Decarbonization Strategy & Action Accelerator Program

A Playbook



Module 4 Playbook

Establishing an Action Plan

How to use this playbook

This playbook serves as both a reference guide and a checklist for completing required activities in Module 4. Please carefully review the module outcomes, resources and assignments, and instructions to help guide you through the module and track your progress.

Be sure to submit all required assignments and resources at the end of the module to receive credit for completion.

Module Overview & Outcomes

The module guides participants on how to translate a decarbonization strategy into a practical, actionable roadmap for implementation. The curriculum will leverage a Project List Identifier Tool to help participants explore approaches for identifying and organizing emissions reduction initiatives, assessing actions based on feasibility, impact, and business priorities, and developing a prioritized project portfolio. Participants will also learn how to build an implementation plan that can be socialized with leadership, support decision-making, and drive progress toward emissions reduction goals.

By the end of the module, participants will have a structured framework for operationalizing their strategy and advancing execution across their organization.

Module Resources & Assignments

Module 4 Session

Establishing an Action Plan

Module 4 Homework Assignment

Project List Identifier Tool

Module Instructions

To complete Module 4, please follow the instructions outlined below. All materials, including session recordings, resources, and homework assignments, are available on the program SharePoint page. Be sure to download and save copies of all materials before editing them.

1. Watch or attend the **Module 4 Session: Establishing an Action Plan**
   a. If you are unable to attend the session at the scheduled time and date, please watch the session recording
2. Complete the **Module 4 Homework Assignment: Project List Identifier Tool**
   a. Download a copy of the Project List Identifier Tool (Excel file)
   b. Navigate to "READ ME" for initial instructions on how to use the tool and input required information
   c. Complete relevant sheets, reading the instructions and inputting the required information. Please see the following pages of this playbook for more guidance on how to determine which sheets may be relevant for your organization and how to complete data input needed for Module 4.

Once the steps above are complete, please confirm you have finished the module by emailing the following items to the program inbox:

1. A copy of the Project List Identifier Tool, with the relevant sheets completed.
2. Confirmation that you have watched the session recording, if you did not attend the module session live.

Receipt of these items is required to be marked as having completed the module and to be eligible to receive a certificate at the end of the program.

M4.0: Organizational Setup

This sheet is where you set up basic information about the countries that your organization operates in and your base year and target year emissions information. These selections feed the drop-down menus and calculations on later sheets.

Guidance

Step 1: Select your countries of operation for the Virtual Power Purchase Agreement (VPPA) screening

Starting in cell **F10**, use the drop-down menus in **column F** to select each country your organization operates in. There are 20 countries to select from.

These selections pull through automatically to the M4.3 Country Information tab, where you will enter annual electricity consumption (in kWh) by country.

Note: There are 20 countries to select from. The list is focused on countries where VPPAs are generally available, so you may not see every country your organization operates in.

The countries you select here are only used for the VPPA screening. If you operate in a country that isn't on this list, you can still enter those facilities and fleets on the **M4.1 Site Information and M4.2 Fleet Information** tabs.

Step 2: Add your company's target year information

In the target year table, enter your **base year in cell I10** and your **near-term target year in cell I11.**

We suggest using the same base year and near-term target year you selected in Module 3, on the **M3.4 Target Setting Parameters** tab of your Module 3 homework assignment.

Note: "Base year" means strategy base year. In this tool, "base year" is your strategy base year. It is the starting point the tool uses to estimate how much you need to reduce emissions to reach your near-term target. We recommend entering your most recent year of scope 1 and 2 emissions data. This may be different from the base year of your public emissions target. For example, if your target base year is 2020 but your most recent complete data is 2025, enter 2025 here.

M4.0: Organizational Setup

Step 3: Add your company's total enterprise-level scope 1 and 2 emissions data

In the emissions table, enter your **total enterprise-level** emissions in **metric tons of CO2e (MTCO2e)**. Fill in all cells formatted in **light blue**. If you completed your Module 3 homework assignment, you already have this data. Guidance for each row is below:

- **Cell L10 (Base year scope 1 emissions)**: Enter your total scope 1 emissions for your base year. You can find this in column I of the **Target Year Emissions Summary** tab of your Module 3 homework assignment.
- **Cell L11 (Base year scope 2 emissions):** Enter your total scope 2 emissions for your base year. You can find this in column I of the **Target Year Emissions Summary** tab of your Module 3 homework assignment.
- **Cell L12 (Base year scope 1 & 2 emissions):** No input needed. The tool adds the scope 1 and 2 emissions in cells L10 and L11 together automatically.
- **Cell L13 (Projected near-term target year scope 1 emissions):** Enter your projected scope 1 emissions for your near-term target year. You can find this in column J of the **Target Year Emissions Summary** tab of your Module 3 homework assignment.
- **Cell L14 (Projected near-term target year scope 2 emissions):** Enter your projected scope 2 emissions for your near-term target year. You can find this in column J of the **Target Year Emissions Summary** tab of your Module 3 homework assignment.
- **Cell L15 (Projected near-term target year scope 1 & 2 emissions):** No input needed. The tool adds the scope 1 and 2 emissions in cells L13 and L14 together automatically.
- **Cell L16 (Near-term scope 1 & 2 target line):** Enter the value of your near-term target line. To find it, open the **Decarb Dashboard NT** tab of your Module 3 homework assignment and go to the **Near-Term Target Decarbonization Strategy** chart. Hover your cursor over the red target line on the stacked chart, and its value will appear.
- **Cell L17 (Annual reductions needed in near-term target year):** No input needed. The tool subtracts your near-term target line from your near-term target year scope 1 & 2 emissions. The result is the total annual emissions reductions projected to meet your near-term target.

