

## Response to Comments on OSE Director’s Rule 2016-01: Building Tune-Ups Requirement

#	Section(s) Referenced	Summary of Comments Received	OSE Action Taken in Final Rule	OSE Explanation of Action
1	General	Government intervention in the private market for local water and electricity usage is not needed. Private users already have a financial incentive to make investments when and where necessary. All of the local electricity is created by non-carbon-producing hydroelectric power. And clean fresh water in our area is abundant. More importantly, climate change based on carbon emissions has been completely debunked. Property owners have a market-based set of powerful incentives to economize, rendering government regulation unnecessary and wasteful.	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	The City’s support for climate action, including regulatory action, in the building sector is documented in Seattle’s Climate Action Plan (CAP), which was adopted by Council in 2013. The Seattle CAP and background materials from its 2011-2013 development process can be found at <a href="http://www.seattle.gov/environment/climate-change/climate-action-plan">www.seattle.gov/environment/climate-change/climate-action-plan</a> . Additional information regarding the development of the Tune-Ups policy and how it supports the Seattle CAP is available in the Director’s Report for the Tune-Ups legislation, which can be found at <a href="http://www.seattle.gov/environment/buildings-and-energy/energy-policy">http://www.seattle.gov/environment/buildings-and-energy/energy-policy</a> .
2	General 5.A 6	<p>Multiple comments noted concerns about tenant spaces and tenant issues. Including:</p> <ul style="list-style-type: none"> <li>• 2,500 sf exemption for small spaces with tenant-owned and operated equipment should be increased to a 5,000 sf space exemption</li> <li>• It is difficult for owner to act on tenant-owned equipment in larger spaces that are not exempt. If the tenants don’t allow it, OSE would fine the building owner, not the tenant.</li> <li>• Tenant should be bound to comply in the case of a triple net lease.</li> <li>• Owner doesn’t want to touch tenant equipment and tune it up on the tenant’s behalf because they could be held responsible for future equipment failures.</li> <li>• More guidance about relationship with tenant would be helpful, especially when there are language barriers.</li> </ul>	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	<p>Changes to the Rule include:</p> <ul style="list-style-type: none"> <li>• Change 2,500 sf exemption to 5,000 sf.</li> <li>• Section 6 (Parties Responsible) is clarified to state that an owner can direct or authorize a tenant to comply on the owner’s behalf. If a tenant does not comply and they own the equipment, the owner is then authorized to comply, including taking correction actions on tenant-owned equipment.</li> </ul> <p>OSE will be developing communications materials oriented towards tenant roles and responsibilities, which can be used for discussions between owners and tenants. In cases of language barriers, OSE can help provide translation services.</p>

3	8.A	An extension is granted for properties that have sold, but more could be said about properties under contract to sell and documents under legal review	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	More information was added to Section 6.A and Section 8.A to reflect ownership responsibilities and extension request options when a building is changing ownership.
4	8.B	Low occupancy should defer a tune-up every year until occupancy surpasses 50%.	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Language was amended to allow additional 1-year extensions for every year occupancy remains below 50%.
5	General 9	Process flow charts of timelines would be helpful. If we apply for an exemption 180 days prior to the compliance date, and it is denied after 60 days, that <u>could</u> then only leave 120 days to complete the entire tune-up process. That could be very difficult. Can exemption requests be submitted earlier in the process if we have documentation?	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	The Rule language has been amended to reflect that exemption requests may be submitted up to two years in advance of the tune-up compliance date, and as early as July 1, 2017 for buildings required to comply by October 1, 2018. Flow charts are a good idea and the City will incorporate process timelines into outreach materials as they are developed.
6	2.B and 2.O 10 11	<p>Multiple comments stated concerns about the definitions of “Appropriate” corrective action and “Low-Cost,” including:</p> <ul style="list-style-type: none"> <li>• Low-cost has different meanings to different people.</li> <li>• Stating that it is a low cost operational adjustment and/or a maintenance action intended to improve energy/water efficiency leaves an enormously wide area for interpretation.</li> <li>• Discussing payback periods in a definition of low-cost creates confusion and suggests that payback periods are supposed to be calculated when that isn’t actually required.</li> </ul>	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Rule definitions have been amended to eliminate reference to “low cost” and payback periods, and instead identify types of adjustments and maintenance actions in the definition of Appropriate. The use of the word “Appropriate” was also edited in Sections 10 and 11.
7	3	The rule relies on obtaining building floor area (GSF) from King County Assessor. This is not the way the floor area is determined under the benchmarking rule. The benchmarking rule contains no reference to the King	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit	The Energy Benchmarking program does rely on King County Assessor gross square feet (GSF) data to determine size thresholds for compliance. The Tune-Ups requirement is consistent with the Benchmarking program by utilizing King County Assessor’s GSF to determine compliance thresholds. The process of benchmarking buildings is conducted

