:

Conduct operational and maintenance building tune-ups and additional energy efficiency measures that average 20% energy savings across at least 100 buildings or tenant spaces.

Achieve an estimated total savings of 99.7 Million kBtu/year and about \$1.5 Million annual cost savings.

# Building Tune-Up Accelerator Project Team



**Seattle**  
Office of Sustainability  
& Environment



**Seattle City Light**

**INTEGRATED DESIGN LAB**

UNIVERSITY of WASHINGTON // **W**



**SMART  
BUILDINGS  
CENTER** A project of NEEC



**Pacific Northwest**  
NATIONAL LABORATORY

*Proudly Operated by **Battelle** Since 1965*



U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy

# Challenge

The City of Seattle mandated **Building Tune-Ups** (RCx “light”) in 2016 for commercial buildings 50K SF+. It phases in with largest buildings (200K+) first in 2019.



SEATTLE  
**building  
tune-ups**

We heard from energy service providers & building owners that Rcx is known and practiced in large buildings 100K SF+.

**But for smaller buildings 50 - 100K SF...**

- Are there enough service providers?
- Do building owners know where to start?
- Can greater energy savings be found?
- Is the mandate effective for this market?



# Approach

1. Advance market expertise to support tune-ups  
**>> Workforce Development**
2. Accelerate tune-ups in mid-size buildings  
**>> Owner Engagement**
3. Generate voluntary market action towards greater savings  
**>> Building Assessments & Implementation – 20% Savings Goal**
4. Ensure the mandate is effective for this market sector  
**>> Evaluation & Refinement**