M4.1: Site Information

This sheet is where you choose and prioritize the sites that have the most potential for operational efficiency and general decarbonization measures.

Guidance

Step 1: Select up to 10 priority sites

We suggest prioritizing 10 sites that are:

- Near-term priorities based on your organization's emissions profile
- Sites with some of the largest decarbonization opportunities, for example because they are outdated or because of their operational makeup
- Sites that have opportunities that align with the largest emissions reductions in your decarbonization strategy

Note

You can add up to 25 sites. However, for your own benefit, we only suggest screening up to 10 sites. This gives you an initial view of which sites are priorities and limits the amount of data you need to enter, so you can be efficient with your time as you complete this module. If your organization has fewer than 10 sites, we suggest screening all of them.

M4.1: Site Information

Step 2: Enter site information

Fill in all cells formatted in light blue for each site. Guidance for each column is below:

- **Column B (Facility Name):** Enter the site name. You can name each site whatever will be clearest to you when reviewing the results of this workbook.
- **Column C (ID):** If your organization uses internal site IDs, enter the site ID here. If you do not use site IDs, we suggest entering the same name used in column B.
- **Column D (Facility Type):** Select the most appropriate site type from the drop-down menu, based on the operations and business conducted at that facility.
- **Column E (State):** Select the state or province the site operates in from the drop-down menu. The menu includes all continental U.S. states, as well as Ontario and Alberta for Canada. For sites outside the U.S. and Canada, leave this field blank. You can find this data on the **M2.0 Facility & Vehicle Details** tab of your previously completed homework.
- **Column G (Country):** Select the country the site operates in from the drop-down menu. You can find this data on the M2.0 Facility & Vehicle Details tab of your previously completed homework.
- **Column H (Owned/Leased):** Select whether the site is owned or leased by your organization. If you are unsure, we suggest selecting Leased. This allows the tool to conservatively assume that new projects at the site may face barriers beyond your organization's control in pursuing them.
- **Column I (Square Footage)**: Enter the approximate square footage of the facility. Please use your best estimate. You can find this data on the **M2.0 Facility & Vehicle Details** tab of your previously completed homework.
- **Column J (Electric Utility):** Select the electric utility serving the site from the drop-down menu. If you do not know the utility, select Other. If the site sits outside USA, leave the cell blank.

M4.1: Site Information

Step 2: Enter site information (continued)

- **Column K (Annual Electricity Consumption):** Enter the annual electricity consumption at the facility. Please make sure this value is entered in **kilowatt hours (kWh)**. You can find this data on the **M2.2 Base Year Raw Energy Data** tab of your previously completed homework.
  - Note: If your company collects electricity data in MWh, multiply by 1,000 to convert to kWh.
    - Conversion equation: MWh x 1,000 = kWh
    - Example: 25 MWh x 1,000 = 25,000 kWh

- **Column L (Annual Electricity Cost)**: Enter the annual electricity cost at the facility in U.S. dollars ($).
  - Note: This information is typically available from facility managers or facilities teams. It can also be found on the past 12 months of utility bills or obtained from the finance or accounts payable team that pays the utility invoices.

- **Column N (Electricity Emission Factor, optional):** The tool automatically fills in an electricity emission factor based on the state and country selected for each site. You can override this value if you choose. Any override should be entered in **metric tons of CO2e per megawatt hour (MTCO2e/MWh)**.
- **Column O (Approximate Usable Roof Area for Solar):** Enter the approximate roof area available for solar, **in square feet**. This information will be used for the onsite solar screening.
- **Column P (Roof Age):** Select the approximate age of the facility's roof from the drop-down menu. If you do not have this information, please feel free to select Unknown. This information will be used for the onsite solar screening.
- **Column Q (Annual Gas Consumption):** Enter the annual natural gas consumption at the facility. You can find this data on the **M2.2 Base Year Raw Energy Data tab** of your previously completed homework.

