



Climate Action for Museums

A Practical Toolkit to Guide
Your Sustainability Journey

Acknowledgements



Climate Action for Museums: A Practical Toolkit to Guide Your Sustainability Journey

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Pilot Sites

Alberta Aviation Museum
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Museum Case Studies

Canadian Museum of Nature
Kerry Wood Nature Centre
Royal Alberta Museum
Royal Botanical Gardens

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Introduction

Climate change is a defining issue of our time. From increased wildfires, droughts, floods, and heatwaves, to species extinction and loss of biodiversity, the impacts of climate change are all around us. Science tells us that we must act today to ensure a healthy, vibrant planet for generations to come.

Canada has set a goal to achieve net-zero greenhouse gas (GHG) emissions by 2050 and to reduce our emissions by 40 - 45% from 2005 levels by 2030. Many municipalities across Canada, including the City of Edmonton and the Town of Canmore in Alberta, have declared climate emergencies and are setting community climate action goals in line with achieving an 80% reduction or being net-zero by 2050. To achieve these ambitious goals and ensure our communities are resilient to the impacts of climate change, we need organizations of all sectors and sizes to play a role in taking meaningful climate action and supporting an inclusive and prosperous transition towards a net-zero future.

The Role of Museums

The museum sector, and the cultural sector as a whole, has reached a point where the need for change is urgent. The global economic reality influences non-profit funding structures, demographic shifts, continuing emergence of new technologies, and approaches to global environmental issues. In turn, these issues directly affect the sustainability of the museum sector. The need for a new way of working has been discussed and understood for many years. Now it is necessary for the sector to act.

As trusted institutions committed to education with strong connections with their communities, museums are in the unique position to preserve the past, inform the present, and shape the future. Museums have a powerful platform to contribute to the public's understanding of current environmental challenges, and inspire audiences to envision a greener future. By working to green their own operations, museums can be leaders and serve as real-life models of environmental sustainability in action for the general public and other organizations to learn from and engage with.



About This Toolkit

The Alberta Museums Association has partnered with Green Economy Canada to develop this guide and toolkit as a resource museums can use to green their operations and embed environmental sustainability into the core of how they operate. This guide provides an overview of identifying where your emissions come from, developing a GHG reduction plan, setting a meaningful reduction target, and maintaining progress towards your goals. There are more detailed resources attached in the appendices that can help you put the concepts into action. Whether you're just beginning or have been on the journey for a while, we hope this resource helps to propel your sustainability efforts forward.



About the Alberta Museums Association

The Alberta Museums Association (AMA) was founded in 1971 as a non-profit society through which museum workers could meet for the benefit of Alberta's developing museum community. Our mission is to lead, facilitate, and support museums in their vital role with communities. Today, the AMA counts nearly 400 Institutional and Individual Members among its membership of Alberta museums and museum professionals.



About Green Economy Canada

Green Economy Canada is a national non-profit accelerating Canada's transition to a vibrant and inclusive net-zero future by engaging businesses and organizations in communities across the country. Through our growing network of 8 Green Economy Hubs and 300 Green Economy Leaders, we're making business better, together.





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The Business Case for Sustainability

Many organizations undertake sustainability work because they feel that it's "the right thing to do." However, there is an increasingly strong business case for organizations to consider their social and environmental performance, and those that look to deeply embed sustainability into how they operate can reap many benefits.



Reduced Operating Expenses

Finding ways to save money is a common motivation across organizations of all sectors and sizes, and luckily many sustainability projects that reduce energy-, waste-, and transportation-related emissions have a dual financial and environmental win. There are many low-cost or no-cost improvements museums can make to reduce both their environmental impacts and their operating expenses, including training employees on how to use less energy and sort waste.



More Engaged and Productive Employees

One study found that organizations that had voluntarily adopted sustainable practices saw a 16% boost in employee productivity,¹ and the World Business Council for Sustainable Development reported that organizations with engaged employees grew profits three times faster than competitors.² In addition, 76% of millennials now consider an organization's social and environmental commitments when deciding where to work.³ Not only can a strong commitment to sustainability be motivating for current employees, it can also be an enticing factor in attracting and retaining the top talent of the future.



Risk Mitigation

Embracing sustainability is an increasingly important risk mitigation strategy. There are costs to inaction, from the reputational risks of not doing enough, to the financial risks that come from regulations like an escalating carbon price. Many organizations are also seeing supply chain disruptions from climate change, making it more difficult or expensive to source materials. Taking action on climate change and looking at your operations through a broader sustainability lens can help you make smart operating decisions to stay resilient.

¹ Tensie Whelan and Carly Fink, "The Comprehensive Business Case for Sustainability," *Harvard Business Review*, 2016.

² World Business Council for Sustainable Development, *Engage: Inspiring Employees about Sustainability* (2010), page 6.

³ Cone Communications, *Millennial Employee Engagement Study - Cone Communications* (Cone: Cone PR: Cone Inc: PR Agency: Boston: NYC, 2015).



Enhanced Reputation

Walking the talk on sustainability can help increase your reputation with your visitors and community. A recent survey found that 91% of global consumers now expect organizations to consider their social and environmental impacts as part of operating.⁴ With this in mind, sustainability could be a way to attract new visitors and strengthen relationships with existing ones. The Harbourfront Centre in Toronto, for example, used their sustainability work to engage directly with their community and to reach visitors in a meaningful way through both technological changes and arts and culture programming.⁵

Case Study Kerry Wood Nature Centre



The Centre is now able to offset approximately **20-30%** of its annual electricity consumption



89,000 kg CO2 emissions reduced over the life of the project

In 2005 (Phase 1) and 2012 (Phases 2 - 4), the [Kerry Wood Nature Centre](#) installed a 36 kW solar array as part of a larger project to balance ecological and fiscal responsibility. The Centre tracks its power generation, CO2 emission

reductions, and cost savings [online](#) to provide a practical, understandable model for the Red Deer community of the benefits of relying on renewable energy.

⁴ Cone Communication, *Ebiquity Global CSR Study - Cone Communications* (Cone: Cone PR: Cone Inc: PR Agency: Boston: NYC, 2015).

⁵ Harbourfront Centre, "Environmental Sustainability Programme," Harbourfront Centre: Environmental Sustainability (2019).



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Getting Started



Whether you're new to sustainability work or looking to add more rigour to the work you've been doing to date, it's important to have leadership buy-in as you're getting started. Without support from decision-makers, it will be hard to make meaningful progress on any of your efforts. It's also important to involve other employees from diverse functional areas throughout the process, and establish a lead person or committee responsible for stewarding your sustainability work. Part of this toolkit includes a guide to [establish a Green Team](#) as a support structure to help set and achieve your sustainability goals.

Getting started can feel daunting, but remember that everyone started somewhere. The road to sustainability is a winding journey, and there are many lessons to learn from other organizations on this journey with you. This guide summarizes best practices to help you get started and encourage you to increase your sustainability ambition. There are many opportunities to continue learning and sharing such as by attending free sustainability webinars offered by different organizations, joining local sustainability networks, and forming connections with other museums on a similar journey.

The AMA's [Sustainability Working Group Report](#) identifies environmental sustainability as one of the five facets of sustainability along with financial, cultural, social, and health and well-being. Reducing GHG emissions is one way your museum can act mindfully in this area of sustainability to ensure the environment it operates in is supported for the long-term.



United Nations Sustainable Development Goals

The United Nations Sustainable Development Goals (SDGs) were established to address the global challenges we collectively face in order to create a more vibrant, equitable, and sustainable future for all. The 17 SDGs and the associated 169 targets were adopted by all UN Member States, including Canada, in 2015 with a commitment to achieve them by 2030.



This toolkit, with its focus on climate action and reducing energy, waste, and water consumption, helps you work towards the four SDGs shown.

