



# 2024 SmartWay Rail Carrier Partner Tool: User Guide

**U.S. Version 1.0  
(Data Year 2023)**



# **2024 SmartWay Rail Carrier Partner Tool: User Guide**

**U.S. Version 1.0  
(Data Year 2023)**

Transportation and Climate Division  
Office of Transportation and Air Quality  
U.S. Environmental Protection Agency

**EPA-420-B-24-015  
April 2024**

# Table of Contents

**PRE-CHECKLIST – BEFORE GETTING STARTED** .....1

- What is the SmartWay Transport Partnership?.....1
- Why Do Rail Companies Join The SmartWay Transport Partnership? .....1
- How do Rail Companies Join the SmartWay Transport Partnership?..... 2
- How do I join if My Parent Company Has Multiple Fleets? ..... 3
- What Data Do I need to Gather to Complete the Rail Carrier Tool? ..... 3
- What Software & Hardware Is Required For Completing The Rail Carrier Tool?..... 4
- How do I set the Security Level When Opening SmartWay Tools?..... 5
- What is Included in the SmartWay Carrier Partnership Agreement?..... 7
- What’s New in the 2024 Rail Tool?..... 9

**DATA COLLECTION REQUIREMENTS** ..... 10

- Establishing Your Data Collection Year..... 10
- Required Data..... 10

**TOOL SCREENS AND DATA ENTRY** .....11

- Downloading the SmartWay Rail Carrier Tool.....11
- How to Set Security Levels For The SmartWay Tools .....11
- Introductory Screens.....11
- Step 1. Entering Partner Name .....11
- Step 2. Company and Contact Information ..... 12
- Step 3. Fleet Description(s).....14
- Step 4. Selecting a Fleet for Data Entry..... 15
- Submitting Your Tool to EPA..... 18

**RESULTS AND SUMMARY REPORTS** ..... 20

**APPENDIX A: WORKSHEETS FOR DATA COLLECTION**..... A-1

- Worksheet #1: Contact Information .....A-1
- Worksheet #2: Fleet Characterization..... A-3
- Worksheet #3: Power Units Information..... A-4
- Worksheet #4: Operations Data .....A-6

# List of Figures







Figure 1. Macro Settings Screen in the Trust Center.....	7
Figure 2. Power Units Screen .....	16
Figure 3. Operations Screen.....	17
Figure 4. View Summary Data Reports Screen.....	20

# Pre-Checklist – Before Getting Started




## WHAT IS THE SMARTWAY TRANSPORT PARTNERSHIP?

Launched in 2003, the SmartWay Transport Partnership is a public/private collaboration between the EPA and the freight industry to improve fuel efficiency, increase environmental performance, and encourage supply chain sustainability.

Six types of freight transport companies can join SmartWay.

-  Freight shippers
-  Logistics companies (including 3PLs/4PLs<sup>1</sup>)
-  Truck carriers
-  Rail carriers
-  Barge carriers
-  Air carriers

Tools are provided for each of the six freight transport company types. The SmartWay Tools:

-  Assess freight operations,
-  Calculate carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>), Particulate Matter (PM), and Black Carbon (BC) emissions, and
-  Allow partners to track fuel-efficiency and emission reductions.

SmartWay ranks Partners' efficiency and environmental performance based on the information reported in the tools and recognizes superior performance through the SmartWay Excellence Awards and the SmartWay High Performers list.

## WHY DO RAIL COMPANIES JOIN THE SMARTWAY TRANSPORT PARTNERSHIP?

The SmartWay Transport Partnership provides Rail Carriers with ways to reduce the environmental impact of their freight operations and address costs. Designed with and for the freight sector, the SmartWay Transport Partnership delivers solutions to marketplace needs and challenges. With access to the latest in EPA-tested technologies and peer-provided success stories, carriers that join the SmartWay Transport Partnership can gain a better understanding of their environmental footprint and assert their corporate leadership.