M4.1: Site Information

Step 2: Enter site information (continued)

- **Column R (Natural Gas Unit of Measure):** Select the appropriate unit of measure for your natural gas consumption from the dropdown menu. The tool will automatically convert the natural gas consumption into MMBtu for use in other background calculations in the workbook.
- **Column S (Annual Gas Cost)**: Enter the annual natural gas cost at the facility in U.S. dollars ($).
    - Note: This information is typically available from facility managers or facilities teams. It can also be found on the past 12 months of utility bills or obtained from the finance or accounts payable team that pays the utility invoices.
- **Column U (Natural Gas Emission Factor, optional)**: The tool automatically fills in the natural gas emission factor. You can enter a different emission factor if you choose, but we recommend using the emission factor already included in this workbook.

M4.2: Fleet Information

This sheet is set up similarly to the M4.1 Site Information sheet and is where you enter information on your organization's fleets of vehicles.

Guidance

Step 1: Determine whether to complete this sheet

If fleet emissions are a large or significant portion of your emissions profile, we suggest adding up to **10 fleets of vehicles** on this sheet.

Step 2: Enter fleet information

Fill in all cells formatted in **light blue** for each fleet. Guidance for each column is below:

- **Column B (Fleet Name):** Enter the fleet name. You can name each fleet whatever will be clearest to you when reviewing the results of this workbook.
- **Column C (ID):** If your organization uses internal fleet IDs, enter the ID here. If you do not use fleet IDs, we suggest entering the same name used in column B.
- **Column D (Vehicle Type):** Select the most appropriate vehicle type from the drop-down menu, based on how the fleet operates and the business it supports.
- **Column E (State):** Select the state or province the fleet operates in from the drop-down menu. The menu includes all continental U.S. states, as well as Ontario and Alberta for Canada. For fleets outside the U.S. and Canada, leave this field blank.
- **Column F (Country):** Select the country the fleet operates in from the drop-down menu.
- **Column G (Owned/Leased):** Select whether the fleet is owned or leased by your organization. If you are unsure, we suggest selecting Leased. This allows the tool to conservatively assume that new projects for the fleet may face barriers beyond your organization's control. Lease status can also point to an opportunity. When vehicle leases are up for renewal, it can be a natural time to consider electrification or alternative fuels.

M4.2: Fleet Information

Step 2: Enter fleet information (continued)

Fill in all cells formatted in **light blue** for each fleet. Guidance for each column is below:

- **Column H (Vehicle Type/Class):** No input required. The tool automatically assigns Vehicle Type/Class.
- **Column I (Number of Vehicles in Fleet):** Enter the number of vehicles in the fleet.
- **Column J (Primary Fuel Type):** Select the primary fuel type used by the vehicles in the fleet from the drop-down menu. Options are gasoline or diesel.
- **Column K (Typical Daily Mileage):** Enter the typical daily mileage for each vehicle in the fleet. If mileage varies across vehicles, we suggest using the median value for the fleet.
- **Column L (Typical Daily Operating Hours):** Enter the typical daily operating hours for each vehicle. This helps the tool understand whether vehicles are on the road all day, or drive to a site, park while work is performed, and return to the facility at the end of the day. This may require an estimate. If operating hours vary across vehicles, we suggest using the median value for the fleet.
- **Column M (Annual Fuel Consumption):** Enter the total annual fuel consumption for the fleet, in either gallons or liters.
- **Column N (Fuel Consumption Unit of Measure):** Select gallons or liters from the drop-down menu to match the value entered in column M. If your data uses a different unit, please convert it to gallons or liters first. Any data entered in liters will be converted to gallons in column O.
- **Column P (Annual Fuel Cost):** Enter the approximate annual fuel cost for the fleet in U.S. dollars ($).

M4.3: Country Information

This sheet is where you aggregate your annual electricity consumption in each country of operation. The country list pulls through automatically from your country selections on M4.0 Organizational Setup.

Guidance

Step 1: Enter annual electricity consumption

In **column C (annual electricity consumption (kWh)),** enter your aggregated annual electricity consumption for each country.

Step 2: Review calculated emissions

Column D (estimated annual scope 2 emissions (MTCO2e)) automatically calculates emissions based on the grid average in each country. No input is required unless an override is needed (see note below).

Note

- If any calculated emissions in column D are more than 15% off from your actual emissions calculations, please feel free to override the emissions values (in MTCO2e) in the **light green cells** in column D.
- If your company collects electricity data in MWh, multiply by 1,000 to convert to kWh.
  - **Conversion equation:** MWh x 1,000 = kWh
  - **Example:** 25 MWh x 1,000 = 25,000 kWh

Module 4 Playbook

Screening Results

General Guidance for selecting Year 1 Priorities

- We would suggest not selecting every opportunity available, rather we would recommend choosing the opportunities that you could realistically start on first
- Start with options that have the biggest emissions impact and the fewest barriers
- “Year 1” means your first wave of action, not necessarily next calendar year. The goal is to get these initiatives started with leadership, not to complete them in Year 1

VPPA

This sheet screens whether your organization is a good candidate for a virtual power purchase agreement (VPPA), and in which countries.