SUSTAINABLE
DEVELOPMENT
GOALS

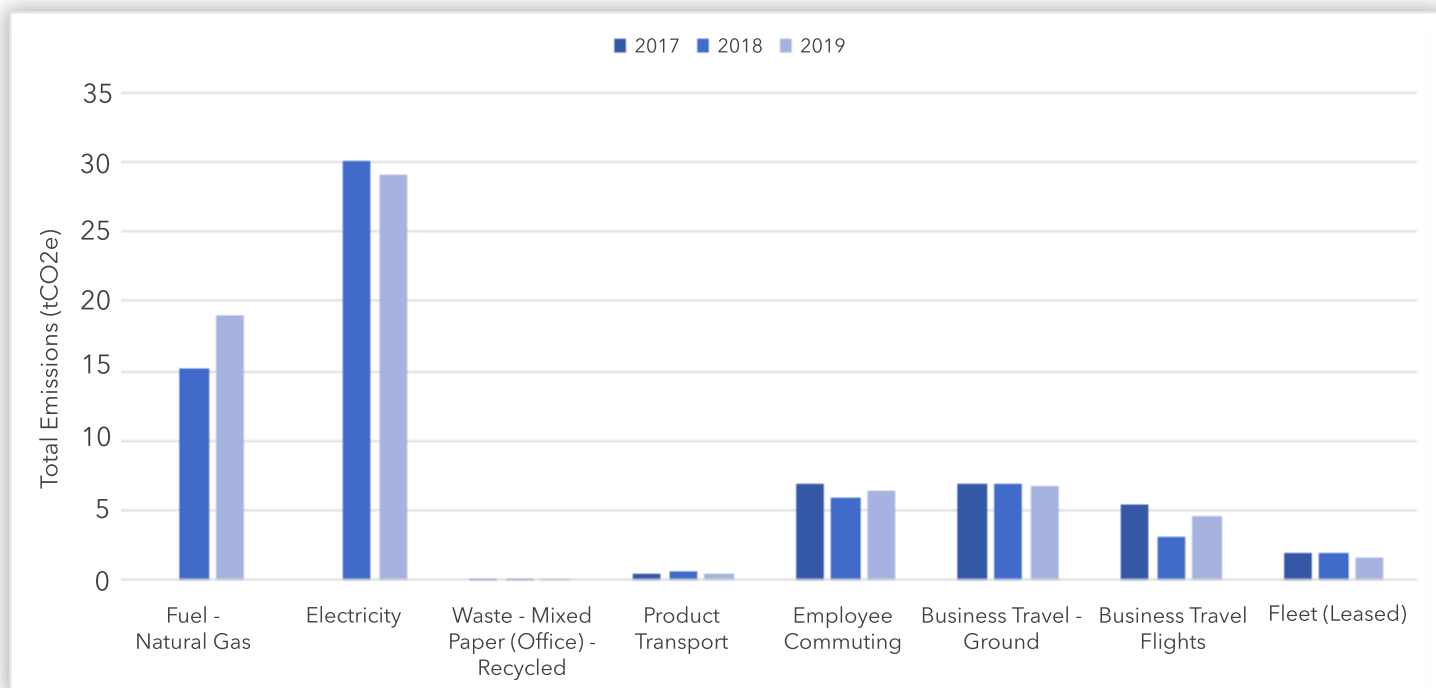
Want to learn more about the SDGs?

Check out this [primer](#) and associated webinar links for a practical step by step process of credibly aligning your organization with the SDGs. Whether you're new to the concept or have been at it for a while, this content can help.

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Identifying Your Impacts

The best way for you to understand where your emissions come from is to get a Greenhouse Gas (GHG) Inventory developed.



A GHG Inventory helps you quantify your GHG emissions based on actual data stemming from your organizational activities, such as heating, cooling, and powering your building, operating your fleet, conducting business travel, and running events. It can give you a clear sense of what the biggest sources of your emissions are to help focus your reduction efforts and get the best impact for your investment of time and money. It is also a necessary precursor to setting a GHG reduction target - an important step in making a serious commitment to climate action, and communicating that commitment credibly to internal and external stakeholders.

Most organizations typically enlist a third party to help them develop their GHG Inventory and to help them quantify the GHG reductions that come from actions taken. If this is of interest to you, Green Economy Canada can help.

It's a good bet that the majority of your emissions will fall into the following categories:

Building Energy Use

Electricity, Natural Gas & Refrigerants

Activities related to your building's energy consumption are likely going to be the main drivers of your GHG emissions profile. Lighting is often your main culprit for electricity use, so upgrading to LED lights is generally a good investment to reduce energy consumption with a quick payback. Other big users of electricity in museums would be computers and peripherals (printers), exhibits, security systems, and wayfinding.



Emissions from natural gas are most commonly from space and water heating. However, an important contributing factor is air leaks in your building: the more air leaks there are, the harder the HVAC system has to work, causing more emissions.

Refrigerants are a potent source of GHG emissions and are part of your building's cooling systems, fridges, freezers, and reach-ins for food service locations. They do exponentially more damage than GHG emissions released from electricity or natural gas use, so reducing even small amounts of refrigerants can have a big impact.

Travel & Transportation

Travel- and transportation-related emissions are likely another big source of emissions. These are all the tailpipe emissions from vehicles burning fuel like gasoline or diesel, jet fuel, or propane. Common activities here include business travel (flights, rail, taxis, rental cars, etc.), employee commuting, shipping and deliveries of your collections, vehicle fleet (utility vehicles and other mobile equipment like forklifts and cranes), and even visitor transportation.

Waste

These emissions come from gases that are released when waste decomposes in a landfill or is incinerated. As waste - particularly organic waste - breaks down over time, it releases methane which is a potent greenhouse gas, so reducing waste sent to landfill has an exponential benefit. Common waste sources for museums would likely include construction and renovation waste, and exhibit waste depending on how often exhibits are rotated. If you have restaurants or food service locations, these will be big contributors as well. Lastly, there will also be general waste from visitors, office waste (paper and consumables), e-waste, and maintenance waste.

Water

Water conservation in and of itself is a good environmental goal, but there is also a co-benefit in energy and emissions reductions. Museums with large physical landscapes often use lots of water for irrigation, and things like pumps, motors, and flush valves use electricity, which has associated emissions. Consider the waterless urinal. Each waterless urinal saves an average of up to 40,000 gallons or more of water per year. If water isn't coming in, then less sewage is created.⁵ Because there is no need to transport or convey water to or from a waterless urinal, each waterless urinal also reduces about 720 lbs of CO₂ emissions annually.⁶ Anywhere you can look to reduce water consumption will save you money and reduce GHG emissions.

⁵ G.P. Thomas, "The Environmental Benefits of Waterless Urinals," AzoCleanTech, 2012.

⁶ Ibid.



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Developing Your Action Plan



Identifying Actions

To determine which actions make the most sense for you to undertake, you will want to gather information about your specific operations - the equipment, processes, and reasons behind certain activities. Here are some ideas for how:



Have a brainstorming session with employees, including those who are on the front lines or are end-users who know the finer details of how and why something is done. When people are asked to think about what they use and how they use it, they often find ways to reduce consumption.



Look for industry best practices. The Canadian Museums Association's [Sustainable Development Guide](#) or [The Green Museum Handbook](#) are great examples. Publicly available registries like the [Leadership in Energy and Environmental Design \(LEED\) project directory](#) on the Canadian Green Building Council website have some museum reports, and you can also learn lessons from what others outside of the museum sector are doing to green their operations.



Speaking with third-party experts such as consultants and contractors for things like recommissioning, energy audits, and building / equipment retrofits can also be useful to hone in on action areas and develop the business case for taking them on.



Sustainable Projects Cheat Sheet Resource

We've created a worksheet that you can use with your team to help think through what action areas might be worth exploring further. Check out the [Sustainable Projects Cheat Sheet](#) at the end of this toolkit.

Where Does Adaptation Fit In?

Climate mitigation is taking action to prevent the worst case scenarios of climate change impacts. Climate adaptation refers to changing natural or human systems to deal with the adverse impacts of climate change. A resilient organization is one which considers actions to both mitigate and adapt.



While this toolkit focuses on mitigation, considering adaptation actions is also important in increasing your resilience. Through appropriate planning and execution of adaptation and mitigation actions, you will help ensure that your organization and employees will experience fewer negative impacts from climate change.

Each type of extreme weather event has the potential to introduce a high level of risk in the following ways:

Climate Change Events	Associated Risks
Extreme Precipitation and Flooding	Flooding and inundation of low-lying lands and property cause an impact on soil surrounding the foundation which can lead to sewer damage.
Extreme Wind Events or Hurricanes	Extreme wind events cause damage to building facades and windows.
Wildfire	Flames, heat, soot, smoke, and hot gases can cause tremendous damage on buildings and collections that reside in museums.
Heatwaves and Extreme Temperatures	Extreme temperatures can result in increased pressure on energy loads and peak demand for cooling.

Risk Management Assessments

The first step to successful climate change adaptation is conducting a risk management assessment. You will need to examine your organization and processes to understand where you are most vulnerable due to climate change. A standard risk management assessment has **5 phases**:

- **Identify** physical risks to your organization that could be brought on by climate change.
- **Assess** the probability that the risk will occur and the impact on your museum.
- **Manage** each risk by implementing adaptive strategies.
- **Monitor** ongoing potential for risks to occur, and prepare your site accordingly.
- **Report** on the outcomes of your adaptation practices.

Each time an assessment is completed, ensure that everyone in your organization is aware of emerging risks and why strategies are adjusted.

Sample Adaptation Projects

Critical Infrastructure Relocation

Relocating your mechanical room above ground can prevent damage during a flood. It is cheaper to move your mechanical room today, than to rebuild or be shut down due to catastrophic damages caused by a flood.

Low Impact Development

Low impact development (LID) is a land planning and engineering design approach used to manage stormwater runoff as part of green infrastructure. LID can reduce local flooding, clean stormwater (and rivers), improve aesthetics and property value, and potentially reduce stormwater rates in the future.

On-Site Generation and Battery Backups

Installing solar panels and battery backups today will not only lower your GHG emissions, but also increase your resiliency should the grid power go down. It can be viewed as both a mitigation and adaptation action. These panels will also save your organization money over their lifetime.

Case Study Royal Alberta Museum

In 2018, the [Royal Alberta Museum](#) (RAM) was certified by the Canada Green Building Council as a LEED Gold Building. RAM's move from a residential area to Edmonton's downtown core presented an opportunity to plan the new building with special attention to sustainability, accessibility, and enhancing the city's cultural district.

Considerations of mitigating and adapting to climate change were included in the design of the museum. The energy and building envelope systems were designed, built, and verified to ensure durability and improve overall building energy efficiency. Extensive water and air leakage testing was done on the building envelope to plug any holes that would lose energy or have the potential to damage the building or the artifacts inside. Careful placement of windows ensured the facility has a highly insulated and airtight building envelope, as windows are where much of the heat loss occurs in buildings.



