



RESILIENT TOGETHER CLIMATE ACTION TOOLKIT

FOR BUSINESSES

UPDATED 04.14.2021





PURPOSE OF THIS TOOLKIT

This toolkit brings together tips, how-to guides, and financial resources to help your business prepare for climate change and increase the stability of the regional economy.

You can reduce business costs, benefit your brand, and care for employees, customers, and community members by cutting emissions, reducing waste, and conserving resources.

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WHAT'S INSIDE

Learn about how climate change impacts us, then explore five resilience topics. Each Topic includes:

2.

1.

WHY the topic is important – both how our current behaviors are driving climate change and how our businesses are being affected.

WHAT your business can do about it - strategies that will reduce carbon pollution and increase resilience in the local economy.

HOW your business

3.

can take action now.





TOOLS - guides and resources to help you run a sustainable business.



As a business leader, you have the power to make choices that will help secure this safe and sustainable future. This toolkit provides resources and education on simple shifts you can make. Join us!



The ability to prepare for, recover from, and adapt to climate impacts.

WELCOME

The city governments of Beverly and Salem have come together to develop Resilient Together. our plan to take collective action in the face of the climate crisis. We are embracing a proactive, collaborative approach to mitigating climate change and building resilience to its impacts, ensuring that we remain inclusive and thriving communities for all residents and businesses for hundreds of years to come.

We all need to work together to reach our collective goal of carbon neutrality by 2050. Our Cities are leading by example, with bold policies and programs to reduce greenhouse gas emissions and build community resilience to intense storms, sea level rise, droughts, floods, and heat waves. As a business leader, you have the power to make choices that will help secure this safe and sustainable future. This toolkit provides resources and education on simple shifts you can make. Join us!

CLIMATE CHANGE ON THE NORTH SHORE

Climate change is already impacting our communities by creating hotter and drier summers, heavier rainfall, more frequent and intense storms, and rising seas. These changing patterns increase the risk of property damage, power outages, and health issues, and threaten the services our communities rely on like transportation, water, and energy.

EXTREME STORMS



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We studied which activities in our communities contribute the most greenhouse gas emissions, to see where we need to make the most changes. In both Beverly and Salem, energy used in our buildings were the biggest source of climate-warming GHGs. Transportation was the second-biggest source of emissions. The resources in this toolkit will help you reduce your own emissions in these two major categories, as well as in water, wastewater, and waste.

Community Emissions by Sector



1 U.S. Climate Resilience Toolkit. (n.d.). Retrieved October 29, 2020, from https://toolkit.climate.gov/image/762

- 2 National Oceanographic and Atmospheric Association. Storm Events Database. 2016
- 3 Climate Change: Global Sea Level: NOAA Climate.gov. (2020, August 14)
- 4 NOAA National Centers for Environmental Information State Climate Summaries



WHAT ARE GREENHOUSE GASES?

Greenhouse gases (GHGs) are essential to life on Earth. They provide a "blanket" in our atmosphere, trapping heat and regulating the Earth's temperature. However, by burning fossil fuels to power our homes, businesses, and automobiles, we have increased the concentration of GHGs in the atmosphere to levels that have led to disruptions in the Earth's climate.



- Request a <u>free energy</u> <u>assessment</u> of your building.
- Start small with energy savings, like turning off lights and electronics when not in use.
- In Salem, opt into
 PowerChoice Plus for
 100% New England
 renewable energy.



Greenhouse Gas (GHG) Usage in Commercial Buildings



ENERGY

Burning fossil fuels to provide our energy needs is a major source of greenhouse gas (GHG) emissions that cause climate change and the resulting harm. **Commercial buildings in Beverly and Salem account for a quarter of our total greenhouse gas emissions (GHGs).** By improving the reliability of our energy systems, shifting to cleaner sources, and consuming energy more efficiently, we can protect our businesses and the communities we serve by reducing operational downtime, saving money, and lessening exposure to long-term financial risks.