**Up to \$0.12/SF  
for Basic  
Tune-Up**

Workforce  
Development

Owner  
Engagement

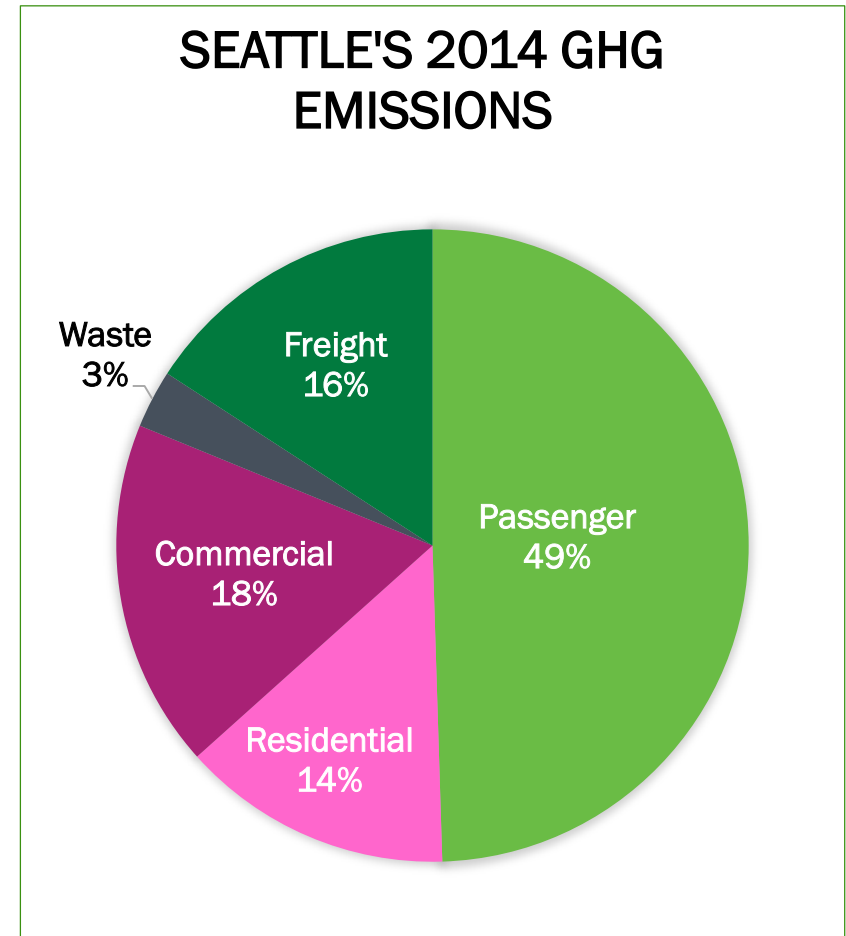
Building  
Assessments

Implementation

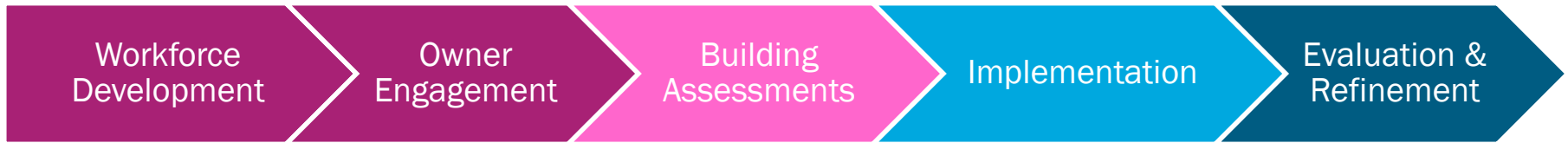
Evaluation &  
Refinement

# Impact

- Supports Seattle's goal of zero net GHG emissions by 2050
- Jump starts tune-ups on 100+ (of ~400 required) buildings
  - Provides incentive and technical support
  - Encourages action beyond "requirement"
- Increases market knowledge to inform future programs
  - Customer demographics
  - Barriers to tune-ups and other ECMs
  - Existing assets in the building



# Progress



## Workforce Development – COMPLETE!

Curriculum Developed

Provider Trainings Completed – 85 attendees  
*30 Participating Service Providers*

## Owner Engagement – COMPLETE!

Buildings Prioritized for Outreach - Asset Score + Benchmarking data

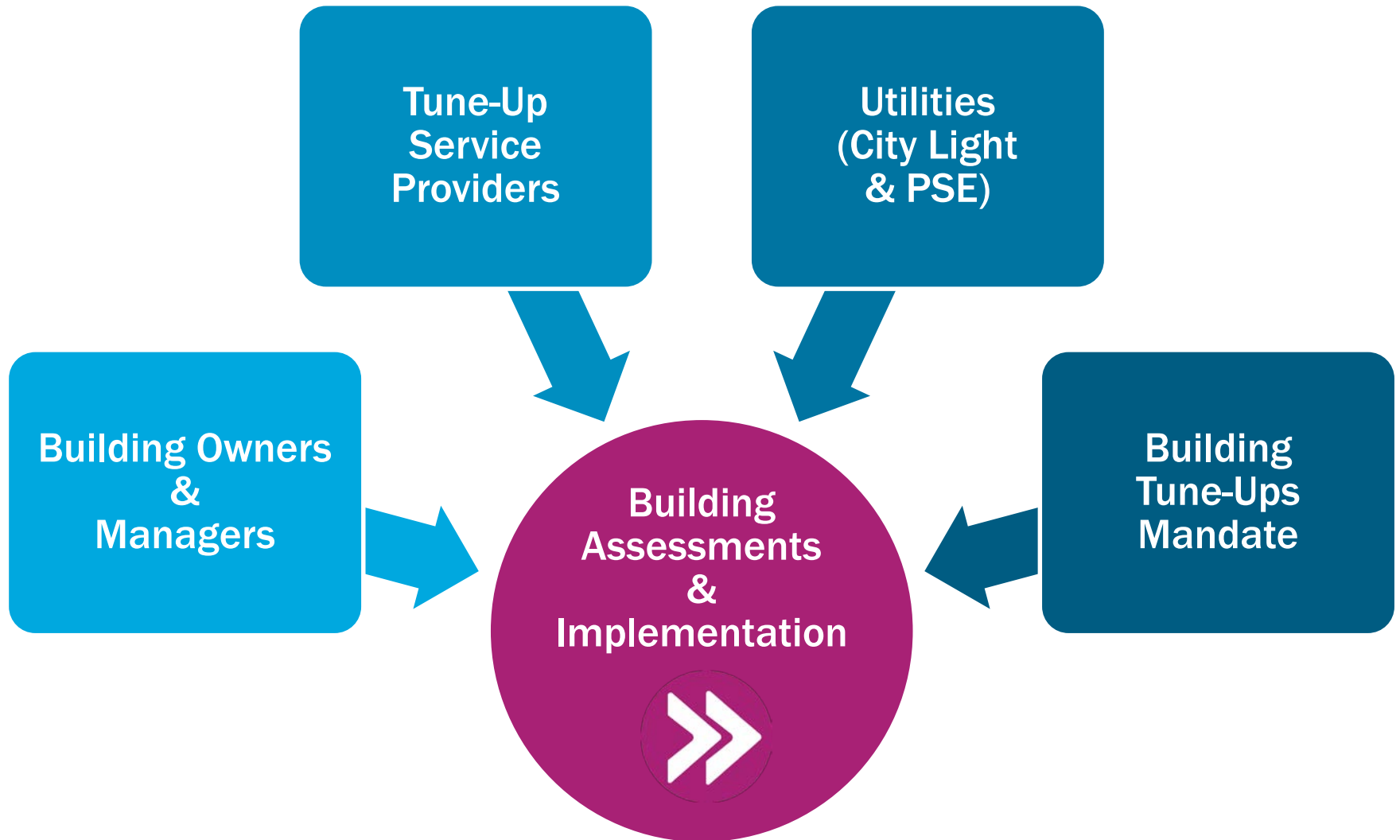
Program Application and 100 Buildings Enrolled –  
*Currently at 110 Enrolled*