Photo | Courtesy of the Royal Alberta Museum.

RAM is located adjacent to the city's planned cultural district as well as key attractions in the downtown core, and the building also connects directly to the light-rail transit system, enhancing the museum's accessibility. From the outset, RAM was designated a 100-year building, setting the stage that this facility will be part of the community for current and future generations.



Carbon Offsets & Renewable Energy Certificates

What they are and when to purchase them.

Carbon Offsets

Carbon offsets allow you to invest in emissions reductions projects around the world (typically developing countries) to balance out your own carbon footprint. You can buy them as part of procuring a specific good or service (like taking a flight), or on their own to offset a total amount of emissions from different activities (like powering your house for a year).

When you buy offsets, you're buying an emissions reduction associated with a project like planting trees to absorb the equivalent amount of CO₂ to what you generated and want to offset.

To be considered a valid offset, it must meet a strict set of criteria, including the concept of additionality, meaning reductions wouldn't have happened anyway, and that the reductions must be deemed permanent.

Both of these criteria can be practically difficult to prove or guarantee, which creates some controversy around the offset market. Offsets that meet third-party certifications like [Gold Standard](#) and [Verified Carbon Standard](#) are helpful to judge the quality of an offset. Even these are not fail proof, so offsets should be used only when it isn't possible to reduce your own emissions.

Renewable Energy Certificates

Renewable Energy Certificates (RECs) are another option for you to purchase to help you green the electricity you consume, which is one component of where your greenhouse gas emissions come from.

A REC is created for every megawatt hour (MWh) of electricity generated and delivered to the grid from a renewable source. They are issued from a certifying agency, and given a unique number that allows them to be tracked and retired.

In buying RECs, your museum can claim that it is powered by a certain percentage of renewable energy. RECs also support demand for increased renewable energy generation in Canada and globally.

You can buy RECs by:

- Paying an additional surcharge on your monthly electricity bill.
- Signing a Power Purchase Arrangement.
- Purchasing them directly from a REC reseller, such as Bullfrog Power.

Select Decision-Making Criteria for Project Evaluation

To determine the strongest projects to proceed with, you'll first need to think about what decision-making criteria are relevant for your organization and their relative importance.

Generally these are:



Environmental: How much will each project lower GHG, waste, or water impacts from their current levels?



Financial: What are the financial costs and benefits of taking on the project? Payback and return on investment (ROI) are the two most common financial metrics decision-makers use. Some cost information may be estimated internally through talking with operations, finance, or procurement staff, while others may require you to reach out to vendors or contractors for quotes.



Qualitative factors: What co-benefits does the project have? Additional benefits you may value include engaging employees, enhanced brand / reputation, leadership preferences, and mitigating risks (regulatory, supply chain, reputation or other). For example, installing electric vehicle (EV) charging stations in response to employee demand could have major reputational and employee engagement benefits. EV charging stations might therefore be prioritized more highly than another project with higher environmental or financial benefits. Ultimately, how you weigh more qualitative factors is up to you and what you deem important to your organization.



Finance Your Climate Action

Organizations are always on the lookout for how to finance their climate action work. Here are some options to explore:

Internal Budgets

Not all projects need external funding to get off the ground. Many organizations find that if the upfront project costs fit within existing budgets, and the payback period for a project is quick, they can finance the project out of pocket. Ongoing cost savings from projects can be used to establish a revolving green fund that can be used to fund future sustainability projects.

Grants & Incentives

Utility providers and governments often come out with programs to support energy efficiency and sustainable transportation projects. Check their websites or conduct online searches to see what's available.

Private Sector Financing

In addition to traditional lines of credit that can be used to get the capital for projects, financial institutions are increasingly starting to offer green loans and sustainable financing products. Check what your financial institution offers and let them know you're interested in learning about green financing options.

Check out [Green Economy Canada's Financing Resource](#) which has compiled some information of what's out there for you.



Crunch the Numbers

Once you have selected the projects that seem most relevant and important to your organization, you need to actually crunch the numbers to evaluate each set of actions and determine the real environmental and financial impacts for each project. To do this you'll need to:

- Collect information about your existing equipment / process and alternatives you're considering. The [Sustainable Projects Cheat Sheet](#) can help identify the important information to look for.
- Calculate GHG emissions and cost savings. There are free online calculators you can use to help with estimating the GHG impact of switching to more sustainable options.
- Evaluate projects against other relevant decision-making criteria. In general, it's a good idea to look for the "low hanging fruit" projects that are low effort, low cost, and high impact.

Develop Your Plan

The information you include in your action plan and the level of detail you scope out will look different from organization to organization. It is a good idea to include things like timelines, responsibilities, project milestones, project and task order, and dependencies. Here are six high level best practices that will help you build an effective plan:



Ensure your plan is balanced. Does your plan capture a mix of easy wins and bigger projects? Does it include a mix of behavioural and capital projects, and incorporate the needs and desires of different stakeholders (including key decision-makers)? Are there enough projects to meaningfully reduce your footprint and are the timeframes realistic?



Think SMART. When looking at projects and implementation tasks, apply the **S**pecific **M**easurable **A**chievable **R**elevant and **T**imebound framework. This will allow you to know what you're going to do, when you're going to do it and how to know when you've succeeded.



Don't do it alone - engage your stakeholders. Not only do they help you generate ideas, they may also hold the keys to getting a project approved and implemented. Forming a [Green Team](#) is an excellent and proven way to engage stakeholders.



Involve senior leaders and get buy-in. Having senior leaders involved from the start helps remove roadblocks and provides credibility when approaching other staff and asking for their time and support. It also helps you identify some of those qualitative decision-making factors that may be important to consider when shaping your plan to ensure actions get approved.



Treat your plan as a living document. Your initial plan will be built out and modified over time as circumstances change. Maybe a new incentive program becomes available, or advances in technologies like solar PV make it more financially feasible. Perhaps your organization's comfort with sustainability grows and its appetite to take on higher impact, longer-payback projects grows too. It's good practice to set a regular schedule to revisit your plan, at least once a year.



Just get started! Don't let perfect be the enemy of good. The journey to sustainability is like a snowball rolling down a hill. You can likely get some quick wins that start to build momentum for deeper reductions and stronger sustainability ambition.

Case Study

Canadian Museum of Nature

Retrofit projects are valuable to undertake in almost any building. But as a 100-year-old museum, the [Canadian Museum of Nature](#) has especially good reasons to monitor and improve its energy use.

Through an energy audit in 2016, the Canadian Museum of Nature was able to identify how to most efficiently manage the ventilation, heating, and cooling systems in the building. With the detailed analysis done, they got to work right away, installing Adaptive Frequency Drives on their chillers. The building now uses software that tracks their energy use in great detail. Tens of thousands of dollars have already been saved through the projects undertaken. More recently, a project was implemented to pressurize the museum

overnight and used drone and infrared cameras to determine the thermal performance of the heritage stone of the building.

Projects in future include increasing staff training during onboarding to promote the museum's sustainability goals, continuing to implement their greening policies, reducing / eliminating single-use plastics in their cafeteria, working on a composting and complete recycling program, and implementing water bottle filling stations.



6% reduction
in total GHG emissions
between 2016-2019



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Setting a Meaningful Reduction Target

Setting a reduction target is an important milestone in your sustainability journey.

Why Set a Target?



Provides focus and sets direction. An organizational target signals to staff that sustainability is a priority. It provides an anchor, and gets leadership attention to direct funding and resources to the necessary places.



Encourages action & innovation. A [Bloomberg article](#) called attention to the fact that companies that had set science-based targets had made significantly more progress on climate action compared to those that had not. Having a target that is a bit more ambitious can push your organization to think creatively about how it operates and engages with stakeholders to drive innovation that's good for the planet and the organization.



Provides accountability. Once you set and announce a public sustainability target, you're much more likely to deliver on the commitments you've made to your stakeholders and the general public.



Demonstrates sustainability leadership to stakeholders and employees. With targets in place, you can more credibly communicate your sustainability commitment externally to avoid greenwash and get a reputational boost. It also helps your staff understand how your organization is measurably working to advance sustainability and feel proud to be a part of those efforts.



Absolute or Intensity-Based Targets?

There are two types of targets:

Absolute Target

Absolute targets set a firm cap on future emissions and are best practice.

E.g., a 40% reduction of total emissions by 2025 from a 2010 baseline

Intensity-Based Target

Intensity-based targets aim to reduce emissions on a per unit basis (such as per unit of production, employee or square footage of operational space).

Typically used in high growth organizations.

E.g., a 40% reduction of emissions per employee by 2025 from a 2010 baseline

Intensity-based targets are more flexible and might feel more appropriate if you are growing. However, they are unlikely to lower your total impact.

There are pros and cons to both types of targets so pick the approach that is right for you with the end goal of looking to reduce your overall emissions as much as possible.

Set a Meaningful Target

Select a Baseline:

- Complete a GHG Inventory using your last three years' worth of operating data to select a baseline year of emissions to assess your progress against.
- Choose a typical year in terms of business operations as well as the output and weather conditions experienced as your baseline year.
- You will likely need third-party support to develop your GHG Inventory and get an accurate calculation of your emissions. Talk to Green Economy Canada if you need help.