---

<sup>1</sup> 3PLs/4PLs Third party logistics/fourth-party logistics companies

Additionally, SmartWay Partners are associated with an internationally recognized and respected brand that symbolizes cleaner, more efficient transportation choices.

Shippers that join SmartWay move significant amounts of freight with SmartWay Carriers. The higher efficiency of SmartWay carriers compared to non-SmartWay carriers gives SmartWay Rail Carriers an opportunity to improve corporate freight efficiency, reduce their carbon footprint, and voluntarily advance freight sustainability for themselves and their customers.

Participation in SmartWay helps SmartWay Rail Carrier Partners

-  identify opportunities to improve efficiency
-  demonstrate efficiency to customers and stakeholders
-  evaluate and compare carrier performance, and
-  determine the company's transportation carbon footprint

SmartWay provides Rail Carriers with free Tools that help assess and compare various freight transportation options with detailed reports and analyses that support better business decision making.





## HOW DO RAIL COMPANIES JOIN THE SMARTWAY TRANSPORT PARTNERSHIP?

Rail companies join SmartWay by submitting a SmartWay Rail Carrier Tool (hereafter known as the "Rail Carrier Tool" or "Rail Tool.")

Rail companies that join the SmartWay Transport Partnership are known as "SmartWay Rail Partners."

When a rail carrier submits a Rail Carrier Tool to EPA, they agree to the requirements stipulated in the SmartWay Rail Carrier Partnership Agreement – notably, that they will measure and report the emissions performance of their company annually and provide supporting documentation to EPA upon request.

All SmartWay Rail Partners agree to complete and submit the SmartWay Rail Tool to:

-  define fleet composition;
-  characterize fleet activity;
-  individually benchmark multiple fleets; and
-  track annual changes in performance.

Upon approval of a Rail Tool submission, rail companies will be identified as SmartWay Rail Partners on EPA's website on the "SmartWay Partner List" and in a database used by freight shippers to identify companies that meet SmartWay's annual requirements. The carrier will also receive information on how to access its current SmartWay Registration Document.

## HOW DO I JOIN IF MY PARENT COMPANY HAS MULTIPLE FLEETS?






Companies that join the SmartWay Partnership should include all of their fleets in their submission. If a company wishes to list multiple fleets in the Rail Carrier Tool, they should list these fleets as their customers can hire them. Internal fleets invisible to a customer should not be listed separately. Companies will be listed at the Company level in the SmartWay Partner list on the SmartWay website, and each individually defined fleet will appear as a separate entity in the SmartWay Carrier Data file that customers use to identify which fleets they do business with in the Shipper and/or Logistics Tools.

Vehicles used only for internal operations should not be listed as separate fleets. Rather, those units' activity should be included along with those of the customer-facing fleet they serve. If these units serve as a distinct internal use fleet whose activity cannot be readily assigned to any one customer-facing fleet, they should be omitted from the tool.

*SmartWay highly recommends developing your list of fleets before beginning your data entry process. Any fleet that a shipper or logistics company could hire directly should be listed as a separate fleet in your Rail Carrier Tool submission. The best strategy is to have a clear idea of how to define your companies before filling out the Tool.*

## WHAT DATA DO I NEED TO GATHER TO COMPLETE THE RAIL CARRIER TOOL?

To participate in SmartWay, rail carriers need to gather the following essential information to complete the Rail Carrier Tool:

-  The official company name EXACTLY as you would like it presented on the EPA website and other EPA communications
-  Company contact information
-  Contact details for your Working Contact (see page 12 for definition)
-  Contact details for an Executive, Sustainability and/or Other Contact(s) (Executive cannot be the same as the Working Contact) (see page 12 for definition)
-  Fleet details for all fleets you control:
  - Fleet name and fleet class (1, 2, or 3)
  - Geographic areas of operation
  - Power unit information:
    - Activity (number of units or hours per year)
      - By type
      - By engine tier level
    - Locomotive unit miles per year
      - Unit, way, and through trains

- Train and yard switching
- Operations information
- Gallons per year by fuel type (diesel, biodiesel, LNG, CNG, electric) and by category (freight, passenger, switching)
- Ton-miles per year
  - Gross, revenue, and non-revenue totals
  - Total railcar miles per year
- Data sources
- SmartWay ID number (if this is not your first tool submission)


This data should be provided for all of your company's fleets. This data reflects the amount of freight carried by each carrier, the distance that freight is carried, and the fuel consumed to carry the freight.