		County Assessor. Floor area should be determined using the same method under both rules.	<input checked="" type="checkbox"/> No text edit	through ENERGY STAR Portfolio Manager, which allows the use of self-reported gross floor area (GFA) to calculate energy use intensity (EUI) and ENERGY STAR scores.
8	7, 9, 14	<p>Multiple comments noted concerns about the timeline for complying by October 2018. Reasons included:</p> <ul style="list-style-type: none"> <li>The time to request 2017 budget has already passed, so all work must be done in 2018, before owners can predict the cost of the corrective actions. Some 2018 budgets don't become available until February.</li> <li>Large, complex hospital facilities can be more challenging to tune up.</li> </ul> <p>Suggestions included:</p> <ul style="list-style-type: none"> <li>Extending the compliance date</li> <li>Requiring the Tune-Up Assessment by the compliance date but allowing more time to take Corrective Actions</li> <li>For a period of time, allow a broader interpretation of on-site continuous commissioning so that facilities managers can begin doing this work and be eligible for an exemption.</li> </ul>	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	OSE staff understand the challenges described for reaching compliance by October 2018, but to maintain the overall roll-out schedule through 2021 we are not adjusting any deadlines at this time. The penalty schedule for non-compliance is now referenced in the Rule (it had previously only been included in the Ordinance), which shows that no fines will be issued for non-compliance until a building has been out of compliance for 180 days.
9	9	Section states that "Building Owners may be granted exemptions from <b>one tune-up compliance cycle</b> for an individual building by. . ." Why is it just one cycle? Shouldn't the building be able to use an alternate pathway for each cycle?	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Building owners may seek and be granted exemptions for each cycle of compliance. However, if they are granted an exemption, that exemption only applies to the current cycle (they have not been exempted in perpetuity). They must reapply in the next cycle to receive another exemption.
10	9.A.i	We would like to understand the basis for an Energy Star rating of 90 and ask that you consider an Energy Star score of 85 or above. Most the commercial building stock downtown is 15 to 20 years old and an Energy Star rating of 85 represents significant investments in energy reduction and ongoing maintenance.	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	This exemption is specifically oriented towards those buildings that have achieved superior performance, whose operating efficiency is in the top 20% of the market. Specific to Seattle's non-residential buildings 100,000 square feet or larger: an ENERGY STAR score of 90 or above captures 20% of buildings and 24% of square footage, based on 2015 Energy Benchmarking data. For buildings 50,000 – 99,999 square feet, an ENERGY STAR score of 85 captures 20% of buildings and 20% of square footage.