Consider the Key Factors

Company Values and Aspirations

How ambitious does your organization want to be based on its values? Think about what's important to your organization in setting a target and where you might fit or want to fit on this chart:



What Science Says Is Needed

In 2015, 196 countries around the world adopted the Paris Agreement - an international treaty on climate change - with the goal of limiting global warming to 1.5 degrees Celsius compared to pre-industrial levels. This means that countries need to reduce their emissions by almost 50% by 2030, and achieve net-zero emissions by 2050.

To address climate change in line with what science tells us is needed to secure a healthy, vibrant planet for generations to come, businesses and organizations need to be setting science-based targets, with emissions reductions of the same magnitude as our national goals.

Setting a science-based target is ambitious. This gold standard for climate leadership requires organizations to take dramatic action in the short window of time we have to act on the climate crisis. If you're just starting out and not sure if your organization is ready for the big changes, setting more achievable goals is still an important stepping stone towards being ready to set a science-based target. Use these smaller goals to align your organization's values and aspirations with the transformative leadership needed to set more ambitious targets. To learn about setting science-based targets, you can check out the [Science-Based Targets Initiative](#) and talk to Green Economy Canada if you need support.

Case Study Royal Botanical Gardens



The [Royal Botanical Gardens \(RBG\)](#) has publicly committed to reducing their greenhouse gas emissions 20% below 2017 levels by 2027. Since setting their target, RBG has started taking action by overhauling its waste diversion program, and establishing a rigorous water monitoring and conservation program.



16%
in annual reduction in
water consumption*



54%
waste diverted
from landfill*



\$3,700
in estimated
avoided waste costs*

* in 2019



What Others Are Doing

In choosing a target that is right for your organization, looking at what your peers are doing is another important reference point. Is your organization interested in complying with minimum standards, in keeping up with the average of the pack, or in leading the charge? Research what kinds of sustainability targets others are setting to inform how ambitious you want to be.

Understanding External Pressures

Understanding regulatory and supply chain risks, funder expectations, and visitor preferences are all important points to consider in selecting a meaningful sustainability target. Carbon pricing in Canada is set to hit \$170/tonne by 2030. This is a cost that organizations can avoid by operating in a low-carbon way.

Supply chain disruptions due to climate change could make materials more costly to procure, or delay shipments that are needed to deliver products and services to customers. Shifting to more local or climate resilient supply chains can help organizations mitigate risks while reducing environmental footprints.

Government funding at all levels is likely to become increasingly aligned with sustainability practices in the coming decade. A strong commitment to sustainability can give you the edge or open up new opportunities in securing funding. And conversely, a lack of serious commitment to sustainability could hamper your ability to get funding as the minimum expectations for organizations are raised.

Lastly, visitors and employees are becoming more climate conscious and care about what organizations are doing with respect to sustainability. A strong commitment to sustainability can be a way to attract new visitors, increase revenue, and attract and retain top talent.



What You Know Is Possible Already

What reductions do you know are possible based on the actions in your initial sustainability plan? By what percentage do those actions reduce your baseline emissions? These questions can ground your target-setting in what you know is possible today. One thing to keep in mind is that if you are just getting started and haven't identified many actions yet, you can still set ambitious targets. Draw inspiration from what others in the sector are doing and what science tells us is needed, and consider getting external support to help you feel confident in building a roadmap for action.

Select a Target

With all of these factors in mind, select a target that is right for your organization. Start with senior management and engage others in the discussion. Ensure your goal fits with broader business objectives and the values and aspirations of the organization. A target should consist of a measurable, time-bound goal - typically a 5- to 10-year timeframe. Setting longer-term goals is important, but should be accompanied by shorter-term targets to get there. Your target should challenge the status quo, motivate change, and inspire better results, but also feel attainable to ensure lasting commitment. Every organization should ultimately strive for a science-based net zero target, but it's okay to start with small goals to get a reductions project started and work towards more ambitious targets.

Once you select a target, communicate your commitment publicly to let others know. You can get some media coverage out of it, and use this exciting milestone as a way to galvanize employees and the general public about action to come.



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Making Progress Towards Your Goals

With GHG reduction targets set and an initial action plan potentially developed, you now need to set yourself up to successfully meet your goals by integrating them into your organization's operations. Here's what you'll want to look at to help keep your goals in focus and ensure you are actively making progress towards them:



Integrate into Long- and Short-Term Strategic Priorities

Your goals should be reflected in any long-term strategic plans your organization has, as well as shorter-term annual plans. If they are not viewed as part of other central goals for the organization, you're likely not going to make much progress towards sustainability.



Develop Concrete Actions with Clear Ownership & Timelines

Achieving your target will require understanding who needs to be involved, and developing concrete actions with clear roles, responsibilities, and timelines for implementation. Building out your action plan and regularly checking back in to keep it current is important.



Establish Good Data Systems

You will also want good data collection systems in place so you can easily track your progress. Working across functional areas to establish annual data collection timelines, roles, and responsibilities can be a helpful way to streamline data collection each year.



Produce Regular Progress Reports

As part of your annual planning process, you'll want to look at your progress towards your target, and what you'll work on for the coming year. Providing regular reporting to senior leaders, employees, and the organization's board of directors helps ensure that your sustainability goals and progress stay top of mind.



Incorporate Accountability Mechanisms

Finally, you'll need to build in accountability mechanisms to ensure that your targets are taken seriously. Part of this is establishing expectations around regular reporting to senior leaders and the board, as well as sharing your progress and commitments with the public. Establishing performance metrics on sustainability-related goals as part of senior leader performance evaluations or key staff roles is another way to embed focus towards your sustainability goals into your organization.

Establishing A Green Team

Green Teams offer a structure to help integrate your sustainability goals and create momentum for your work.

What is a Green Team?

A Green Team is a group of employees who meet regularly to identify and implement sustainable practices within their workplace to advance their organization's sustainability goals.

Why start a Green Team?



Creates a formal structure for maintaining focus and progress on your sustainability goals



Encourages employees to feel engaged and proud to be part of sustainability efforts



Strengthens organizational culture by bringing team members together from different areas to collaborate on sustainability efforts

Case Study Alberta Museums Association



The AMA's Green Team works to identify areas of potential reductions and plan steps to see those reductions materialize. Comprised of three to four AMA staff members, the Green Team meets bimonthly to check in on progress towards its GHG goals. The efforts in the first year saw the AMA reduce its GHG emissions by 40% over 2019.

The Green Team is also able to build upon earlier environmental actions taken by the AMA. This includes a commitment to use hybrid or electric vehicles for travel around the province, and the AMA's switch to [Bullfrog Power](#) in 2018, which puts green electricity onto the grid to match the amount the AMA uses.

In addition to the careful work of setting and meeting GHG goals, the Green Team supports green initiatives and activities for staff to participate in. These include the annual 30-by-30 challenge, where staff are encouraged to spend at least 30 minutes outside for 30 days.

With a dedicated Green Team and efforts to engage all staff, the AMA is working to ground future GHG reductions and climate action in a history of making green choices.

How to Recruit

Direct Asks

People are most likely to respond to a direct ask. Approach people who are likely to be interested in a Green Team, or who you think would be valuable members. If you don't know staff in a department, speak to a department lead to get an idea of who to reach out to.

Host an Information Session

Host a lunch-and-learn or other meeting to introduce the idea of a Green Team and answer questions. You might want to have a few people already recruited to help you run the information session.

Email or Newsletter

Work with HR or internal communications to send an announcement (e.g., all staff email, employee newsletter, or intranet) to let people know about the Green Team and how to join, or to let them know about an upcoming info session.

Posters or Flyers

Post information on bulletin boards or in the break room.

See the [Green Team Toolkit for Green Team recruitment templates, a sample charter, and sample agenda for meetings](#).

How To Build an Effective Green Team

There are five key steps to go from starting to supercharging your Green Team. More details can be found in the [Green Team Guide](#).

Assess your starting point: Gain an understanding of your context, organizational goals, and the protocols for forming official teams. Learn who might be early supporters and begin thinking about what purposes the team could serve. Examples include engaging employees in sustainability actions, and forming and implementing a formal sustainability action plan for the organization.

Recruit your team members: Target 6 to 8 team members, though smaller organizations may have 2 or 3 people, and larger organizations may have more. Remember that too few members means higher workloads, while too many members can become unwieldy. When selecting team members, aim for cross-functional representation and a range of staff levels. Use the human resources available to you: regular volunteers and summer students can be great assets.

Develop a Green Team Charter: Whether you're just starting a Green Team or have had one for a while, creating a charter is a good way to formalize and strengthen your Green Team work. The Charter captures the purpose of the Green Team, team member roles, and how the Green Team operates, including how decisions are made and length of membership. Having the Charter endorsed or signed off on by senior management is another way to legitimize the work of the Green Team in the organization.

Get to Work: The activities your Green Team undertakes will depend on your unique sustainability plan and the purpose and mission of your Green Team. It's likely that your Green Team will undertake a mix of: project identification, research, and planning; project management and implementation; education, outreach, and engagement; data collection; and reporting and communicating on successes.

Maintain Momentum: Setting up a team and developing a sustainability plan is hard work. Don't let it go to waste - put the right support in place to make sure the Green Team can maintain its momentum. Sustainability goals should be part of the organization's annual planning, just like goal-setting in any other business area. Keep progress going by always knowing what the next project is going to be. Your initial work developing an action plan likely provided you with a great reference list to return to. Additionally, as you see progress from initial efforts, excitement may build and you may find more employees or supervisors coming forward with ideas and energy to tackle new projects.