Description: A VPPA is a long-term contract to buy the renewable energy from a specific renewable energy project located elsewhere. You don't receive the electricity directly. The project sells its power to the grid, and you receive the renewable energy certificates (RECs) that let you claim the renewable energy. It is typically used for portfolio electric loads near or greater than 100,000 MWh/yr.

Guidance

Step 1: Answer the two screening questions in rows 4 and 5

These questions are an initial screening to see if your company has the financial qualifications and willingness to sign a long-term energy contract. Select your responses from the dropdown in **cells F4 and F5.**

Step 2: Review the screening results

Review the screening table starting in **row 12.** If your company is a good candidate based on your responses in cells F4 and F5, the tool will show whether you have an adequate electricity load in each country to qualify for a VPPA. Countries that qualify will show **Potential VPPA candidate in column F,** and the cell will be filled dark green.

Step 3: Select Year 1 priorities

For each country marked as a potential VPPA candidate, select Yes or No in the Year 1 Priority column (column B) to indicate whether that country should be a Year 1 priority for pursuing a VPPA. This is the only input required in the screening table.
Guidance for selecting Year 1 VPPA opportunities:

- We'd recommend starting with countries that have the largest electricity load and the highest emissions
- Most organizations begin with one or two VPPAs, not several at once

Note: Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the screening table shows the number of countries with VPPA opportunities, based on your credit standing, your willingness to sign a long-term energy contract, and your electricity load.

> **Note**
>
> You may need to work with your finance team to answer question 1 (row 4). Question 2 (row 5) may involve conversations with facilities, finance, or energy procurement leadership to understand your willingness to sign a long-term energy contract.
>
> If you do not know the answer to either question and would prefer not to engage additional stakeholders, select Unsure in cells F4 and F5. The tool will still provide screening results for any country with an electricity load large enough to qualify for a VPPA.

Green Tariffs

This sheet screens your sites for utility green tariff and green pricing programs.

This sheet is set up similarly to the VPPA sheet. Most of it populates automatically from the data entered on M4.1 Site Information.

Description*:

- Green Tariffs: A green tariff is a program offered by your electric utility that connects you to a specific renewable project. You receive the RECs from that project, and the cost usually shows up as a credit or charge on your utility bill. Green tariffs often involve a multi-year commitment, and availability depends on your utility.
- Green Pricing: Green pricing is a utility program that lets you buy RECs through your utility, usually for a small added charge on your bill. It is easy to start and usually has a short commitment, such as monthly or annual. You don't choose the project the RECs come from, so it is often used as a quick starting point.

> Note
>
> *Utility companies may use different terminology than “Green Tariff” or “Green Pricing” to describe their programs. Consider these descriptions as general guidance for the different types of programs electric utilities offer.

Guidance

Step 1: Review the screening results

Columns J and K show whether Green Tariff or Green Pricing programs are likely available through the utility at each site.

Step 2: Select Year 1 priorities

For each site with an available program, select **Yes** or **No** in the **Year 1 Priority** column **(column B)**. This is the only input required on this sheet.

Guidance for selecting Green Tariffs and Green Pricing opportunities:

- Prioritize sites with the highest electricity use
- Consider owned sites or sites with long leases, since some programs may need a multi-year commitment
- Green pricing is usually quick to enroll in, so it can be a quick win

Green Tariffs (continued)

The table below compares green tariffs and green pricing programs. Use it to decide which option fits your company's situation at your facilities best.

Green Tariffs	Green Pricing Programs
Utility contract for RECs from a specified project. Contract structure varies by program and may resemble a VPPA.	RECs purchased directly from the utility, typically unbundled from an unspecified resource.
Allows claims surrounding renewable energy, may include additionality	Allows claims surrounding renewable energy
May be cost-competitive with other utility-scale options, typically involves a bill crediting mechanism	Short-term commitment (monthly or annual)
Local or regional projects	Readily available
More complex structure and contracting process; pricing may be variable over the term	Additional charge on bill
Multi-year commitment; limited availability	Customer does not have input into type of renewable energy; lacks additionality claims
May have multi-year lead time before projects comes online	Lacks local impact given procurement of regional or national RECs
Generally, green pricing programs fit best as a bridge solution until other renewable procurement options with better economics and/or stronger sustainability claims are executed.	

Note

Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the screening table shows the number of green tariff and green pricing opportunities your organization has.

Community Solar

This sheet screens your sites for potential community solar opportunities based on the state and utility selected for each site.
This sheet populates automatically from the data entered on M4.1 Site Information.

Description:

Community solar is a shared solar project located off-site. You subscribe to a portion of it and receive credits on your utility bill for the power it produces. It lets you use solar without installing anything at your facility. Availability depends on your state and utility.

