

### **Open House** OSE Director's Rule 2016-01 Building Tune-Up Requirements

Seattle Office of Sustainability & Environment November 17, 2016



## WHAT IS A TUNE-UP?

Optimizing the operation of existing equipment for energy and water efficiency

Commonly includes adjustments to equipment schedules, sensors, set-points, and controls

Key Steps include:

- 1. Building assessment to identify systems that need tuning
- 2. Adjusting or "tuning" systems to save energy and water



# WHY TUNE-UPS?

Saving energy in existing buildings is a critical part of our Climate Action Plan

Reduce energy and water waste

Tune-ups average 10-15% energy savings and 2-3 year paybacks





Commercial Building Energy Use

Target Reduction 63% by 2050 = **1.07% / year** 

Actual 2008-2014: 0.17% / year

Residential Building Energy Use

Target Reduction 45% by 2050 = **1.50% / year** 

Actual 2008-2014: 1.33% / year

Source: 2014 Seattle Community GHG Inventory



#### **Research on Policy Options**

- Climate Action Plan research & analysis, plus additional alternatives from other jurisdictions
- Interviews with key cities

#### Stakeholder Engagement – 2015-2016

- Building owners, developers & facility managers
- Energy efficiency & environmental organizations
- Service providers and professional organizations
- Open house in September 2015
- Focus groups in January 2016

Ordinance adopted in March 2016



# Proposed OSE Director's Rule specifies the details of compliance, as authorized by the adopting Ordinance





### IMPLEMENTATION STEPS & SCHEDULE

#### Director's Rule Schedule

**Technical Working Groups** 

**Public Meetings** 

Publish Draft Rule

**Open House** 

**Public Comment** 

**Final Rule Adoption** 

#### <u>2016</u>

April – September

June – September

November 2

November 17

By November 30

Mid-late December (est)



# Key Requirements

Non-residential buildings ≥ 50,000 sq ft

Tune up every 5 years

Phased in 2018-2021 by building size:

- 200,000+ sf October 1, 2018
- 100,000-199,999 sf October 1, 2019
- ° 70,000-99,999 sf
- October 1, 2020
- 50,000-69,999 sf
  October 1, 2021

(City-owned buildings comply 1 year earlier)

Alternative compliance options are available

### APPLICABLE BUILDINGS & SPACES

Need to Comply If:	50,000+ of non-residential space, excluding parking	
	Mixed Use: applies to non-res portion	
Spaces to Tune-Up (after determining need to comply)	General non-residential uses (office, retail, institution, etc.)?	YES
	Lighted, vented parking?	YES
	Cooking or manufacturing equip?	NO
	Spaces 2,500 sf or less, w/ tenant owned & maintained HVAC equip?	NO
	Cell tower / communications tower?	NO



## TUNE-UP PROCESS



*Tune-Up Spec can be on-site staff or outside vendor, if meet qualifications*  Corrective actions may be done by Tune-Up Spec, onsite staff, or others Owner may submit or authorize Tune-Up Spec or Owner's Agent to submit



### INFORMATION TO SUBMIT IN REPORT

Basic Contact Info & Tune-Up Specialist Credentials

#### **Basic Building Information**

- Construction type
- Square footage by use type
- % occupancy
- Primary HVAC & lighting systems & significant process loads
- Vehicle charging stations

Verify Portfolio Mgr Report & Review Water Billing Data

Tune-Up Assessment & Summary of Corrective Actions (next page)

#### CLIMATE ACTION PLAN PROPOSED SYSTEMS TO REVIEW & TUNE

### **Operating Protocols** (schedules, sensors, set-points, calibration & sequencing):

- 1. HVAC systems
- 2. Lighting
- 3. Domestic hot water
- 4. Water usage

Maintenance, Cleaning, and Repair:

- 1. HVAC systems
- 2. Lighting
- 3. Domestic hot water
- 4. Water usage
- 5. Envelope



# EXAMPLE TUNE-UP ELEMENTS

Operating Protocols, Calibration, Sequencing

- Review HVAC equipment schedules.
- Set schedules to optimize operations for actual building occupancy patterns.
- Maintenance, Cleaning, and Repair
  - Verify HVAC equipment is clean and adequately maintained
  - Clean where adversely impacting system performance.



### DISTINGUISHING BETWEEN TUNE-UP "PRODUCTS"

#### List of Tune-Up Elements / Expectations

In Director's Rule

Private Data Collection Tools & Detailed Reports to Owners

**Market-Determined** 

Summary Reporting Form to the City

**In Development** 



# Who is Qualified as a Tune-Up Specialist?

Must have seven years combined education & experience and one of the following credentials:

- Professional Engineer with relevant expertise
- Certified Energy Manager (from AEE)
- Existing Building Commissioning Professional (from AEE)
- Certified Commissioning Professional (from BCA)
- Level II Building Operator Certification (from NEEC)
- Bachelor of Applied Science Sustainable Building Science Technology (from SSC)
- Apprenticeship completion focused on building operations and building energy management (program to be developed)

#### \*Tune-Up Specialist can be service provider or on-site staff\*



### EXEMPTIONS & EXTENSIONS

#### Alternative Compliance Pathways

High Performance

Tune-Up Equivalents

#### Examples:

- High certified Energy Star score
- LEED-O&M Gold
- Living Building Certification

Examples:

- Utility RCx incentive programs
- Reduced energy use by 15%
- Proof of continuous commissioning

Barriers to Compliance

#### **Exemption** example:

- Building undergoing a major renovation
- Extension example:
- Recent change of ownership



# NEXT STEPS

**Comments on Rule:** November 30 **Final Rule Adopted:** Est. December

#### **Resources Under Development:**

- Reporting forms & guidance documents
- NEEC list of qualified Tune-Up Specialists
- Education & technical assistance
- Tune-Up Accelerator program





### BUILDING TUNE-UP ACCELERATOR 100 Buildings 50-100K SF



- Recruiting **100 mid-size nonresidential** buildings (required to comply in 2020 or 2021) to complete a tune-up sooner in 2017 or 2018.
- Take advantage of funding and technical support that will sunset after 2018.
- Meet 1<sup>st</sup> required building tune-up.
- Additional support to tap into utility incentives and strategic energy management planning.
- Providers: Training starting next Spring / Summer.

#### **Project Partners:**

Seattle OSE | Seattle City Light | Smart Buildings Center University of Washington Integrated Design Lab | Pacific Northwest National Laboratory Supported by US Department of Energy

### WRITTEN COMMENTS ACCEPTED THROUGH NOVEMBER 30

### Via email: <u>nextgenee@seattle.gov</u>

-or-

Via mail:

Jessica Finn Coven, Director

Seattle Office of Sustainability & Environment

700 Fifth Avenue, Suite 1868

PO Box 94729

Seattle, WA 98124



# QUESTIONS?

#### www.seattle.gov/buildingtuneups

-or-

**Christie Baumel** 

Seattle Office of Sustainability & Environment

christie.baumel@seattle.gov

(206) 233-7173