

THE GREEN WORCESTER SUSTAINABILITY AND RESILIENCE STRATEGIC PLAN

FREQUENTLY ASKED QUESTIONS

1. *What is the purpose of the Green Worcester Plan?*

The vision of the Green Worcester Plan is to make Worcester the most sustainable and climate-resilient mid-sized city in America by 2050.

The Plan is both visionary and pragmatic. It establishes an integrated approach to achieving sustainability and resilience in the city, with a special focus on City leadership and actions, assuming some assistance of the State and Federal governments. The plan also recognizes the essential role of the work to be done by non-governmental partners (i.e. not under the control of the city), such as residents, institutions, businesses, nonprofit organizations and others.

The goals, strategies and actions in the Green Worcester Plan are not intended to be exhaustive. The Plan identifies additional functional plans needed such as an Urban Forestry Master Plan, a Pedestrian, Bicycle and Micromobility Plan, and a Zero Waste Master Plan.

The Plan does not take the place of an upcoming Comprehensive (aka Master) Plan amendment and zoning ordinance revisions (see #3 below), but will influence it to be consistent with achieving sustainability and resilience goals.

A new Department of Sustainability and Resilience will work to ensure that the City incorporates sustainability and resilience in its policies and practices and will work with the Green Worcester Advisory Committee to report on the progress and communicate with the public.

2. *Will there be a citizen's Advisory Committee to work with the Department of Sustainability and Resilience?*

Yes. Appointed by the City Manager, members of this Green Worcester Advisory Committee will represent a variety of city institutions, including residents, environmental justice communities, the business community, nonprofit environmental groups, and persons with special expertise.

Responsibilities would include quarterly review of progress in implementing the Green Worcester plan, review of an annual progress report prepared by the Department of Sustainability & Resilience, review and comment on relevant municipal projects, as well as connect with the public at events.

The Green Worcester Advisory Committee would employ equity, health and prosperity lenses when reviewing and advising on initiatives and projects.

3. *How Will Land Use Planning and Smart Growth Principles Be Addressed?*

Land use planning is primarily implemented through zoning, which establishes regulations and requirements for the development and use of land.

From a longer-term planning perspective, a community’s Master Plan (aka Comprehensive or Long-range Plan) provides the basis for policy establishment and decision making regarding the long-term physical development of the municipality (M.G.L. Chapter 41, Section 81). The city is launching a comprehensive update to its Master Plan in 2021, which will study and recommend coordinated actions related to transportation and mobility, housing (including affordable housing), open space and recreation, zoning and much more. This effort will include extensive community engagement throughout the plan development process. The Division of Planning & Regulatory Services is leading development of the plan, with the support of many other municipal departments. The findings and recommendations of the Green Worcester Plan will influence the development of the Master Plan and its various elements to ensure consistency and facilitate achievement of sustainability and resilience goals.

4. *How will the public be informed about implementation of the Plan?*

The Department of Sustainability and Resilience, with review by the Green Worcester Advisory Committee, will prepare a public annual progress report on implementing the Green Worcester Plan, including identification of any opportunities to accelerate progress towards meeting goals. This report, and other information and documents, will be available in the Green Worcester section of the City’s website. In addition, discussions and reports on implementation of the Plan can occur during community events.

5. *Can the plan be revised and updated as conditions change?*

Yes. This is intended to be a “living plan.” That means that every year updates to the plan can be made at the time of the annual report. In addition, the Plan should receive a full review and update every five or ten years, as needed.

6. *The 2019 climate emergency declaration called for the elimination of greenhouse gas (GHG) emissions “citywide” by 2030, while recognizing the role of State and Federal assistance. Why does the Plan use different dates for eliminating fossil fuel energy and greenhouse gas emissions in different circumstances?*

The Green Worcester Plan has a special focus on policies and actions under the control of Worcester city government. The current GHG emissions elimination goals are:

- By 2030: 100% renewable energy for municipal facilities
- By 2035: 100% renewable electricity for the entire community through the Municipal Electrical Aggregation program; and
- By 2045: 100% renewable energy for the entire community, including for building heating and transportation (five years earlier than the State goal).

The City has less ability to control GHG emissions outside of its own facilities and operations, such as in transportation and private sector buildings, which account for a significant amount of GHG emissions throughout Massachusetts. For example, the City can invest in infrastructure and land use policies that promote alternatives to fossil-fuel vehicles, but it does not own, manage, or fund the city's transit agency, the WRTA, nor does it have the standing or means to fund a large-scale residential and commercial switch to non-fossil fueled transportation. To make a full transformation, all levels of the government and industries need to and are expected to be involved from regulatory, technological and economical perspectives.

7. *Can the City of Worcester ban oil and gas infrastructure for heating and cooling in new construction and major renovations in order to hasten electrification of building?*

The Massachusetts Attorney General recently determined that municipal bans of this type conflicted with state building and gas codes as well as requirements for uniform utility services to the public. The Green Worcester Plan includes a goal to require electric heating and cooling in new construction and major renovations, but will not be able to impose this without changes to state law.

8. *Would it cost more to heat a home with electricity, as opposed to natural gas?*

Most homes currently heated with air source heat pumps (ASHP) are smaller (1,272 SF) than an average Massachusetts home (1,861 SF of heated area). Their heating bills are less than heating bills for an average home heated with natural gas.