Building Tune-Up Incentive & 85 City Light Incentive Agreements Signed - *Currently at 85*

Project Tracking Tool Built



# Stakeholder Engagement





# Remaining Project Work



## Building Assessments - IN PROGRESS THROUGH 2018

Tune-Up “Walkthrough” & Asset Score

Estimated Program Impact – Energy & GHG Savings

## Implementation – JUST STARTING – 2018 & 2019

Tune-Ups, ECMs & Strategic Energy Plans.

“Basic Tune-Up” “Tune-Up Plus” “Building Renewal”

Data Collection: Tune-Ups, ECMs & Strategic Energy Plans & Owner Engagement

## Evaluation & Refinement – SUMMER 2019

Final Program Impacts & Final Report/Presentations to DOE

Policy & Program Recommendations



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# Thank You

City of Seattle Office of Sustainability & Environment  
[www.seattle.gov/buildingtuneups](http://www.seattle.gov/buildingtuneups) (click on Accelerator)

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# REFERENCE SLIDES

# Project Budget

**Project Budget:** Major budget categories are Personnel and Contractual  
**Variances:** SCL Incentives and Asset Score payments moved from BP1 to BP2;  
Allocate funding for Case Studies in BP2  
**Cost to Date:** About 30% of direct and cost share expenses have been expended to date  
**Additional Funding:** No other funding sources

## Budget History

Budget Period 1		Budget Period 2	
DOE	Cost-share	DOE	Cost-share
\$365,245	\$691,808	\$992,907	\$1,120,289

# Project Plan and Schedule

Project Schedule												
Project Start: 9/1/16		Completed Work										
Projected End: 8/31/19		Active Task (in progress work)										
	◆	Milestone/Deliverable (Originally Planned)										
	◆	Milestone/Deliverable (Actual)										
	FY2016	FY2017				FY2018				FY2019		
Task	Q4 (Sep-Dec)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (July-Sept)	Q4 (Oct-Dec)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (July-Sept)	Q4 (Oct-Dec)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	Q3 (July-Sept)
<b>Past Work</b>												
2.1.1 Curriculum Development			◆									
2.3.1 Provider Trainings Completed (G/NG)				◆								
3.4.1 Buildings Prioritization		◆										
3.5.1 Participation Agreements					◆							
3.6.1 Bldg Tune-Up Incentives (G/NG)						◆						
4.2.1 Draft Tracking Tool			◆	◆								
4.2.2 Final Tracking Tool				◆	◆							
<b>Current/Future Work</b>												
5.2.1 Bldg Assessments								◆				
5.5.1 Program Impacts									◆			
6.3.1 Tune-Ups & ECMs												◆
6.4.1 Strategic Energy Plans												◆
7.1.1 Data Collection: Tune-Ups & ECMs												◆
7.1.2 Data Collection: Strategic Energy Plans												◆
7.2.1 Participation Tracking												◆
7.5.1 Final Program Impacts												◆
8.1.1 Policy & Programs												◆
8.5.1 Report & Presentations												◆