Let us know how it's going!

Congratulations on getting started on your journey to green your organization!

You've just read through some best practices for taking action on climate change and advancing sustainability in your organization. We know that having the knowledge is an important initial step, but that putting these concepts into practice might feel challenging. We'd love to hear how it's going. Let us know what parts of this toolkit were most helpful for you, and what you'd love to learn more about in future. Don't be shy to contact the Alberta Museums Association at advisory@museums.ab.ca or Green Economy Canada at info@greeneconomy.ca to share your thoughts or seek additional help.



Appendices



Appendix A

Sustainable Projects

Cheat Sheet: Museums

Guidance for selecting greenhouse gas reduction projects for the museum sector

How to Use This Resource

This resource is intended to assist museums and heritage organizations in understanding what actions they can take to reduce their greenhouse gas (GHG) emissions. It is organized by *Activity Focus Areas* that address common emissions sources, and you can jump to sections of interest using the index below. Each section provides information on key considerations and common actions for that emissions source.

Key Considerations

These prompts will help you think about how aspects of your operations contribute to GHG emissions in each *Activity Focus Area*.

Common Actions

The actions listed are common examples for the associated *Activity Focus Area*. As you read through the document, consider if these actions are applicable or suitable in your specific context, or if they can be adapted to meet the needs of your organization. Put a checkmark next to each action you feel would be worth exploring further.

Index of Activity Focus Areas

Buildings

- [Building Envelope](#)
- [Heating, Ventilation & Air Conditioning](#)
- [Electricity - Lighting](#)
- [Electricity - Other](#)

Waste

- [Exhibits & Installations](#)
- [Food Service / Restaurants](#)
- [Visitors & Office Waste](#)
- [Construction & Renovation](#)

Water

- [Washrooms & Grounds](#)

Transportation & Travel

- [Business Travel & Employee Commuting](#)
- [Shipping \(Exhibits & Collections\)](#)
- [Fleet](#)

Emissions Source: Buildings

Activity Focus Area: Building Envelope

Museums typically require precise controls all season round over their internal environment (e.g. temperature, humidity, etc.) to ensure the preservation of their collections. This is challenging given the large open and connected spaces and fluctuating levels of visitor traffic. The building envelope plays an important role as the thermal and pressure barrier that surrounds a building.

Key Considerations

- How airtight is your building?
- Do you feel drafts or have windows or doors open for large periods of time?
- Have you implemented any measures for your windows, doors, entrances / exits, roofing, insulation, and shipping or receiving bay to minimize air leaks?

Common Actions

- Install high-efficiency building envelope upgrades
 - Cocoon interior spaces with freestanding walls
 - Install high-efficiency windows (glazed, coated, gas-filled) and doors
 - Complete a building energy audit
 - Utilize daylighting or passive solar in winter months to reduce heat requirements
 - Install a green roof to help with insulation and rainwater harvesting
-

Activity Focus Area: Heating, Ventilation, and Air Conditioning

HVAC systems are closely connected to the building envelope and a leaky building envelope can cause your HVAC systems to work much harder (and less efficiently) than they need to. Once you have your building envelope tightened up, you should then look to maximize the efficiency of your HVAC system.

Key Considerations

- Did you maximize your building envelope improvements (section above)?
- Do you have the right size HVAC system for your needs?
- How old is your equipment?
- Can you replace your equipment with more efficient alternatives?

To answer the above, inspect your equipment, maintenance records, purchase records, or ask vendors about the efficiency rating of specific equipment.

Common Actions

- Install a heat recovery system to capture waste heat
 - Install programmable thermostats to control both room and hot water temperatures
 - Install variable frequency drives (VFDs) and energy-efficient motors
 - Replace chlorofluorocarbon chillers, retrofit or install energy-efficient models to meet a building's reduced cooling loads
 - Upgrade boilers and other central plant systems to energy-efficient standards
 - Use glass insulated with a layer of argon and utilize a ceramic dot frit pattern with 40% coverage; integrate within the insulating units to control glare and solar heat gain
 - Install an air-quality monitoring system that gauges when vents need to do an air exchange (bring in fresh outdoor air)
 - Perform monthly maintenance of heating and cooling equipment to guarantee efficient operation throughout the year
 - Conduct a nighttime audit to find out what's on afterhours that shouldn't be
-

Activity Focus Area: Electricity - Lighting

Your lighting uses electricity which generates greenhouse gas emissions when consumed. Consider whether your lighting has been designed and installed to meet your lighting needs while also minimizing electricity consumption.

Key Considerations

- Do you have excess lighting in any areas?
- Are your lights turned on for long periods of time?
- Do you have lights on in areas that are not frequently used?
- Are your light fixtures high-efficiency models (e.g. LED)?
- Are there areas of your site where you can meet lighting needs with natural light sources?

Common Actions

- Building automation systems rigged with detection devices such as carbon-dioxide, occupancy, and light sensors can reduce energy use and save needless expenditures by prioritizing natural light or dimming a room when unoccupied
- High-efficiency lighting retrofits (LED or other) save energy and often have a payback period of less than one year
- Use natural light sources to reduce the internal lighting load for the building

Considerations for Natural Light

Natural light should be avoided as a light source in areas where collections are stored or displayed. If natural light is used, ensure you are taking the appropriate steps to block or limit the light and UV

levels through coverings and filters. Please refer to page 214 of the Alberta Museums Association's *Standard Practices Handbook for Museums*, 3rd Edition, for more information.

Activity Focus Area: Electricity - Other

This focus area includes all non-lighting or HVAC-related electrical equipment your facility uses. For museums this equipment commonly includes computers and peripherals (e.g. servers, tablets, printers, & copiers), exhibits (e.g. displays, speakers, theatres, etc.), security systems, wayfinding, and other appliances (e.g. fridges, microwaves, cash registers, sound systems, etc.).

Key Considerations

- Can you automate device usage (control or preset when something turns on or off)?
- Do you have the right size or number of devices for the need?
- Can you replace the equipment with a higher efficiency or ENERGY STAR version?

Common Actions

- Create policies to prioritize the procurement of the most energy efficient equipment (ENERGY STAR, EPEAT)
- Replace aged or inefficient equipment
- Install on-site renewable energy (e.g. solar PV or wind) to generate electricity
- Replace electric steam humidifiers with ultrasonic humidifiers
- Use smart power bars to limit energy waste from 'phantom power' (energy consumed when devices are off but plugged in)
- Set computers and other device default power management settings to 'on'
- Transition to virtual IT servers

Emissions Source: Waste

Waste is generated in many different ways across a museum's operations, including: Exhibits & Installations, Food Service & Restaurants, Visitors & Office Waste, and Construction & Renovation. Reducing waste not only has an impact on reducing your greenhouse gas emissions, but can also improve your organization's overall impact and reduce costs associated with waste management and removal. In this Waste section the Common Actions list compiles actions that may impact one or more of the *Waste Activity Focus Areas* and is placed at the end of the section.

Activity Focus Area: Exhibits & Installations

Exhibits can involve the frequent use and disposal of drywall / building materials, wood, glass, carpets, paint, printing, and adhesives.

Key Considerations

- How often are we changing exhibits?
 - Are we using materials more than once?
 - Do we need to use new or virgin materials or can we incorporate recycled content?
 - How are we disposing of exhibit materials?
-

Activity Focus Area: Food Service & Restaurants

Waste is generated at food service locations in two primary areas: front of house by patrons and back of house by kitchen staff.

Key Considerations

- Do your food service supplies come in excessive packaging?
 - Do you provide reusable / recyclable / compostable containers and cutlery?
 - Do you encourage the use of reusable containers?
 - Do you limit the amount of pre-consumer food waste generated through menu options?
 - Do you have infrastructure (e.g. bins, processes, signs) to sort waste into landfill, recyclable, and organic streams?
-

Activity Focus Area: Visitors & Office Waste

Waste is generated in common office and visitor areas and will typically be a mix of recyclable, organic, and landfill streams.

Key Considerations

- Are there high traffic areas (e.g. food service locations) that generate higher volumes of waste?
 - Are there areas that have higher contamination rates (e.g. a higher proportion of organic waste) than other areas?
 - Is there adequate infrastructure (e.g. bins) and clear signage for sorting?
 - Can you reduce the consumption of single use items and generation of waste at its source?
-

Activity Focus Area: Construction & Renovation

Concrete, bricks, wood, and gypsum or drywall are just a few examples of waste generated by construction, renovation, and demolition projects.

Key Considerations

- Can you reuse or repurpose materials on-site?
 - Can you salvage materials for recycling or resale?
 - Can you specify recycled content in building materials?
-

Common Actions (Across All Waste Activity Focus Areas)

- Use Green Seal certified cleaning products that ensure no corrosive or environmentally harmful products are used, and train cleaning staff in green housekeeping
- Implement a comprehensive in-house program and infrastructure to recycle glass, cans, paper, cardboard, and scrap metal as well as a composting (organic waste recycling) program for commercial kitchens, food services areas, banquet operations, and administration areas
- Properly dispose of e-waste (computers, printers, etc.) with a credible recycler. Better yet, consider donating your old electronics for a second life (remember to scrub sensitive business information first)
- Ask vendors about their product take-back and recycling programs (computers, print cartridges, etc.)
- Install water filtration stations and reduce or eliminate the sale of bottled water
- Provide reusable plates and cutlery at food service locations

- Reduce packaging waste by using recyclable and / or recycled packaging materials or reusing products
- Ensure easy disassembly and reassembly for elements of travelling exhibitions to reduce the need to purchase new materials when moved to new locations
- Design modular systems for exhibits which can be reused
- Extend the life cycle of materials by repurposing or donating for a second use
- Purchase products and supplies in bulk
- Set printers to automatic double-sided printing to reduce paper waste
- Limit the use of non-reusable materials during the packing and storage of collections

Emissions Source: Water

Activity Focus Area: Washrooms and Grounds

Toilets, kitchens, and landscape designs are usually the heaviest sources of water loss.