Current numbers¹ show that yes, if an average size home heated with gas was converted to an air source heat pump (ASHP) system, it would cost more per year to heat, when using the recent energy prices and census information. Converting an oil-heated home to ASHP now will not make a significant difference in the annual heating costs.

We anticipate that soon, ASHP will be a great alternative even for larger homes heated by natural gas, due to the following reasons:

- Air source heat pump technology and efficiency continues to improve at a rapid pace.
- ASHP are flexible, able to provide primary as well as secondary heat source to parts of a house.
- ASHP provide not just heating, but are an efficient source of cooling in the summers.
- ASHP installations often are naturally accompanied by improvements to the energy efficiency of the entire home, bringing total home energy use down.
- The price of natural gas is projected to increase over the next 10 years, while the price of renewable electricity continues to decrease. Already renewable energy systems in New England typically costs less to produce electricity than gas, coal, oil or nuclear plants.

The Green Worcester Plan has a goal of requiring new buildings to be net zero and climate resilient and promote deep energy retrofits of existing buildings. It also has a goal of Worcester becoming a 100% clean and affordable energy city by 2045. The plan has a number of strategies and proposed actions to

¹ <https://www.mass.gov/info-details/household-heating-costs#comparison-of-heating-fuel-cost-effectiveness->

achieve these goals, including incentivizing, but not requiring, electrification of the private homes (see #7 above), providing 100% renewable energy via the city’s existing municipal electrical aggregation program, and much more.

9. **Greenhouse Gas Emissions:** The city (via the Department of Sustainability & Resilience) will update and publish the citywide greenhouse gas emissions inventory in compliance with the current accepted guidance and practices used by other municipalities. Exact methodology and metrics are to be determined.
10. **Limiting Car Use:** The Plan has many actions that would incentivize land use development and practices (via changes to current regulations) that encourage and promote alternative modes of mobility. These topics will be further studied in the forthcoming Master Plan.
11. **Equity, Health, Prosperity:** Equity, health and prosperity are the three lenses that will be used to consider and recommend projects - by the Green Worcester Advisory Committee and the Department of Sustainability & Resilience. We believe that integrating these values into the projects’ planning and development is the best way to enhance their sustainability.
12. **Utilities and the Grid:** The Plan does not recommend that the City takes over the utility distribution system, but it does suggest considering becoming a Level II aggregator, by taking over energy efficiency funds and their distribution. Currently, we are watching closely the utilities’ efforts to modernize the grid and promote distributed energy sources – which holds the key to transition to electrification, a backbone of sustainable clean energy.

For example, Action V-7, recommends “*Distributed Energy Systems: Promote solar installations, geothermal networks, and other distributed energy systems, working with the state, National Grid, and other stakeholders. Work with utilities to undertake pilot projects for geothermal heating districts using natural gas infrastructure in neighborhoods, starting with triple-decker (higher-density) neighborhoods.*”

13. **Green Education:** The Plan has a goal for a robust green education and training program integrated with economic development initiatives and programs that will also bring significant co-benefits to Worcester.

For example, Action II-10 recommends:

“*School Curriculum: Integrate sustainability and resilience into the curriculum at all levels in the Worcester Public Schools:*

WPS offers an environmental science course at the high school level and some schools have schoolyard gardens, but sustainability/resilience elements as related to life in Worcester should be included throughout the school curriculum in every grade. Massachusetts uses an adaptation of the Next Generation Science Standards which includes climate change education. Students and faculty in the Boston Public Schools developed a sustainability and climate change curriculum for K-12 students that is aligned with state standards and has its own website with lessons, projects, and teacher resources: www.climatecurriculum.com/.

Develop programs in green building systems, green infrastructure design and maintenance, and green vehicle maintenance at the Worcester Technical High School.

Promote green technical careers through the WPS Innovation Pathways Program. In this program students commit to two years of college and career planning classes, two years of technical classes taken at Worcester Technical High School from November–March, and a 100 – hour internship during the summer or a capstone project by the end of their senior year.”

The Department of Sustainability & Resiliency and the Green Worcester Advisory Committee will be coordinating with the WPS programs and building on existing partnerships to implement this action.

14. What is the Green Worcester Plan’s Timeline? What has been the Green Worcester Plan’s Public Participation Process?

- 2018, Nov – City Manager convened Green Worcester Working Group - staff, representatives of environmental and other groups, residents
- 2019, March – Energy and Asset Management Division, as the municipal project manager, engaged Larissa Brown + Associates to assist with the project

Public Input:

- 2019, Summer - Professional, scientific telephone public opinion survey of residents and online version of the survey (both in English and Spanish)
- 2019, October - Public workshop
- 2019, Fall - Youth survey
- 2020, March - Public drop-in open house
- 2020, Nov - Online Public Review of the Draft Plan

Council Review & Approval; Establishment of the Department:

- 2021, Jan – Green Worcester Plan draft submitted to City Council
- 2021, Feb 24 – Public Meeting in front of the Urban Technologies, Innovation And Environment Committee
- 2021, Spring – TIE Committee recommendation to the Council and Council’s vote.
- 2021, July - Anticipated establishment of the Department of Sustainability & Resilience

Find more information at www.worcesterma.gov/GreenWorcester.