				The Rule offers eleven pathways for demonstrating high performance or a tune-up equivalent. We estimate that amongst all the options, approximately 1/3 of buildings will qualify for an exemption.
11	9.A.i	RE reference to an Energy Star score being certified, which requires certification by a Professional Engineer or Registered Architect: A Qualified Tune-Up Specialist should be sufficient to verify the Energy Star Score and Statement of Energy Performance. Certification requires a PE or RA which adds significant cost to organizations with no added energy benefits.	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	<p>The US EPA determines the pathway for certifying an ENERGY STAR score. OSE defers to that process. OSE opted not to set up a parallel local process with different qualified agents because (a) the City is not resourced to manage that process, and (b) OSE does not wish to undercut EPA standards by establishing a local alternative.</p> <p>An exemption for a certified ENERGY STAR score is one of eleven potential pathways for demonstrating high performance or a tune-up equivalent. The alternative compliance pathways have been developed to provide less costly alternatives to conducting a tune-up.</p>
12	9.A.v	What is weather normalized EUI? EUI is defined as kBtu/sf/year – which you identified in the section. However, weather normalized EUI would look something like kBtu/sf/year/degree day. If you use a weather normalized EUI, you probably need to define exactly what this means and you may have to modify the EUI exemption number to account for the weather normalization.	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	<p>A definition of weather-normalized energy was added to the Rule. A weather normalized EUI is still expressed as kBtu/sf/year, but it is the energy your building would have used under average weather conditions. Weather normalization is calculated by the EPA in the Portfolio Manager tool based on their formula, which is detailed in the following technical reference:</p> <p><a href="https://portfoliomanager.energystar.gov/pdf/reference/Climate%20and%20Weather.pdf">https://portfoliomanager.energystar.gov/pdf/reference/Climate%20and%20Weather.pdf</a>.</p>
13	9.B.i	Please confirm that existing energy service agreements qualify under this section.	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	Existing energy service agreements may or may not qualify, depending on the scope of services, the frequency of systems review and corrections and the qualifications of the energy service provider.
14	9.B.i	Providing reports for active management and continuous commissioning once per quarter is excessive. It should be twice a year so that we are capturing peak loads by season.	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	This optional alternative compliance pathway is focused around a demonstration of continuous commissioning. Quarterly documentation was recommended by the Building Tune-Ups Technical Working Group as a reasonable way to convey that actions are performed continuously, as opposed to on an intermittent basis.
15	9.B.i	The active monitoring/continuous commissioning exemption specifically calls out monitoring of HVAC, lighting, water heating, and water usage. Most true continuous commissioning/fault detection systems (not BAS or controls systems, but fault detection overlays)	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	<p>The language has been amended as follows:</p> <ul style="list-style-type: none"> <li>Water usage was removed from the list to recognize the greater degree of difficulty in regular fault detection of water systems, and for consistency with other alternative compliance pathways that focus on energy not water.</li> </ul>

		pull live data from the BAS and sometimes lighting systems if available. However, in many instances live interval data for domestic water or lighting is not available for continuous commissioning/fault detection systems. The benefits of a continuous commissioning/fault detection system go well beyond a 5 year tune up; because of this, is it possible to silo water and/or lighting from the active monitoring exemption?		<ul style="list-style-type: none"> <li>Language was clarified related to lighting and water heating to reflect that information may be captured through a periodic review of information from a data logger or billing analysis if continuous commissioning.</li> </ul>
16	9.B.iii	RE "Level II audit:" Should have the same language as above "...audit no less stringent than ASHRAE Level 2"	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	"Level II audit" language amended as suggested.
17	9.B.iii	RE "evidence" that all actions with a 3-year payback were implemented: What would qualify as "evidence?"	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Language is amended to specify evidence in the form of the audit report and a signed certification from an individual meeting the qualifications of a Tune-Up Specialist that all actions with a simple payback of 3 years or less were implemented.
18	9.B.iii	RE "simple payback:" Does this mean we would be required to calculate simple payback for everything in the audit, or can we show that all measures in included in section 11.B. have been implemented?	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Language was clarified to indicate that this optional alternative compliance pathway requires implementing both capital and operational recommendations of an audit if a simple payback is calculated to be three years or less.
19	9.B.iv	Could not find City's Open Data website.	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	The Open Data website can be found at: <a href="http://data.seattle.gov">data.seattle.gov</a> . Relevant data on Energy Benchmarking will be available in February 2017. The Rule language was amended to add the website address to the Rule.
20	9.B.iv	Why does an ENERGY STAR Statement of Energy Performance require a stamp from a Professional Engineer or Registered Architect?	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Language amended to remove the reference to a PE or RA. No stamp on a Statement of Energy Performance is necessary.
21	9.B.v	Multiple comments indicated concerns that the evidence that a building has spent at least \$1 per sf on energy efficiency measures over the last three years	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit	Upon investigation into concerns, the City has reconsidered this option and removed item 9.B.v from the list of actions qualifying a building for an exemption. This decision was based on concerns about availability of complete and accurate data regarding the nature