Your actions as a business owner are especially powerful because energy use intensity – the amount of energy used per square foot of building space - is **higher** for commercial buildings than for residential buildings (see charts). As a business, every step you take in your commercial building – from occupancy sensors on the lights to purchasing ENERGY STAR kitchen equipment to installing solar panels - will reduce your overhead *and* make a big impact on greenhouse gas emissions community-wide!

Natural Gas Intensity Average in Beverly and Salem







TOOL: EFFICIENCY GUIDES

Save on your utility bill with building adjustments with this <u>Energy Star Checklist</u>.

Motivate your team with a competition to reduce energy and advertise your success for an added bonus with <u>EPA's</u> <u>Battle of the Buildings</u> <u>Toolkits.</u>

ENERGY EFFICIENCY

Increasing energy efficiency can help your business reduce energy bills and increase profits, all while cutting harmful emissions. Start small by turning off unnecessary lights and electronics, then tackle projects with some up-front cost but quick payback, like LED lighting replacements and controls for your building systems. Then, dig deep for long-term cost savings with major purchases like efficient appliances, updated windows, or new heating and cooling systems.

Have more time? Go through all the steps for deep energy savings with the <u>Energy Star</u> <u>Action Workbook for</u> <u>Small Businesses.</u>

TOOL: FACILITY ASSESSMENTS



Mass Save works with National Grid to provide <u>small business</u> and <u>large</u> <u>facility</u> assessments at low or no cost.

ENERGY EFFICIENCY ASSESSMENTS

Energy assessments bring experts to your facilities to review your energy bills, walk through your buildings, and identify where your business can maximize energy savings and cut GHG emissions.



BUILDING AUTOMATION SYSTEMS

Building automation systems (BAS) can control heating, cooling, lighting, and appliances in commercial buildings. These networked systems of sensors and controls can be built into new construction or <u>retrofitted into an existing building</u>. An automated building management system can reduce energy consumption by up to 20% compared to manually controlling building systems.

A BAS scans and rebalances building systems for the greatest efficiency. They can be controlled remotely and can alert facility managers to malfunctions, leaks, and emergencies. In addition to reducing the utility bills, these systems save maintenance costs and make the space more comfortable for everyone. By maximizing the efficiency of your building and minimizing energy waste, you can cut emissions and improve your bottom line.

Installing and upgrading these systems are often eligible for financial assistance as a building retrofit.

TOOL: RETROFIT ASSISTANCE

The <u>Energy Saving</u> <u>Programs</u> page with National Grid summarizes the technical and financial support (including loans and rebates) available and provides contact info.

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Check out these US Department of Energy <u>Advanced Energy</u> <u>Retrofit Guides (AERGs)</u> to get ideas unique to your business type. Maximizing Energy Savings for Small Businesses from NREL provides a three-step how-to guide with resources for small businesses.

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<u>Mass Save</u> is a utilitysponsored initiative that helps businesses save energy and money through rebates, incentives, and free equipment.

BUILDING RETROFITS

Make some easy changes to your business' building: weatherization, upgrade to LED lighting, install Energy Star appliances and equipment.

It's smart to contact your energy utility early in the process to make sure you get the maximum financial assistance. Most Beverly and Salem businesses are National Grid customers - email <u>Efficiency@NationalGrid.com</u> or call 1-800-787-1706 (or 1-800-332-3333 for small businesses) to get started.

Beverly Commercial Square Feet by Heating Fuel



Salem Commercial Square Feet by Heating Fuel



ELECTRIFY YOUR OPERATIONS

Today, most of our businesses are heated with natural gas or heating oil, which are significant contributors to greenhouse gas emissions in Beverly and Salem.

To permanently reduce GHG emissions, we need to electrify building systems (and transportation) with 100% renewable energy. With as much as 97% of commercial buildings heated with fossil fuels, there is a long road ahead to switch to electricity, and your help is needed!