Key Considerations

- Do you know how often and for how long water-consuming equipment is used (e.g. irrigation, dishwashers)?
- Are there any noticeable leaks in your water systems?
- Can you identify areas of high use?
- Are your toilets and faucets low-flow / high-efficiency?

Common Actions

- Install water meters to monitor consumption and to zero in on leaks and sources of loss
- Catch rainfall using green roofs, cisterns, or barrels to water landscaped areas, lawns, or air conditioning and toilet systems
- Use automatic taps and flush sensors
- Use low-flow or double-flush toilets, water volume reducers in all your toilet tanks or pit privies
- Use waterless urinals
- Install a grey-water reclamation system and use the water for watering lawns and landscaping
- Use drought-tolerant, native species when landscaping vegetation

Emissions Source: Transportation and Travel

Transportation and travel can create significant greenhouse gas emissions depending on the frequency and mode of transportation / travel employed. Your museum may be creating or contributing to transportation and travel emissions through transporting collections, staff business trips, freight transport of supplies, employees getting to and from work, and your visitors' travel to and from the museum. In this Transportation & Travel section the Common Actions list compiles actions that may impact one or more of the Transportation & Travel *Activity Focus Areas* and is placed at the end of the section.

Activity Focus Area: Business Travel & Employee Commuting

Key Considerations

- How often do your staff travel for work and do they always need to be on site?
 - Does your museum provide infrastructure for alternative transportation (e.g. bike racks, carpool parking, etc.)?
 - Is there public transit access for your museum?
-

Activity Focus Area: Shipping (Exhibits & Collections)

Key Considerations

- How frequent are deliveries to your museum?
 - Can you reduce the distance travelled by your borrowed collections?
-

Activity Focus Area: Fleet

Key Considerations

- Do you own or rent fleet vehicles?
 - Are there high-efficiency or low-carbon fleet alternatives you could replace existing vehicles with?
-

Common Actions (Across All Transportation & Travel Activity Focus Areas)

- Offer transit pass purchase through salary deductions as an incentive for your employees to reduce car transportation to work
- Provide active transportation infrastructure for employees like bike racks, showers, lockers, and bike repair stations / tools

- Provide preferential parking spaces for carpool or high-efficiency / low-carbon travel modes (e.g. using EVs)
- Install electric vehicle charging stations
- Implement a telework policy where staff are able to work from a remote location
- Reduce business travel where possible by leveraging video conferencing technology
- Sign up for a corporate membership at a car-sharing service
- If flight travel is required, purchase carbon offsets when booking your tickets, or separately through a credible offset provider (e.g. www.less.ca)
- Set green criteria for purchase of new fleet vehicles (e.g. lowest carbon option available)
- Train your employees on green driving techniques (e.g. anti-idling, proper tire inflation, reducing excessive acceleration and braking)
- Incentivize sustainable travel by offering a discount to visitors travelling to your museum by public transit or active transportation
- Look for opportunities to reduce the weight or frequency of shipments to your museum, and ask shipping providers about green shipment options
- Look to borrow collections from local museums rather than from abroad
- Ban vehicle idling on site and post signage indicating so, including for delivery vehicles and school buses
- Provide virtual options for school and / or public programs



Appendix B

Green Team Guide

How to start and supercharge your Green Team

Contents

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This guide is for any employee who is passionate about taking action on sustainability in the workplace, and who wants to form or lead an internal Green Team to promote measurable sustainability progress at work.

Use the accompanying [Green Team Guide Toolkit](#) to find extra resources, examples, and templates for your Green Team.

What is a Green Team?

A Green Team is a group of employees who meet regularly to identify and implement sustainable practices within their workplace to advance their organization's sustainability goals.

Why start a Green Team?



Creates a formal structure for maintaining focus and progress on your sustainability goals



Encourages employees to feel engaged and proud to be part of sustainability efforts



Strengthens organizational culture by bringing team members together from different areas to collaborate on sustainability efforts

Case Study | Alberta Museums Association



The Alberta Museums Association's (AMA) Green Team works to identify areas of potential reductions and plan steps to see those reductions materialize. Comprised of three to four AMA staff members, the Green Team meets bimonthly to check in on progress towards its GHG goals. The efforts in the first year saw the AMA reduce its GHG emissions by 40% over 2019.

The Green Team is also able to build upon earlier environmental actions taken by the AMA. This includes a commitment to use hybrid or electric vehicles for travel around the province, and the AMA's switch to [Bullfrog Power](#) in 2018, which puts green electricity onto the grid to match the amount the AMA uses.

In addition to the careful work of setting and meeting GHG goals, the Green Team supports green initiatives and activities for staff to participate in. These include the annual 30-by-30 challenge, where staff is encouraged to spend at least 30 minutes outside for 30 days.

With a dedicated Green Team and efforts to engage all staff, the AMA is working to ground future GHG reductions and climate action in a history of making green choices.

Starting Your Green Team

Assess Your Starting Point

Checklist

- Read this guide so you know what you're getting into!
- Confirm that establishing a new Green Team makes sense:
 - Find out if your organization has had a Green Team in the past. If so, learn what happened and determine what will be different this time around.
 - Find out if your organization already has any similar committees or teams. If so, identify if there are opportunities to collaborate or combine.
- Check if your organization has a standard protocol or Terms of Reference for teams or committees, and what the official approval process is to get started with a Green Team.
- Identify who in senior management is likely to be a supporter or "sponsor" for the Green Team, and which senior leaders you could bring on board right from the get-go.
- Identify some functions the Green Team could fill for your organization based on gaps or opportunities in the organization you or others have identified. Examples include:
 - Engaging employees in sustainability actions.
 - Developing and implementing a formal sustainability action plan for the organization.
 - Connecting employees with community volunteer opportunities.

Recruit Team Members

Who to Recruit

Put out a general call for team members (see [How to Recruit](#) below) and keep the following in mind:

- **A range of departments are represented.** All departments can bring valuable insight and benefits to a Green Team. For example, someone from Facilities can share information about the environmental performance of the building and equipment to advance sustainability actions and support with data collection. Someone from Communications can share your sustainability work publicly to optimize the public relations benefit of a Green Team. Someone from Human Resources can help move new policies forward, promote sustainability work to employees broadly, and leverage your sustainability work as part of attracting top talent.

- **A range of seniority levels are represented.** A Green Team benefits from the contribution and engagement from staff at all levels. Senior management representation is critical to provide a valuable link to key decision-makers to move sustainability work forward. Junior staff may have more time to contribute and can bring fresh ideas.
- **6 - 8 people form the initial group.** Smaller organizations may have 2 or 3 people, and larger organizations may have more, but in general, we recommend a Green Team of this size. Too few people will mean high workloads for each member and a group of more than 8 can be harder to coordinate, even in a larger organization. Keep in mind that the activities of the Green Team should be scoped according to its size.

Case Study | Onyx Energy

“When we opened up to our team, about how passionate the Onyx leadership team was about sustainability, we were deeply impressed to see how much they all wanted to support conservation internally and with our client base.”

Angel-Marie Reiner
President, Onyx Energy



While Angel-Marie Reiner, the President of [Onyx Energy](#), had started the business knowing that she wanted to offer solutions to empower individuals to make more sustainable choices, she had no idea how much Onyx’s individual employees were passionate about sustainability.

The Onyx employees fully and enthusiastically committed themselves to the various sustainability challenges, turning down the thermostat in the office and at their homes, gathering together for several vegetarian, zero waste team potlucks, and collecting car loads of e-waste.

How to Recruit

- **Direct asks.** People are most likely to respond to a direct ask. Approach people that you know who are likely to be interested, or who you think would be valuable members. If you don’t know staff in a department, speak to a department lead to get an idea of who to reach out to.

- **Host an information session.** Host a lunch-and-learn or other meeting to introduce the idea of a Green Team and answer questions. You might want to have a few people already recruited to help you run the information session.
>> [See a sample info session in the Green Team Guide Toolkit.](#)
- **Email or newsletter.** Work with HR or internal communications to send an announcement (e.g., all staff email, employee newsletter, or intranet) to let people know about the Green Team and how to join, or an upcoming info session.
>> [See a sample recruitment email in the Green Team Guide Toolkit.](#)
- **Posters or flyers.** Post information on bulletin boards or in the break room.
>> [See a sample poster in the Green Team Guide Toolkit.](#)

In the News | Ladies Eco Team

How the Ladies Eco Team dramatically cut waste at a Thornhill mosque - and what other groups can learn from them

The black garbage bags were piling up at the Jaffari Community Centre in Thornhill. The mosque's Iftar meals breaking fast during the month of Ramadan welcomed more than 3,000 people. But each night ended in mountains of Styrofoam cups and plates, plastic spoons and food waste.