		<p>must come in the form of evidence that utilities incentivized the efforts. Concerns included:</p> <ul style="list-style-type: none"> <li>• Not all buildings pursue utility incentives for their conservation actions</li> <li>• A rush of requests to utilities asking for documentation</li> <li>• Utility documentation does not always contain final cost data.</li> </ul>	<input type="checkbox"/> No text edit	<p>and final costs of the efficiency measures taken. It is also likely that a building subject to this level of investment in energy efficiency activity would meet another of the eleven exemption options included in the Rule.</p>
22	9.B.v and 9.B.vii	<p>Please confirm that financial incentives from City Light under <i>vii.</i> can be included with owner investments to reach the \$1.00 investment required in <i>v.</i></p>	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	<p>The option of qualifying for an exemption based on spending of \$1/sf over a three-year period (formerly 9.B.v) has been removed from the Rule. See explanation above, in item #21.</p>
23	9.B.viii	<p>If someone participates in the Tune-Up Accelerator program earlier than mandated, are they required to perform the next tune up before 2025 or 5 years from the grant participation date?</p>	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	<p>Participants in the Tune-Up Accelerator program, who complete tune-ups or alternative compliance pathways before their compliance deadline, will be exempted from the first cycle of tune-up compliance, but not from the second cycle five years later. Compliance for the second cycle is not adjusted based on the date of compliance for the first cycle, but remains the same for all buildings in each size cohort. For example, if a 40K SF building that is due to comply in October 2021 participates in the Accelerator and completes in 2019, that building's next date to comply will be the next cycle, which is October 2026.</p>
24	9.C	<p>Multiple comments that buildings should be exempted from a tune-up if they plan to demolish the building within three years (as opposed the stated one year), because tune-up payback periods are anticipated to average three years.</p>	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	<p>Language is amended to reflect a 3-year timeframe. Evidence is in the form of a demolition permit or permit application, so language was amended to note the demolition permit must be issued no more than two years prior to the tune-up compliance date, and an application must be active.</p>
25	10.A 12	<p>A building owner identifies a specialist, but the specialist submits their tune-up report and their qualifications <u>after</u> the entire process is completed. If they don't have the qualifications, the tune-up will be rejected. There may be, or should be, a better pre-approval process for this if the building owner so desires.</p>	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	<p>Although the form is collected at the end of the process, the Owner is responsible for ensuring they have selected a qualified tune-up specialist at the beginning of the process. The Northwest Energy Efficiency Council has indicated that they will maintain a list of qualified tune-up specialists that owners may reference as a starting point, but Owners are advised to verify qualifications before selecting with a tune-up specialist.</p>

26	10	The language in this section encourages the use of outside "for hire" organizations and implies that the Tune-Up Specialist and building owner must be separate entities. There should be an additional tune-up process outlined for the many owner-operated facilities in the City. We recommend adding a section on meeting the tune-up requirement through either a) -as described using a third party OR b) using in-house expertise.	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	The building owner and the Tune-Up specialist are different people, although they may represent the same organization. The process of interaction between the two people would remain the same and is captured within the existing text. Section 12 states that a Tune-Up Specialist may be either on-site staff or an outside vendor if qualifications are met.
27	10.E	Section B says that the City's Reporting Form is optional but section E says it is required.	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Language was removed from 10.B to make it more clear in 10.E that a tune-up includes a final required report.
28	11	It would be helpful to see the reporting form to better understand the tune-up expectation.	<input type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input checked="" type="checkbox"/> No text edit	A reporting form will be released in the spring of 2017.
29	11	The rule identifies that if there are multiple pieces of equipment a sample (12% or a minimum) is acceptable. How does this apply to schedules, setpoints, sensors, lighting, and envelope? Sampling should be further defined.	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Language was clarified to note that a 12% sampling rate only applies to identical and repetitive pieces of equipment, and only if there are more than 10 or 20 pieces of identical and repetitive equipment, depending on building size. All schedules must be reviewed, all noted elements of an envelope must be reviewed. All set points on any piece of equipment inspected must be reviewed. 12% of lighting sensors must be reviewed.
30	11.A.i.a	The definition of building zone is confusing.	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	The definition of building zone was removed and references to it in this section were replaced. For example, instead of asking for HVAC type and lighting type by zone, the Rule requires HVAC type and lighting type by distinct space use.
31	11.A.ii	The language: "and analyze bills to identify energy for heating, cooling, lighting, plug loads, and other loads." Unless sub metering data is available, it is not possible to analyze the load subsets from energy bills or Energy Star data.	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Language is edited to reflect a general review of energy use to look for anomalies and identify seasonal patterns that indicate heating and cooling loads