**NOTE: Power units used only for internal operations, such as load switching, should not be listed as separate fleets. Rather, those vehicles' activity should be included along with those of the customer-facing fleet they serve. If these vehicles serve as a distinct internal use fleet whose activity cannot be readily assigned to any one customer-facing fleet they should be omitted from the tool.**





## WHAT SOFTWARE & HARDWARE IS REQUIRED FOR COMPLETING THE RAIL CARRIER TOOL?

The Rail Carrier Tool was designed in Microsoft Excel using forms and Visual Basic for Applications (VBA) macros and code. Completing the Rail Carrier Tool requires the following software and system requirements:

### Supported Operating Systems

-  Microsoft Windows 10 or later
  - Includes Windows 10, Windows 11, and later
  - The Tool may also be compatible with older versions of Windows if all other requirements are met as well. However, Windows 8.1 and older have reached end of support from Microsoft and this may affect tool performance.

### System Requirements

-  IBM Pentium processor or greater
-  2 GB Ram
-  100 MB disk space
-  Monitor display setting of 1,024 x 768 or greater



## Software Requirements

 Microsoft Excel 2016 or later

- Includes Excel 2016 and Excel in Office 365
- Must be the one-time purchase version of Microsoft Excel installed on a PC or the Office 365 subscription **desktop version** of the application; **cannot run with Microsoft Excel online or through OneDrive online.**
- The Tool may also be compatible with older versions of Excel if all other requirements are met as well. However, Excel 2013 and older have reached end of support and Microsoft no longer provides technical support, bug fixes, or security fixes. This may affect tool performance.
- Please download the tool and **save it to your desktop or a location on your hard drive** if your desktop is in the cloud. The tool will not run if saved to the cloud or certain other locations.



Please check with the user guides for your computer, online support, or your company's IT department to make sure your system is set up to use the Rail Carrier Tool.

## HOW DO I SET THE SECURITY LEVEL WHEN OPENING SMARTWAY TOOLS?

Since the Tool employs macros, Excel macros must be enabled to use the Tool. If necessary, follow the directions on the first screen of the Tool to enable macros, follow directions provided on the Microsoft Support website:

<https://support.office.com/en-us/article/Enable-or-disable-macros-in-Office-files-12B036FD-D140-4E74-B45E-16FED1A7E5C6>, or follow the directions below:

### Macros must be enabled on your computer to use the Rail Tool.

-  The default macro security setting in Excel is "Disable all macros with notification."
-  When you open the tool, you may get a security alert that macros are present, and you need to choose to enable the macros for this file to work. The steps below describe how to enable macros for different versions of Excel, first if the message bar or security dialog appear, and alternatively in the Trust Center if the message/dialog do not appear.

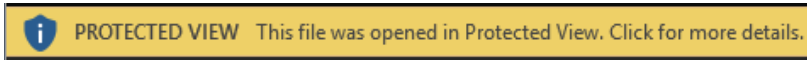
### Enable macros when the Message Bar appears

1. When you open the tool, a yellow message bar appears with a shield icon and **Enable Content** button.



2. On the **Message Bar**, click **Enable Content**.

**Note:** If the file opens in Protected View, click **Enable Editing** on the message bar. If there is no Enable Editing option, click **for more details** and then **Edit Anyway**. The Protected View message will look like the this:



Once editing is enabled, follow Steps 1 and 2 above to enable content on the macro message bar.