Guidance

Step 1: Review the screening results

Review **column L.** Sites with potential will show **Yes, Community Solar opportunities may exist.**

Step 2: Select Year 1 priorities

For each site with a potential opportunity, select **Yes or No** in the **Year 1 Priority** column (column B). This is the only input required on this sheet.

Guidance for selecting Community Solar Opportunities:

- Prioritize wherever available as this opportunity often yields notable cost savings
- This can be a good fit for leased sites, or sites where onsite solar isn't possible, because no site construction is needed

> Note
> Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the screening table shows the number of community solar opportunities your organization has.

Onsite Solar

This sheet screens your sites for potential onsite solar opportunities.
This sheet populates automatically from the data entered on M4.1 Site Information.

Description:

Onsite solar means installing solar panels at your own facility, usually on the roof or on the ground nearby. The power is used right at the site, which reduces how much electricity you buy from the grid. How much you can install depends on available space and roof condition.

Guidance

Step 1: Review the screening results

Review **column M**. Sites with potential will show **Yes, Onsite solar opportunity may exist**, and the cell will be filled green.

Step 2: Select Year 1 priorities

For each site with a potential opportunity, select **Yes** or **No** in the **Year 1 Priority** column **(column B)**. This is the only input required on this sheet.
Guidance on selecting Onsite Solar opportunities:

- Prioritize owned sites because leased sites often need landlord approval, which could be a barrier
- Prioritize sites with newer roofs, since a roof that needs replacing in the next several years should be replaced before solar is installed or at the same time
- Favor sites with large usable roof area and high electricity costs

> Note
> Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the screening table shows the number of onsite solar opportunities for the facilities included in this workbook.

Energy Efficiency

This sheet screens your facilities to indicate which are most likely to reveal significant energy reduction opportunity through an energy audit.

Proper identification of energy reduction opportunities often requires on-site observation or custom calculations, requiring some level of time and monetary investment.

This tool identifies which facilities are most likely to provide your company a good financial return for a further investment into conducting an energy audit.

Description:

Energy efficiency means using less energy to do the same work. Common examples are LED lighting, better heating and cooling systems, building controls and improved insulation. It usually lowers both emissions and energy costs.

Guidance

Step 1: Review the screening results

Review **column M** to see whether an energy audit may be a worthwhile investment based on the facility information you provided.

Step 2: Select Year 1 priorities

For each site that is an energy audit opportunity, select **Yes** or **No** in the **Year 1 Priority** column (column A) to indicate your highest priority facilities.

Guidance on selecting Energy Audit opportunities:

- Consider sites that have not had an audit completed in the last 5 years
- Consider selecting multiple sites in the same region to take advantage of efficiencies of visiting nearby facilities

> Note
> Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the screening table shows the number of energy audit opportunities for the facilities included in this workbook.

Facility Electrification

This sheet screens your processes and key fossil fuel consuming equipment for electrification opportunity.

This evaluation is unique to the other project identification tabs because it evaluates opportunity at the process or equipment level. We recommend identifying the most energy intensive processes to evaluate rather than comprehensively assessing every process or piece of equipment.

Description:

Facility electrification means replacing equipment that burns fuel, like natural gas boilers, furnaces, and water heaters with electric versions such as heat pumps. This reduces on-site fuel use and emissions. It will also increase your electricity use.

Guidance

Step 1: Enter the process you are evaluating

Facility Name	Process, Equipment, or End Use
Example Site 1	HVAC
Example Site 2	Aluminum holding furnace
Example Site 2	Aluminum melting furnace
Example Site 3	Boiler

Use the drop-down to select your Facility Name and enter the process or equipment you'd like to evaluate for electrification

Facility Electrification (continued)

Step 2: Enter current process energy efficiency

Process, Equipment, or End Use	Energy Efficiency of the Current Process
HVAC	90%
Aluminum holding furnace	20%
Aluminum melting furnace	30%
Boiler	75%

Enter the estimated energy efficiency of the process you are evaluating.

You will likely need support from Facility Engineers/Managers to estimate this information

Examples of this include efficiency ratings given by a manufacturer for equipment such as an HVAC rooftop unit.

Alternatively, this may also be a calculated value from plant engineers using estimated heat losses through exhaust gases, casing, opening infiltration, etc.

Step 3: Enter the estimated efficiency of an electric alternative

Energy Efficiency of the Current Process	Projected Electric Process Energy Efficiency
90%	300%
20%	60%
30%	40%
75%	300%

Enter the estimated energy efficiency of the electric process that would replace the current fuel consuming process.

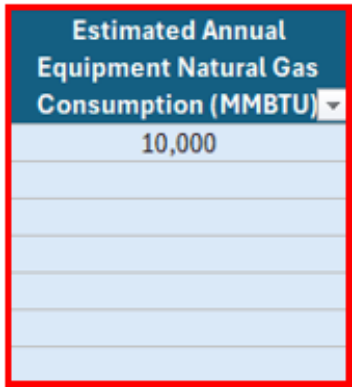
You will likely need support from Facility Engineers/Managers to estimate this information

This data will often come from manufacturer specification sheets for equipment replacements. Note that “heat pump” equipment often has a coefficient of performance (COP) rating instead of an efficiency rating. The efficiency rating is simply COP x 100. For example a COP of 2.8 would be an efficiency of 280%.