As a business owner, you have an opportunity to support this transition. As you upgrade equipment or perform renovations, consider replacing systems and equipment with more efficient, electric options, for which there are also numerous rebates and incentives. Electrifying your building's heat source can cut building emissions by up to 44%!

TOOL: COMMERCIAL SOLAR GUIDES

The Massachusetts Clean Energy Center (MassCEC) <u>Commercial Solar Hub</u> provides background info, details on available incentives, and connections to solar energy experts.

The National Grid

energy bill.

Distributed Generation portal can help you

understand how solar

energy systems on your

business will affect your

MassCEC also has grants and technical assistance programs to help commercial building owners deploy other renewable energy technologies.

RENEWABLE ENERGY

Once you have minimized your business's energy waste, it may be time to go straight to the source! Renewable energy, like wind and solar, are emissions-free ways to generate electricity, and every year more of our region's power is coming from renewables instead of fossil fuels. The more renewable sources we use to fulfill our energy needs, the closer we get to carbon neutrality by 2050.

Installing a solar array on your building may be a good option for your business. Generating your own energy has benefits:

- > More control over your energy costs.
- > Reducing your electric bill's usage charges and demand charges.
- > Backup energy during an emergency.
- Ability to earn incentives during peak power times.
- > An investment with continuous financial and environmental returns.

ENERGY · RESILIENT TOGETHER CLIMATE ACTION TOOLKIT FOR BUSINESSES / 9

COMMUNITY ELECTRIC AGGREGATION PROGRAMS

Community choice aggregation is an electricity program run by your city, that makes renewable energy available to City residents and businesses, while also offering stable, predictable pricing.

<u>Salem PowerChoice</u> launched in 2019, and all National Grid customers in Salem were automatically enrolled unless they opted out. Your basic service, PowerChoice Standard, includes

An electricity supplier selected by Beverly buys cleaner electricity for you National Grid continues to deliver your electricity





100% renewable energy, sourced outside of New England. You can champion local clean energy by opting up to PowerChoice Plus, which provides 100% from New England renewable energy projects, and supports local jobs and renewable energy growth in our region.

<u>Beverly Community Electric</u> plans to launch in winter 2022.

The City of Beverly



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- Host a <u>MassBike</u> <u>lunch & learn</u> for bike maintenance help and bike safety training.
- Encourage a green commute by installing a bike rack at your businesses.
- Allow telecommuting, when possible, to save money, energy, and time!



GHG Emissions Caused by Transportation



TRANSPORTATION

Transportation accounts for nearly half of both Cities' total emissions. Transportation is critical to reducing GHG emissions while creating cleaner, safer, and more connected travel for your employees and customers. As businesses, you can reduce community emissions significantly by switching to less carbonintensive transportation modes and encouraging our employees to do the same.

In both cities, these emissions often result from just one person commuting by personal car. Businesses can cut down on this inefficient form of travel by promoting greener commuting options and providing alternatives for work-related travel.

Beverly and Salem both offer public transit options that could be useful to move around the cities. See if you can use the <u>Salem</u> <u>Skipper</u>, <u>CATA bus</u>, or <u>The Ride</u> to get to your next destination! Need to get to a different city? Consider using the commuter rail instead of taking a personal car out of town.

TOOL: MASSACHUSETTS CLEAN CITIES COALITION

The <u>Massachusetts</u> <u>Clean Cities Coalition</u> can help you choose the alternative-fuel vehicle that's right for your business needs. They also can help you find grants and rebates.

GREENING YOUR FLEET

Electric vehicles (EVs) and other alternative-fuel cars are a great way to drastically reduce transportation related emissions and can save time and money with less fuel and lower maintenance. Electric options are now available for everything from riding lawn mowers and forklifts to delivery vans. Heavyduty diesel engines have replacement options as well. Be sure to investigate rebates and tax credits when you purchase or lease an EV.