32	11.B Table reference 1.h, i, and j	Technical edits suggested to clarify intent of 1.h, 1.i, and 1.j in Table 1.	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Edits incorporated.
33	11.B Table reference 4.c	Will the tune-up evaluate the cooling tower for water leaks and excess consumption? Should the city recommend separate water meter for consumption data to help validate tower use, offset sewer billing costs and help identify true loads?	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	The Rule language was edited to clarify that cooling towers should be evaluated for water leaks and excess consumption.
34	12	<p>Several comments proposed additional certifications for Tune-Up Specialist qualifications, including:</p> <ul style="list-style-type: none"> <li>• Any program meeting USDOE Better Buildings Workforce Guidelines</li> <li>• Systems Maintenance Administrator (SMA) through BOMI</li> <li>• Commissioning Authority (CxA) as certified by AABC Commissioning Group</li> <li>• Energy Management Professional (EMP) as certified by AABC Cx Group</li> <li>• RCx for Existing Buildings as certified by National Environmental Balancing Bureau (NEBB)</li> <li>• PE in Architectural Engineering</li> </ul>	<input checked="" type="checkbox"/> Substantial edit <input type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	<p>The following have been added to the list of optional certifications:</p> <ul style="list-style-type: none"> <li>• Commissioning Authority (CxA as certified by AABC Commissioning Group)</li> <li>• Professional Engineer in Architectural Engineering</li> </ul> <p>OSE staff reviewed material on the additional programs and sought opinions from experts in the community. Staff concluded that:</p> <ul style="list-style-type: none"> <li>• The USDOE Better Buildings Workforce Guidelines are not a certification program, but rather an approved process for developing certifications. Not all certification programs undertaking this process would be relevant.</li> <li>• The BOMI System Maintenance Administrator did not appear to be equivalent to other training programs in the Rule. This training may feed into the Building Operator Certification II training program, which is included as a possible certification toward the Tune-Up Specialist requirements.</li> <li>• More information is needed about the Energy Management Professional program and the RCx for Existing Buildings program. It may be appropriate to add one or both of these programs in a future update to the Rule.</li> </ul>
35	12 – 1 <sup>st</sup> paragraph	The text references a section 12.C. There is no 12.C.	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	The reference was a typographical error. It has been amended to refer to 12.A and 12.B.
36	12.A	It's unclear if this should be "AND" one of the following or "OR" one of the following.	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit	The word "and" has been added.



			<input type="checkbox"/> No text edit	
37	12.A	Does the expression, "At least seven years of experience, including . . ." apply to all individuals doing the building tune-up, or can it apply to the experience of the project manager or lead for a company that is overseeing individuals that work for that company?	<input type="checkbox"/> Substantial edit <input checked="" type="checkbox"/> Clarifying edit <input type="checkbox"/> No text edit	Correct, the tune-up must be conducted by a team that is under the direct supervision and oversight of a qualified Tune-Up Specialist, with the Tune-Up Specialist finalizing the Seattle Tune-Up Report. The qualifications of a tune-up specialist do not apply to every person on the team must hold the same credentials.

Additional edits were made upon staff review including the following:

- Editing and adding to the Definitions section (Section 2) for additional clarity and internal consistency between various Seattle code definitions
- Clarifying text edits to several sections
- Specifying actions that may be considered as non-compliance in a new Section 13: Enforcement and Penalties for Non-Compliance.