This information may also be a calculated value from plant engineers using estimates of reduced heat losses compared with current equipment.

Facility Electrification (continued)

Step 4: Enter the estimated natural gas consumption of the current equipment



Enter a high-level estimate of the natural gas consumption of the current equipment. This value is only used to estimate emissions savings and will not impact the evaluation of how good the project is.

You will likely need support from Facility Engineers/Managers to estimate this, but reinforce that an approximation is OK for the purposes of this tool.

Step 5: Review the screening results

Review **column P** to see whether process or equipment electrification may be a worthwhile investment based on the information you provided.

Step 6: Select Year 1 priorities

For each facility electrification opportunity, select **Yes** or **No** in the **Year 1 Priority** column **(column A)** to indicate your highest priority facilities.

Guidance on selecting Facility Electrification opportunities:

- Prioritize high energy consuming equipment for evaluation
- Prioritize equipment or processes that are nearing end-of-life
- Consider prioritizing equipment where incentives may be available for electrifying equipment

Note
Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the screening table shows the number of facility electrification opportunities for the equipment and processes included in this workbook.

Fleet Electrification

This sheet screens your fleets for electrification potential.

This sheet is set up similarly to the previous sheets. The main difference is that it populates automatically from the data entered on M4.2 Fleet Information.

Description:

Fleet electrification means replacing gas or diesel vehicles with electric ones. It works best when an electric version of your vehicle type is available and your vehicles' daily mileage is within the electric vehicle's charging range.

Guidance

Step 1: Review the screening results

Review column P. Fleets will show Likely feasible when both of the following are true:

- A like-for-like electric replacement is available for the vehicle type.
- The vehicle's daily mileage is within the charging range of the electric replacement.

Step 2: Select Year 1 priorities

For each fleet marked **Likely feasible**, select **Yes** or **No** in the **Year 1 Priority** column (**column B**). When choosing Yes or No, consider the fleet's average vehicle age. It's a good indicator of how soon a project could realistically be put in place. This is the only input required on this sheet.

Guidance on selecting Fleet Electrification:

- Prioritize fleets with older vehicles or leases coming up for renewal, since replacement is likely already planned
- Favor vehicles that return to the same site each day, so they can charge there overnight

> Note
>
> Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the table shows the number of fleet electrification opportunities for the fleets in this workbook. The reduction summaries in the Output section assume the electric vehicles are charged with renewable electricity, so they produce zero emissions. Actual emissions reductions will be lower if vehicles charge on standard grid power.

Fleet Alternative Fuels

This sheet screens your fleets for alternative fuel options.

This sheet is set up similarly to the Fleet Electrification sheet and populates automatically from the data entered on M4.2 Fleet Information.

Description:

Fleet alternative fuels means switching your existing vehicles to lower-carbon fuels, such as renewable diesel, biodiesel or renewable natural gas. This can reduce emissions without buying new vehicles, though fuel availability and cost vary by location.

Guidance

Step 1: Review the screening results

Review **column N** to see whether alternative fuels are available based on the fleet information you provided.

Step 2: Select Year 1 priorities

For each fleet where alternative fuels are available, select **Yes or No** in the **Year 1 Priority** column **(column B)** to identify your highest priority fleets. If you already selected a fleet for electrification on the previous tab, we recommend not selecting it here too. Choosing one option per fleet keeps your priorities clear when you discuss them with your leadership team.

Guidance on selecting Fleet - Alternative Fuel opportunities

- Use this for fleets that aren't ready for electrification yet
- When selecting a fleet as a Year 1 priority, we recommend choosing fleets that can easily get alternative fuel along their regular routes. Prioritize fleets where you know fueling stations that carry the fuel are available.
- Where possible, prioritize fleets with the highest fuel use to achieve the most emissions reductions

> **Note**
> Action recommendations only appear for rows marked Yes in the Year 1 priority column

The summary above the screening table shows the number of fleet alternative fuel opportunities for the fleets included in this workbook.

Output – Reduction Summary

This tab summarizes the potential annual emissions reductions from the projects you selected as Year 1 priorities throughout this workbook. It shows reductions at the facilities level and fleet level, and how those reductions move you toward your near-term emissions reduction target.

Note: No input is required on this tab

This tab is a summary of all the data and Year 1 priority selections you made throughout this workbook, and all values update automatically. If you want to change the results, go back to the screening tabs and update your selections in the Year 1 Priority column.

Guidance

Step 1: Review the High-level Emissions Reduction Summary

The table in the top left shows the total potential annual emissions reductions from the projects you selected as Year 1 priorities for your company's facilities and fleets. All reductions are shown in metric tons of CO2e (MTCO2e).