TOOL: MOR-EV

Massachusetts offers rebates up to \$2,500 to commercial and nonprofit organizations who buy electric vehicles for their fleets.



Beverly has added an electric school bus in an effort to green their fleet!

TOOL: MASSEVIP WORKPLACE & FLEET CHARGING INCENTIVES

Check out this State <u>funding opportunity</u> to add an EV charger for employees or for your fleet vehicles.

EV CHARGING FOR EMPLOYEES

According to the US Department of Energy, employees are six times as likely to own an electric vehicle if their workplace provides charging infrastructure, and 90% of employers that provide it receive positive feedback from their employees. Several EV charging stations are located around Salem and Beverly, and <u>Beverly is adding more</u>!



https://chargehub.com/en/Charging-Stations-Map.html

TOOL: NORTH SHORE TRANSPORTATION MANAGEMENT ASSOCIATION



Become a member of the <u>North Shore TMA</u> to access resources like the <u>CommuteConnect</u> app that creates easy ways for employers to incentivize and track your employees' sustainable transportation choices. Members also receive access to a Guaranteed Ride Home (GRH) service for participating employees. This 'commuter insurance' helps to alleviate concerns of being stranded at work in the case of unforeseen circumstances, such as emergencies, inclement weather, or unexpected overtime.

LOW-CARBON COMMUTING

Encourage and incentivize ride sharing or public transit options for employees. Support employees who bike or walk with safe bike parking, changing areas and lockers, celebrations for Bike to Work Day, or a MassBike Lunch & Learn. Your business could also be eligible for tax breaks for providing transit, carpool, or biking/walking incentives. Sharing rides, using transit, or taking an active commute, like walking or biking to work, will cut emissions, decrease traffic congestion, and save parking spaces at your business.

\$11,000

Business savings per employee that telecommutes half of their working hours.



www.microbizmag.co.uk CC BY 2.0

TELECOMMUTING

You can shrink your businesses' transportation carbon footprint by offering employees the option to work remotely, as applicable. Telecommuting offers benefits like less commuting time for employees, increased productivity, reduced emissions from traveling, and savings for some business expenses that add up. There could be huge benefits for them, your business, and the planet.

- \$11,000: what the average business can save per employee that telecommutes half of their working hours because of increased productivity, savings on real-estate and building costs, and more.
- If half the American workforce telecommuted half their work week we could save: 54 Million metric tons of GHGs, the equivalent of taking 10 Million cars off the road.

Get started setting up remote work for your business with this quick guide from <u>Trello</u>.



- Send employees on a leak scavenger hunt in your building.
- Choose non-toxic salts and deicers, used sparingly, to maintain paths in the winter.
- Install a <u>water</u> <u>efficient fixture</u> for up to 20% water savings.



WATER

As climate impacts intensify, natural resources such as our water source, the Ipswich River, can be strained by water quality threats and drought. As a business, the daily activities you engage in impact our local watershed and the safety and availability of this essential natural resource.



Salem's wastewater treatment facility, which serves multiple municipalities, **processes 1.8 million gallons per day,** with 29 miles of pipes to get the job done! Read up on local water treatment <u>here</u>.



TOOL: WATER EFFICIENCY-SUSTAINABLE FACILITIES TOOL

The US General Services Administration has compiled resources and case studies on dozens of water-related topics applicable to businesses of all sizes. Check out the GSA's <u>SF Tool</u>!

TOOL: WATERSENSE



Install efficient fixtures with the EPA's <u>WaterSense</u> label and use up to 20% less water!

CONSERVING WATER

Conserving water is critical as climate change increases the frequency of drought and rainfall is heavier but more sporadic.

Water and energy are connected too - energy is used to treat and distribute water and to heat it for people to use or for process steam. Energy is also needed to treat wastewater leaving our businesses. Conserving water, through waterefficient appliances and fixtures, can save money on your water and energy bills.