"One day we were like, 'this is wrong, this is just wrong,'" recalled Shelina Jessa.

"After that we kind of put our heads together, and said, 'we've got to do something.'"



From that moment in 2013 came the spark for the Ladies Eco Team, a group of about half a dozen women, including Jessa, who eventually took on the mission of greening dinners at the centre, a part of Islamic Shia Ithna Asheri Jamaat of Toronto (ISIJ). Six years later they now use a mix of compostable and reusable cutlery and plates, despite a higher cost, organizing volunteer dishwashers, and eco stations at events to separate waste.

READ MORE IN THE
[TORONTO STAR >>](#)

Developing a Green Team Charter

Once you have your Green Team recruited, one of the first steps you will want to take is to create a Charter. The Charter will clearly detail what the purpose of the Green Team is, the expectations of the various roles on the team, and how the team operates. This process should be led by someone on the Green Team with senior management and HR support where required, with the broader Green Team providing input and feedback on the Charter at different stages. The Charter should be endorsed or approved by senior management to legitimize the Green Team's focus and ability to move larger sustainability work forward.

Note: before starting to develop a Charter, find out if your organization has a standard template for committee charters or Terms of Reference.

What to Include in the Charter

Below are recommended sections to include (where relevant).

>> [See a full sample Charter in the Green Team Guide Toolkit.](#)

Mission and Purpose

Specify the mission and the 2 - 5 purposes of the Green Team.

Example:

Mission: The Green Team advances sustainability efforts at [organization] and works to create a culture of sustainability among employees.

Purpose:

1. Educating [organization] employees on sustainability and promoting a culture of sustainability.
2. Implementing projects and initiatives that result in achieving [organization]'s sustainability goals of:
 - a. Reducing greenhouse gas emissions by 50% below 2015 levels by 2030.
 - b. Reducing water consumption by 30% below 2020 levels by 2025.
 - c. Achieving 95% waste diverted from landfill by 2025.

Roles

You will want to elect a **Team Lead** who manages the Green Team, facilitates meetings, delegates tasks, and liaises with senior management, HR, and Facilities (all of whom may also have representatives on the team). The Lead can be elected at the first meeting by a majority vote or other decision-making convention you decide on.

Note that smaller organizations may not need all of these roles, or might have one person wearing multiple hats. In addition, you may want to consider the following roles which can be assigned at the first meeting by asking for volunteers, through a majority vote, or through another decision-making convention you decide on:

- **Secretary:** records meeting minutes and generates a list of action items to send to committee members within 72 hours of each meeting.
- **Administrator:** supports the Team Lead and Secretary. Schedules meetings and distributes agendas one week in advance.
- **Communications Lead:** acts as the main point of contact for employees seeking to learn about the Green Team, and as the main messenger for the Green Team's communications to general employees. Ensures Green Team updates and messaging to the organization are consistent and reflect the Green Team Charter. Liaises with the internal communications department about incorporating sustainability efforts into public messaging.
- **Finance Lead:** manages the budget for Green Team activities.
- **Data Collection Lead:** leads data collection for the organization to update its GHG Inventory, water footprint, and waste audit data; tracks the quantitative impact of projects and overall progress on sustainability goals. Works with a variety of stakeholders on data collection and responsibilities may range from project managing the process to direct roles in data collection.

Aside from these kinds of designated roles, you will have **General Members** who bring expertise from their functional area, help develop sustainability initiative ideas, and provide insight on how to implement sustainability projects successfully in their departments.

The Charter should **specify Green Team roles and the expectations for each role and length of terms for membership, including expectations for a General Member** (e.g., *obtain supervisor's approval to sit on Green Team, contribute minimum [x] hours per month to Green Team activities, attend at least 75% of Green Team meetings*).

Decision-Making Purview

The Charter needs to account for how decisions will be made about how the Green Team operates, sustainability actions taken at your organization, and what role the Green Team plays in that process. Typically, some initiatives, like behavioural campaigns, may be authorized by the Green Team without requiring further approvals, whereas others that involve capital expenditures and impact budgets will likely need approval by management, supported by recommendations / proposals from the Green Team.

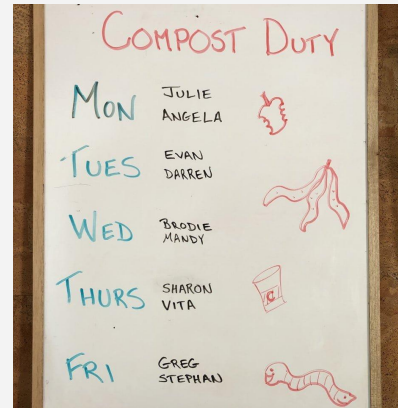
Meetings

Detail how often the Green Team will meet, the duration of the meetings, and the typical agenda for the meetings. Aim for a monthly meeting of 60 minutes. Subcommittees might also meet at various frequencies, depending on active projects or time of year.

Case Study | EnviroCentre

EnviroCentre's Green Team consists of 6 staff members who commit to being part of the team for at least a year. They meet monthly for half an hour to an hour and weekly tasks are assigned to Green Team members. The organization keeps the **weekly task schedule on a whiteboard in its kitchen** as a reminder and to keep each other accountable.

RIGHT |
EnviroCentre's Green Team
composting schedule



Typical Agenda for an Active Green Team

If the Green Team already has a sustainability plan to implement, then you can adapt this agenda below. You may want to structure the first meeting of every quarter to have a heavier emphasis on planning ahead for the following quarter, with meetings in between discussing what has been accomplished and how to move the intended work forward. If you do not have an initial sustainability plan, your meetings over the first 3-6 months might be focused on developing it, with the support and approval of senior leaders.

Meeting Agenda (60 minutes)

- Icebreaker / energizer / team time (5 mins)
- Review of action items and updates of projects in progress (15 mins)
- Discussion items (30-35 mins)
 - *Could include: anything that requires further discussion or alignment from projects in progress, discussion of new projects that should be explored in the upcoming quarter, communicating progress / successes to employees, and anything else that the team needs to align on*
- Next steps and wrap-up (5 - 10 mins)
 - *Detail any next steps and assign them to relevant Green Team members with clear timelines for completion*

Getting to Work

With your team members, Charter, regular meeting schedule, and sustainability plan in place, you're ready to drive sustainability action!

The activities your Green Team undertakes will depend on your unique sustainability plan, the purpose and mission of your Green Team, and the responsibilities of other people in your organization. Your Green Team could undertake a mix of:

- **Project identification, research, and planning.**
Examples: research feasibility of solar panels for building; talk to relevant stakeholders to identify receptivity to projects, coordinate quotes from contractors.
- **Project management and implementation.**
Examples: oversee timeline and actions to implement low-flow toilets; project manage installation of solar panels and administrative details for rebates available.
- **Education, outreach, and engagement.**
Examples: organize employee town hall with senior leaders on your organization's sustainability goals and action plan; organize waste-free competition between departments; host sustainability-themed lunch-and-learns; send monthly eco tips to employees.
- **Data collection, analysis, and evaluation.**
Examples: gather required data to update your organization's greenhouse gas emissions inventory annually; calculate projected / actual environmental and cost savings from proposed projects in the sustainability plan; track sustainability actions taken by your organization to feed into internal and external reporting.
- **Reporting and communicating on successes.**
Examples: create internal reports for decision-makers summarizing initiatives and results; create blog posts to educate and engage employees on the organization's sustainability progress; draft materials for Communications / Marketing (including annual sustainability reports) to use externally describing the organization's sustainability journey and progress.

Maintaining Momentum

Setting up a team and developing a sustainability plan is hard work. Don't let it go to waste - put the right support in place to make sure the Green Team can maintain its momentum! Keys to success include:

- **Annual goals and senior management support.**
Sustainability goals should be part of the organization's annual planning, just like goal-setting in any other business area. Set a specific time each year to develop annual goals and look ahead. Review the past year's progress with the senior management team, then get their support and sign-off for the upcoming year's goals.
- **Continue regular touchpoints.**
Keep regular monthly meetings to stay on top of progress, setbacks, and opportunities for action. Understand how senior management and the organization's board want to be kept informed of sustainability initiatives, and set up systems and structures to keep those lines of communication, accountability, and engagement open.

Case Study | IKEA Ottawa

Many Ottawa businesses are taking steps to build their own sustainability committees, and IKEA Ottawa's is worth highlighting!

Their committee meets monthly, includes representatives from each function area, and has been instrumental in tracking the store's **impressive waste diversion rate**.

They conduct **internal sustainability tours**, affording co-workers the opportunity to provide input on green initiatives, and they organize annual tree planting events, and employee sustainability competitions.



Julie Damaren, a member of their team, says that co-workers are proud to be a part of the committee, and that the organization's sustainability work has **helped attract and retain talent in the workforce**. IKEA's sustainability committee coordinates and participates along with other co-workers in events like Ottawa's [Cleaning the Capital](#) and [Electric Vehicle Day](#), as well as packing snack bags for local schools, **demonstrating their commitment to the wider community!**

- **Track progress, evaluate results, and celebrate success.**

Keep track of what you're doing, the progress made, and the results you're seeing to motivate the Green Team and the rest of the organization too. As you see measurable progress, be sure to celebrate it within your organization (e.g., success reports to senior management, posters, newsletters, announcements) and to take advantage of opportunities for public celebration (e.g., marketing opportunities, media stories, community sustainability awards). Remember that your success can help inspire others, and can create some friendly local competition too.