- **Facilities:** Potential annual emissions reductions from the Year 1 priority projects selected for your sites.
- **Fleets:** Potential annual emissions reductions from the Year 1 priority projects selected for your fleets.
- **Total:** Facilities and fleets added together. This is the total potential annual emissions reductions from all of the projects you selected.

Output – Reduction Summary (continued)

Step 2: Review the Detailed Emissions Reduction Summary

The two tables below the high-level summary give a more detailed breakdown of where your emissions reductions are coming from. All three tables on the left side of this tab pull from the same data points, so the totals will match the high-level summary.

- **Facilities - Potential Annual Emissions Reductions (bottom left):** Breaks out the reductions at your facilities by reduction lever, including VPPA, Green Tariffs, Green Pricing, Community Solar, Onsite Solar, Facility Electrification, and Energy Efficiency.
- **Fleet - Potential Annual Emissions Reductions (to the right of the facilities table):** Breaks out the fleet-level reductions by Electrification and Alternative Fuels.

If a reduction lever shows no value, either no projects were marked Yes as a Year 1 priority for that lever, or no opportunities were identified on that screening tab.

Note

- The fleet total may be lower than the Electrification and Alternative Fuels rows added together. If a fleet was selected for both, it is only counted once in the total, so these two rows are not added together.
- Fleet electrification reductions assume vehicles are charged with renewable electricity. Actual reductions will be lower if vehicles charge on standard grid power.

Output – Reduction Summary (continued)

Step 3: Review your progress towards your near-term emissions reduction target

The Target Check table on the right side of this tab shows how the projects you selected move you toward your near-term emissions reduction target. Guidance for interpreting each row is below:

- **Annual reductions needed in near-term target year:** The emissions reductions needed in your near-term target year to meet your target. This pulls from cell L17 on the M4.0 Organizational Setup tab.
- **Potential reductions from projects:** The total potential annual emissions reductions from the projects you selected as Year 1 priorities. This matches the total in the high-level summary.
- **Remaining gap to target:** The emissions reductions that would still need to be filled to achieve your target in that year.
- **Status:** Shows how far the potential reductions from your selected projects get you toward the reductions required in your target year, shown as a percentage of your target.

Step 4: Review the chart

The chart below the Target Check table is a visual summary of the same information. It helps you visually understand the order of magnitude of how much the projects you selected in this workbook get you toward the reductions required in your target year.

Guidance on using these results:

- A remaining gap is expected. Year 1 projects are your first wave of action, and projects in later years and renewable electricity procurement can help close the rest of the gap
- To see how more projects affect your progress, revisit the screening tabs and mark additional opportunities as Year 1 priorities, but remember to be realistic if you choose to select additional projects
- These results are screening-level estimates, not guaranteed outcomes. Actual reductions will depend on contracts with utilities and developers, project design, timing, and costs
- This tab is a good starting point for discussing your action plan with your leadership team

> **Note**
>
> Only rows marked Yes in the Year 1 Priority column on each screening tab are included in this summary

Output: Site-level Summary

This sheet is where you can review the site-level results of the projects you selected as Year 1 priorities on the reduction lever tabs. No data input is needed on this sheet. Everything fills in automatically based on the selections you made up to this point.

Guidance

Step 1: Review the key metrics

At the top of the sheet you'll see two key metrics that summarize your Year 1 priorities across all site-level reduction levers:

- **Number of Year 1 projects:** The total number of projects you selected as Year 1 priorities as you worked through each reduction lever tab.
- **Total emissions reduction potential:** The total annual emissions, in metric tons of CO2e (MTCO2e), that you could reduce by pursuing the projects you selected as Year 1 priorities.

Step 2: Review the high-level site summary

Below the key metrics is the high-level site summary, which breaks the key metrics down a bit further. Here you'll see:

- **Number of sites with Year 1 projects:** The number of sites with projects selected as Year 1 priorities, broken out by reduction lever. If no projects were selected for a reduction lever, it will show 0.
- **Emissions reduction potential by reduction lever:** The emissions reduction potential from the sites with projects selected as Year 1 priorities for each reduction lever, and the total reductions for those sites.

Step 3: Review the site-level summary

Below the high-level site summary is the site-level summary. This table shows exactly which sites have opportunities selected as Year 1 priorities, broken out by reduction lever. A green dot means the site has an opportunity for that reduction lever and you selected it as a Year 1 priority.

> **Note**
>
> If a site or reduction lever you expected to see isn't showing up, go back to that reduction lever's tab and check that you selected Yes in the Year 1 Priority column. Only projects marked as Year 1 priorities are included on this sheet.

Output: Country-level Summary

This sheet summarizes your VPPA opportunities at the country level. No data input is needed on this sheet. Everything fills in automatically based on the information and selections you've entered so far.