- > Check out these <u>EPA tips</u> to fix leaks and minimize wasted water.
- Did you know that as much as 50% of water we use outdoors is lost to evaporation, runoff, and wind? Conserve water on exterior landscaping with these tips.



WATER QUALITY IN WINTER

Keeping people safe during the winter requires managing snow and ice, which often involves using salts and de-icers. This can lead to harmful runoff. Store these chemicals carefully and apply them sparingly. When buying, read the labels and choose those non-toxic to animals and plants. Read these <u>salt storage guidelines</u> from the MDEP.

PROTECTING WATER QUALITY

Both cities have recreational and business activities centered around the Salem Sound, and preserving the quality of this body of water and the several rivers in our region that are part of the Sound's watershed is important to maintaining our shared connection to the sea and shore.

PREVENTING HARMFUL RUNOFF

If your business has any landscaped areas, you can reduce stormwater runoff that pollutes our waterways by following these <u>recommended steps</u>.

You can reduce runoff in other ways too, like taking care of parking lots, performing fleet maintenance, and cleaning up outdoor areas on your property. Read more about each of these ways to <u>minimize</u> <u>runoff from your property</u>!

If you're redoing your parking lots or walkways, consider swapping concrete and asphalt for a water-permeable solution like permeable pavers, porous asphalt, or adding planted areas to absorb runoff.



- When serving food, get a head count and have a plan for leftovers.
- Put your city's Hazardous Waste Collection Day on the calendar and gather chemicals and electronics for safe disposal.
- Think about the one item your business landfills the most - ask your waste and recycling haulers and your employees for ideas to reduce, reuse, or recycle the item.



WASTE REDUCTION

Being informed about proper disposal for materials from your business is important so that you can stay in compliance with regulations, but you can make a big impact on our community's resilience if you also reduce the amount of waste your business produces and increase recycling for the waste that is produced. Reducing solid waste generation can save time, energy, money, and transportation, and ease the strain on our region's overburdened waste management systems.

Beverly and Salem's waste goes to an incinerator <u>facility</u> in North Andover and provides energy that generates power for the local utility. While this is a more energy-efficient and climate friendly solution than dumping waste in landfills, our goal as a community is to reduce the amount of waste delivered to the incinerator in the first place.

Remember that curbside and drop-off programs are intended for residents and some legacy small business locations and may only accept very small volumes of commercial waste. If you produce large quantities of waste, you will need to contract with a private trash hauler.

TOOL: DISPOSAL GUIDES

Check out Green <u>Salem's</u> <u>A-Z Guide</u> for Reuse, Recycle and Disposal options around the City.

For specifics on what each city collects in its curbside program, refer to guides for <u>Salem</u> and <u>Beverly</u>.

RECYCLING

Every business should be motivated to participate in recycling programs. Recycling creates around 60 times more jobs than waste disposal. It also keeps the costs of raw materials down. Recycling an aluminum can, for example, saves 90% of the energy required to produce a new one!

Separating waste streams can even create value for your business – often clean cardboard and scrap metal can be sold when it's kept clean and separated from trash and other containers, and even some foams and plastics could be of interest to the right partner!



CIRCULAR ECONOMY

A circular economy is an approach to economic development that strives to keep products and materials in use and eliminate waste and pollution by smart design. This model of growth is possible at all scales, from one small business, to the entire country!

A circular economy model can save businesses money and resources from having to purchase new raw materials or equipment, all while reducing waste and benefiting the local business community.

Learn more about <u>Circular Economy</u>.

SPECIAL TYPES OF WASTE

Not all waste can go in the trash or in the recycling bin. If your business produces any of the following, take advantage of local options for safe and legal disposal.

Yard Waste: If your business operates or owns property with landscaping, you can make sure that you are properly disposing of the organic matter. Both <u>Salem</u> and <u>Beverly</u> have yard waste stations to properly dispose of organic matter like leaves, grass clippings, woodchips etc.

