

Philadelphia's New Building Energy Tune-Up Law: A Guide for Owners, Managers, and Design Professionals

On December 4, 2019, Philadelphia Mayor Jim Kenney signed into law a **“building tune-up” policy** addressing one of the city’s biggest sources of carbon emissions: large commercial and institutional buildings.

The ordinance amends the Philadelphia Code, Section 9-3400, requiring non-residential buildings larger than 50,000 square feet to perform regular building inspections and tune-ups to improve their energy efficiency. Philadelphia projects that the policy, the City’s first to require building energy performance improvements, will cut 200,000 metric tons of carbon pollution. The goal is to reduce carbon emissions in Philadelphia 80% by 2050.

What Is Required?

“Tune-ups” of the building’s energy and water systems are mandated by the law, including **inspection** and **corrective action** components. Systems include:

- Building envelope,
- HVAC (heating ventilating and air conditioning) systems,
- Conveying systems,
- Domestic hot water systems, and
- Electrical lighting systems.

Inspections and corrective actions cover:

- **Outside air control**, including calculation of ventilation requirements, measurement of actual ventilation rates, and determination of optimal ventilation delivery and control;
- **Design issues** leading to high energy use, such as missing insulation, large leaks, and unbalanced systems;
- **Optimization of sensors**, set points, schedules, and equipment controls for efficient operation;
- **Lighting**, including identification of outdated technologies, over-lit spaces, and areas needing lighting controls;
- **Plumbing system** maintenance;
- **Energy and water bill** data analyses; and
- **Common maintenance items** that impact energy usage.

Excluded are systems owned by tenants, condo owners, or coop unit shareholders, as well as systems fully maintained by tenants that are within the tenant’s space or that exclusively serve that space. Industrial processes within the building are also excluded.

A **“qualified tune-up specialist,”** i.e. a licensed Professional Engineer or Certified Energy Manager, supervises the inspection and prepares a signed inspection report with findings and recommendations, which is submitted to the building owner and to the Office of Sustainability.

The corrective action component of the tune-up must resolve all **adjustments and minor repairs** (defined as low-cost repairs to existing equipment that would not require permits from the Department

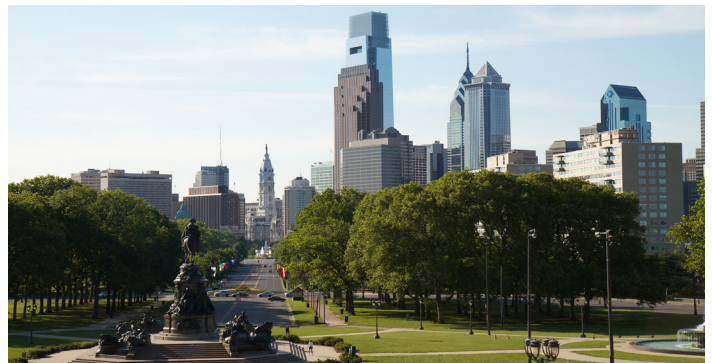


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of Licenses and Inspections) identified in the inspection. The Office of Sustainability will provide standards for determining which adjustments are “low-cost,” as well as how to optimize usage to maximize energy and water savings and ROI while minimizing cost. The law authorizes the Office of Sustainability to further define “corrective action” in forthcoming regulations.

Are Any Buildings Exempt?

Yes. Exemptions are provided for high-performance buildings that demonstrate any of the following conditions at least 180 days before the scheduled tune-up:

- **Certified ENERGY STAR** score of at least 75 within the year immediately preceding the scheduled tune-up, or
- **LEED Gold Rating** for BOM v4, **Net-Zero Energy Certification**, or equivalent or better certification, within three years prior to scheduled tune-up, or
- **Completed a utility retro-commissioning incentive offering** under a Pennsylvania Public Utility Commission-approved energy efficiency program or other approved program within the preceding three years, or
- **Completed a full retro- or re-commissioning procedure** with documentation of optimized building performance, within three years prior, or
- **Achieved energy savings of at least 15%** and provided measurement/verification of Office of Sustainability within three years prior, or
- **Underwent an energy audit** at least as stringent as ASHRAE Level II standard and implemented all no/low-cost energy efficiency measures identified, or
- **Already has in place active optimization efforts**, including monitoring and ongoing commissioning, or
- **Received an initial certificate of occupancy within the three years prior** to the scheduled tune-up, or
- **Is scheduled to be demolished within a year** of the scheduled tune-up, or
- Other factors approved by the Director.