Guidance

Step 1: Review the high-level VPPA opportunity summary

At the top of the sheet is the high-level VPPA opportunity summary. It shows three data points:

- **Total annual country-level Scope 2 emissions:** Your total annual Scope 2 emissions, in metric tons of CO2e (MTCO2e), as entered on the M4.3 Country Information tab.
- **Total annual country level addressable Scope 2 emissions:** The emissions you could potentially reduce by signing a VPPA that covers the sites in those countries.
- **Countries with a Year 1 VPPA opportunity:** The number of countries where you have a VPPA opportunity and chose to make it a Year 1 priority.

Step 2: Review the country level VPPA summary

Below the high-level summary is the country-level VPPA summary. This table shows which countries have VPPA opportunities that you selected as Year 1 priorities. A country shows a green dot only if it meets all of these criteria:

- Your organization meets the financial requirements, including credit rating and willingness to sign a long-term contract
- Your organization has enough electricity load in that country
- You selected the country as a Year 1 priority

A green dot means your organization qualifies for a VPPA opportunity in that country and you chose to pursue it as a Year 1 priority.

> **Note**
>
> If you expected to see a green dot for a country but don't, go back to the VPPA tab and check that you selected Yes in the Year 1 Priority column. Also check that your answers to the financial qualification questions are correct.

Output – Fleet Summary

This tab summarizes the potential annual emissions reductions from electrifying fleets or switching to alternative fuels for the fleets you selected as Year 1 priorities in this workbook. It also shows your total annual addressable fleet emissions. Each fleet is counted only once in that total, so reductions from the same fleet are not double counted.

Note: No input is required on this tab. This tab summarizes the fleet data and Year 1 priority selections you made on the M4.2 Fleet Information, Fleet Electrification, and Fleet Alternative Fuels tabs. All values update automatically. If you want to change the results, go back to the screening tabs and update your selections in the Year 1 Priority column.

Guidance

Step 1: Review the High-level Fleet Opportunity Summary

The table at the top of this tab gives a quick view of your fleet emissions and how much of them your Year 1 priorities could address. Emissions are shown in metric tons of CO2e (MTCO2e).

- **Total annual fleet emissions:** The total annual emissions from all fleets entered in the tool. These are calculated from the fuel consumption you entered on M4.2 Fleet Information. This is your starting point.
- **Total annual addressable emissions:** The total emissions from fleets with at least one Year 1 opportunity, with each fleet counted once.
- **Fleets with a Year 1 Opportunity:** The number of fleets selected as a Year 1 priority for electrification, alternative fuels, or both. Each fleet is counted only once, so a fleet selected for both electrification and alternative fuels counts as one Year 1 opportunity. Trio does not recommend selecting the same fleet for both electrification and alternative fuels. Choosing one option per fleet keeps your priorities clear when you discuss them with your leadership team.

Step 2: Review Year 1 Opportunities by Reduction Lever

This table splits your Year 1 priority fleets by reduction lever, so you can compare electrification and alternative fuels side by side.

- **Fleets selected as Year 1 priority:** The number of fleets marked Yes as a Year 1 priority for each lever.
- **Vehicles in those fleets:** The total number of vehicles in those fleets. This gives a sense of how big a Year 1 effort could be for each lever.
- **Potential annual emissions reductions (MTCO2e):** The estimated annual reductions if those fleets moved forward with each lever. Adding the electrification and alternative fuels values together may not match the Total annual addressable emissions in the High-level Fleet Opportunity Summary table above. A fleet selected for both levers shows up in both columns here, but it is only counted once in the total to avoid double counting.

Output – Fleet Summary (continued)

Step 3: Review the Fleet Opportunity Summary

The table at the bottom lists every fleet you entered. A green dot in the Electrification or Alternative Fuel column means the fleet has an opportunity for that lever and you selected it as a Year 1 priority. A blank cell means either no opportunity was identified or the fleet was not marked Yes.

Notes

- As a reminder, if a fleet is selected for both electrification and alternative fuels, it is counted in both columns of the Year 1 Opportunities by Reduction Lever table. Do not add the two columns together. Use Total annual addressable emissions instead, which counts each fleet once.
- Fleet electrification reductions assume vehicles are charged with renewable electricity. Actual reductions will be lower if vehicles charge on standard grid power.
- Alternative fuel reductions assume a 100% fuel switch, so treat them as the maximum potential. Actual reductions may be lower depending on blend levels and fuel availability.

Guidance on using these results

- If a fleet has a green dot in both columns, we suggest choosing one option for that fleet before you discuss priorities with your leadership team
- Compare total addressable emissions to total annual fleet emissions to see how much of your fleet footprint your Year 1 selections cover. Fleets without a green dot can be revisited in later years
- These results are screening-level estimates, not guaranteed outcomes. Actual reductions will depend on vehicle availability, charging infrastructure, fuel availability, and timing

Note: Only rows marked Yes in the Year 1 Priority column on each screening tab are included in this summary


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