Hazardous Waste and Electronic Waste:

Chemicals, cleaning supplies, technology, batteries, and other hazardous waste pose a serious threat to human health and the environment. Stay informed on <u>Beverly</u> and <u>Salem</u>'s special collection days and locations and safely collect, transport, and dispose of any suitable materials. For electronics like computers, printers, or radios, talk to your vendors about taking back outdated equipment, or consider switching to a lease.

Food Waste: 30-40% of edible food is wasted in the U.S. each year, and most of that wasted food goes to landfills. Whether you own a restaurant, or provide food at meetings and conferences, your business can be a part of the solution to divert food waste from the landfill.

TOOL: COMMERCIAL COMPOSTING SERVICE

Black Earth Compost offers commercial scale composting service that is customizable and may be right for your business needs!_





- If you hire a local vendor for any events, you can select those who have good waste management practices or request such practices for your events. Sustainable waste management related to food can mean serving banquet style, using compostable serving products and avoiding foam and single use plastics.
- Consider adopting an easy composting system for events where food is served, or in an employee break room, to make sure food scraps stay out of the landfill.
- If your business orders food for employees on occasion, consider smaller portions and take a head count of who will be eating, so that there is not much food left over.

TOOL: GREEN PROCUREMENT GUIDES

SF Tool's <u>Green</u> <u>Procurement</u> <u>Compilation</u>, from the US General Services Administration, provides advice for many types of products and services, and an easy-to-use search engine.

EPA and Massachusetts

both have guides to environmentally preferable purchasing and ecolabels that can be a great starting place to learn about different ecolabels and become the green purchasing expert for your business.

GREEN PROCUREMENT

As businesses, what you choose to buy matters! Purchasing and promoting green products can amplify your sustainable actions to the larger economy and can catalyze a more sustainable marketplace.

There is a growing market for greener products and services, and it can be complicated to discern which are credible and best to buy. Relying on Eco-labels or trusted vendors you already use, or talking to your industry colleagues, can help narrow the field.

Sign up for emergency alerts from <u>Beverly</u> and <u>Salem</u> to be informed about events as they happen.

 Complete the risk assessment checklist found in the <u>Power</u> <u>Outage Ready</u> <u>Business Toolkit</u> (pg. 8).



TOOL: READY.GOV/ BUSINESS

Ready.gov provides toolkits in Spanish and English for power outages and inland flooding as well as several training modules to help your business plan for emergency response, crisis communications, IT recovery, employee support, and many more topics.

TOOL: LOCAL EMERGENCY ALERTS

Sign up and customize emergency alerts from Beverly, or Salem's CodeRED to stay informed about emergencies that may affect your business or employees.

PREPARING FOR EMERGENCIES

Emergency situations affect your business, your employees, and your customers. Interruptions such as flooding, heavy rains, extreme heat, and power outages are predicted to increase due changes in our climate.

You want to keep your employees, customers, and business assets safe – and advanced preparation can reduce the impacts of these hazardous events, saving you money and getting you back to work sooner. So, take time to prepare by assessing your risk and readiness, developing plans, and implementing advanced preparations. Consider your supply chain as well, when making plans.





START HERE! CHECKLIST

ENERGY

- Request a free energy assessment of your building at www.masssave.com.
- Start small with energy savings, like turning off lights and electronics when not in use.
- In Salem, opt into PowerChoice Plus for 100% New England renewable energy.

TRANSPORTATION

- Schedule a lunch & learn for bike maintenance help and bike safety training with www.massbike.org.
- Encourage a green commute by installing a bike rack at your businesses.
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STAY CONNECTED

Your local government supports you in adopting a more sustainable lifestyle. Stay up to date with *Resilient Together* and all Beverly and Salem's sustainability efforts.

FOLLOW US!



Questions? Comments? Stories to share? Reach out via email to: Erina Keefe at <u>ekeefe@beverlyma.gov</u> or Esmeralda Bisono at <u>ebisono@Salem.com</u>

OR VISIT: Resilient Together Dashboard