New York
Connecticut
Washington DC

1040 Avenue of the Americas, Suite 14C, New York NY 10018 Tel 212 789-9915
2321 Whitney Avenue, Hamden CT 06518 Tel 203 239-6660
2711 Richmond Highway, Suite 333, Arlington VA 22202 Tel 703 253-9800

www.hoffarch.com

When Are Tune-Up Reports Due?

Philadelphia Building Tune-Up Schedule	
Building Size	Report Submission Deadline
200,000 sf or larger	30 September 2021
100,000 sf – 200,000 sf	30 September 2022
70,000 sf – 100,000 sf	30 September 2023
50,000 sf – 70,000 sf	30 September 2024

Subsequent tune-ups are **every 5 years** after the original tune-up date. Inspections and corrective actions must take place no earlier than 2 years prior to the scheduled tune-up date.

For a building owner with 20 or more covered buildings or cumulative floor area of 5 million sf or more, or for School District of Philadelphia buildings, application may be made to defer the deadline, but not later than 30 September 2024. Other extensions for “good cause” might include less than 50% occupancy or compliance that would place a burden “disproportionate to the value of the building.”

What Are the Penalties?

Violation carries a fine of \$2,000. Beginning 30 days after the deadline, an additional fine of \$500 *per day* will be imposed, so the impetus to have the tune-up completed on time is forceful.



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What Will the City Do with this Information?

Public shaming, of a sort, aims to further encourage compliance. The Office of Sustainability will publish a public inventory of properties certified as “high performance,” as well as those that completed a tune-up, must complete one in a future year, or are in violation for non-compliance.

Every year, the Office of Sustainability will submit a report to the Council that addresses the energy and water efficiency of Philadelphia buildings and evaluates the accuracy of building energy tune-up reports. The annual report will also consider compliance and make recommendations for strengthening enforcement.

Why is Philadelphia Enacting this Law?

Coming on the heels of [New York’s Climate Mobilization Act](#) and [Washington DC’s Clean Energy DC Omnibus Act](#), as well as [Seattle’s Building Tune-Ups policy](#), the Philadelphia building tune-up law is part of a trend in American cities to address climate change by making buildings more energy efficient. Philadelphia’s new law builds on its [energy benchmarking program](#), enacted in 2012, which requires building owners to publicly report yearly energy use. According to [Philadelphia’s 2019 Municipal Energy Benchmarking Report](#), that

program already showed a 5% reduction in overall building energy use since 2013. The City hopes that by requiring implementation of low-cost energy-saving tune-ups, they can push energy savings further.

What Should Building Owners and Managers Do Now?

With the deadline for the largest buildings coming up in 2021, and deadlines for other buildings following closely behind, building owners and managers should act now to evaluate building systems and plan for implementing upgrades and repairs.

The building envelope, including facades, roofs, windows, and exterior doors, is critical to energy performance. Poorly functioning building enclosures waste energy, lower benchmarking scores, and place excess demand on heating and cooling equipment. As part of the tune-up process, we recommend assessment of the building envelope by a qualified design professional. Working from the building envelope inward can help optimize HVAC performance by addressing energy leaks, allowing owners to more cost-effectively meet efficiency goals.

Resources

Philadelphia Ordinance – Bill 190600

<https://phila.legistar.com/View.ashx?M=F&ID=7748379&GUID=62374D0C-3E95-485D-B3DE-0BAFBFCD8FF8>

Philadelphia Building Energy Benchmarking 2019 Report

<https://www.phila.gov/media/20191210091804/2019-Municipal-Energy-Benchmarking-Report.pdf>

City of Philadelphia Energy Benchmarking Website

<http://www.phillybuildingbenchmarking.com/>

Philadelphia Office of Sustainability Press Release: City Passes New Building Tune-up Legislation to Further Climate Goals

<https://www.phila.gov/2019-11-21-city-passes-new-building-tune-up-legislation-to-further-climate-goals/>

Powering Our Future: A Clean Energy Vision for Philadelphia

<https://www.phila.gov/documents/powering-our-future-a-clean-energy-vision-for-philadelphia/>



For more information, contact Hoffmann Architects at (800) 239-6665 or visit www.hoffarch.com.

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