- **Think about what comes next.**

Becoming more sustainable is a long-term journey. Your initial work developing a sustainability plan likely provided you with a great reference list to return to in thinking about what projects come next. Additionally, as you see progress from initial efforts, excitement may build and you may find more employees or supervisors coming forward with ideas and energy to tackle new projects, and increase the ambition of your organization's sustainability goals.



Let us know how it's going!

Green Economy Canada created this Green Team Guide based on best practices across our network. We'd love to hear your Green Team stories and successes so others can benefit too.

Contact us at info@greeneconomy.ca to let us know about your Green Team or if you have any suggestions for what guidance you'd love to see in the future.



Appendix C

Green Team Guide | Toolkit

This toolkit includes the samples and templates mentioned in the [Green Team Guide](#). Feel free to adapt these for use in your organization. If an editable version of this toolkit would be useful, please contact Green Economy Canada at info@greeneconomy.ca

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Sample Green Team Recruitment Email

Subject line: *Join [Company's] New Green Team at the March 12 Kick-off Meeting*

Hello,

I want to be part of making our workplace more sustainable, so I'm working along with **[any collaborators]** to start a Green Team. We'd love to have you attend our upcoming kick-off session to share your ideas and learn more:

Green Team Kick-Off:

Tuesday, March 12th

12:15 - 1:00pm

Meeting Room 1B

All welcome!

Wondering what a Green Team is?

A Green Team is a group of employees representing different departments and roles who come together to help set goals and make sustainable changes at their workplace.

Is the Green Team right for you?

- Do you have ideas about how **[company]** could be more environmentally friendly?
- Do you care about our climate impact and want to take action?
- Do you want to work with coworkers to engage staff in planet-friendly activities?

If you answered yes to any of those questions or just want to learn more, come to the kick-off meeting!

[sign off]

Sample Green Team Recruitment Poster

Green Team Kick-Off

*"If we upgraded this equipment
the company would save money
AND energy!"*

*"I know we can do a
better job of recycling!"*

*"I care about the
environment, and I want my
workplace to care too."*

**Join the Green Team and make
your ideas happen. All welcome!**

[Date]

[Time]

[Location]



Sample Kick-off Session Agenda

Kick-off Session Agenda	
12:15-12:20	Arrival and welcome
12:20-12:30	Introductions from the people involved in organizing the meeting, explaining who they are, their role in the company, why they care about sustainability, what a Green Team is, and why they are starting a Green Team. Invite the Green Team senior leadership sponsor to speak to how the Green Team aligns with the company's overall sustainability goals and that senior leadership supports this initiative. Share any insights about the organization's environmental footprint you might have.
12:30-12:40	Ask attendees to turn to the person next to them (or if meeting remotely use breakout rooms) and discuss: <ul style="list-style-type: none">• What made you come out to the meeting today?• What do you think a Green Team could do at [company] to make it more sustainable?• When it comes to sustainability, what role would you like to play at [company]?
12:40-12:45	Hear back from a few groups who volunteer to share.
12:45-12:55	Q&A: <ul style="list-style-type: none">• Be prepared to answer questions such as time commitment, potential responsibilities, and to field lots of comments and ideas.• You might not know all the answers yet, because the first members of the Green Team will work some of these details out when they formalize the Green Team Charter.
12:55-1:00	Remarks on next steps: <ul style="list-style-type: none">• The idea of a Green Team is to take ideas and energy like this and turn it into action and results.• Our first step as a Green Team is to recruit members like you. We'll then formalize our mission and goals into a Charter, and then begin developing a plan to carry out sustainability projects. If today's conversation has got you interested, we invite you to sign up to participate as part of the Green Team.• Let them know how to sign up and the process for Green Team selection. Thank everyone for attending and let them know you'd be happy to answer any further questions and how to reach you.

Sample Green Team Charter

Mission:

The Green Team advances sustainability efforts at [company] and works to create a culture of sustainability among employees.

Purpose:

1. Educating [company] employees on environmental sustainability and building a culture of sustainability.
2. Implementing projects and initiatives that result in achieving [company]'s sustainability goals of:
 - a. Reducing greenhouse gas emissions by 50% below 2015 levels by 2030.
 - b. Reducing water consumption by 30% below 2020 levels by 2025.
 - c. Achieving 95% waste diverted from landfill by 2025.

Goals:

The [company] Green Team will:

- Serve as a resource on all environmental sustainability matters at [company].
- Support development of a Sustainability Plan to outline detailed actions to reduce [company]'s environmental footprint.
- Research and make recommendations on sustainability initiatives to implement in the workplace.
- Develop environmental sustainability reporting
- Facilitate and promote opportunities for staff engagement in sustainability education and initiatives.

Structure and Membership Responsibilities:

The Green Team will consist of a maximum of ten (10) employees.

Members will include a mix of employee departments with representation including, but not limited to:

- Marketing
- Human Resources
- Finance, and
- Facilities.

Green Team Roles include:

- **Team Lead:** manages the green team, facilitates meetings, delegates tasks, liaises with senior management and other departments as needed.

- **Secretary:** records meeting minutes and generates a list of action items to send to committee members within 72 hours of each meeting.
- **Admin:** supports the Team Lead and Secretary. Schedules meetings and distributes agendas one week in advance.
- **Communications:** acts as the main point of contact for employees seeking to learn about the Green Team, and as the main messenger for the Green Team's communications to general employees. Ensures Green Team updates and messaging to the organization are consistent and reflect the Green Team Charter. Liaises with the internal communications department about sustainability efforts to incorporate into public messaging.
- **Finance:** manages the budget for Green Team activities.
- **Data Collection Lead:** leads data collection for the organization to update its GHG Inventory, water footprint, and waste audit data; tracks the quantitative impact of projects and overall progress on sustainability goals. Works with a variety of stakeholders on data collection and responsibilities may range from project managing the process to direct roles in data collection.
- **General Members:** bring expertise from their functional area, help develop sustainability initiative ideas, and provide insight on how to implement sustainability projects successfully in their departments.

Responsibilities of all Green Team members include:

- Sign this charter to demonstrate their commitment to the Green Team mission.
- Actively participate in the meetings, recommendations and initiatives of the Green Team.

Green Team membership is subject to the approval of the employee's direct supervisor and should not conflict with the employee's core job function.

If a member is going to miss a meeting, it is their responsibility to notify the Team Lead or meeting lead if the Team Lead is to be absent. They should also obtain meeting minutes from the Secretary. If the meeting Secretary is to be absent from a meeting, it is their responsibility to make alternate arrangements for a delegate minute taker.

A team member is expected to attend 75% of scheduled meetings to remain active on the Green Team. If a team member is unable to uphold their commitments to the Green Team, they should submit their intentions to withdraw to the Green Team Lead.

Project Planning and Execution

Individual projects, initiatives and events will be carried out by sub-committees and action owners. Any Green Team member is welcome to support the sub-committees if necessary. The

various sub-committees may also draw on employees who are not an official part of the Green Team in order to bring in new expertise and build organizational connections.

An annual calendar of events will be created to allow for members to plan for upcoming commitments.

Meetings

Meetings will be held monthly for 60 minutes. These meetings will be held on the first Wednesday of each month at 2:30pm.

Quorum

The majority of the membership will constitute a quorum. The lack of a quorum at a meeting will not prevent the members from discussion or creating recommendations to be later distributed to the rest of the members for a decision.

Decision-making

Decisions within the purview of the Green Team may be made by a majority of the membership, but the team will make a reasonable effort to reach a consensus. All members will be notified when a decision is required and given a set time for a response. If a member does not respond within the specified response time, the decision will be carried by those members who responded.

When the Green Team is making recommendations which need to be approved by decision-makers outside the Green Team, the Green Team Lead will manage the recommendations process and liaise with the appropriate decision-makers.

Budget

Budgeting for Green Team activities will fall under the budget allocated by the Finance Department unless otherwise specified.

Report and Communication

The Green Team will prepare an annual report on all projects and events. The report will be distributed to all employees with approval from the Director of Operations.

Additional team communications will be conveyed through internal emails to employees along with postings to relevant internal sites with the support of Human Resources as required.

Amendments

Any member may propose an amendment to this Charter. Any proposed amendment will be circulated to the entire membership prior to the next meeting. The recommendation to amend the

Charter must pass by consensus at a Green Team Committee meeting that has a quorum. The recommendation must be approved by the Team Lead, to be adopted into the Charter.

Commitment

I, the undersigned, am committed to reaching the goals of this Charter and declare my support for the Green Team. I understand the membership responsibilities and time commitments required to participate on this committee and have received approval from my supervisor to participate.

Employee Name

Supervisor Name

Employee Signature

Supervisor Signature

Date

Date

Sample Green Team Meeting Agenda

Agenda	
5 mins	Icebreaker / energizer / team time
15 mins	Review of action items & updates of projects in progress
30-35 mins	Discussion items <ul style="list-style-type: none">• <i>Could include: anything that requires further discussion or alignment from projects in progress, discussion of new projects that should be explored in the upcoming quarter, communicating progress / successes to employees, and anything else that the team needs to align on.</i>
5-10 mins	Next steps and wrap-up <ul style="list-style-type: none">• <i>Detail any next steps and assign them to relevant green team members with clear timelines for completion</i>