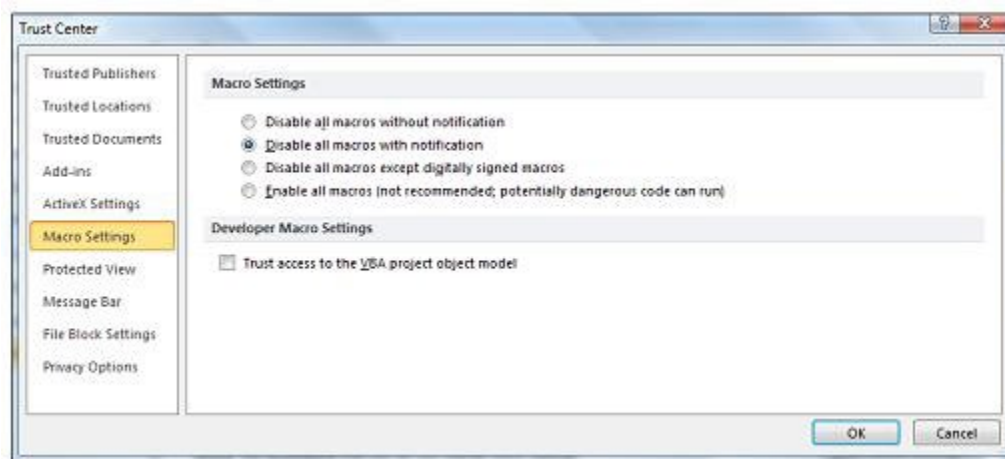
**If the Message Bar or Security Options dialog does not appear, change macro settings in the Trust Center.**

### Change macro settings in the Trust Center

1. Click the **File** tab
2. Click **Options**
3. Click Trust Center, and then click Trust Center Settings.
4. In the **Trust Center**, click **Macro Settings**.
5. Click the option "Disable all macros with notification."
6. Click **OK**.
7. Close out of the Excel file and then re-open it.
8. Follow the previous instructions to Enable macros when the Message Bar or Security Options dialog appears.

The following image is the **Macro Settings** area of the Trust Center.

Figure 1. Macro Settings Screen in the Trust Center



Once macros are enabled (and you are not in Protected View), you should be able to run the Tool.

**If the Tool does not open at this point, review the “Software and Hardware Requirements.”** If you cannot determine how to correct the problem after reviewing this section, contact your SmartWay Partner Account Manager.

## WHAT IS INCLUDED IN THE SMARTWAY CARRIER PARTNERSHIP AGREEMENT?

To join the SmartWay Transport Partnership as a rail company, you must agree to the language on the “Partnership Annual Agreement for Carriers.” When you begin working within the Tool, you will be asked to check a box stating that you agree to the terms of the Partnership Annual Agreement. **This agreement must be renewed annually.**

Please review this language with the appropriate personnel within your organization before completing or submitting a Carrier Tool to EPA.

## Partnership Agreement for Carriers

**With this annual agreement, your company joins EPA's SmartWay Transport Partnership and commits to:**

1. Measure and report to EPA on an annual basis the environmental performance of your fleet(s) using EPA's SmartWay Tool. (Existing fleets must report the 12 months of data for the prior year ending December 31. Newly formed companies require a minimum of 12 months of operational data.)
2. Have company's name and performance results posted on the EPA SmartWay website/databases.
3. Upon EPA's request, agree to submit supporting documentation to EPA for any data used to complete the Tool, and agree to submit to an audit of this data.

**In return, EPA commits to:**

1. Promote company participation in the Partnership by posting Partner names on the EPA SmartWay Website and in related educational, promotional, and media materials. EPA will obtain express written consent from the Partner before using the Partner's name other than in the context of increasing public awareness of its participation as described here.
2. Provide companies with industry-wide performance benchmark data as data becomes available to EPA.
3. Assist Partners in achieving emission and fuel usage reduction goals.

### General Terms

1. Either party can terminate this Agreement at any time without prior notification or penalties or any further obligation.
2. EPA agrees not to comment publicly on the withdrawal of specific partners.
3. EPA reserves the right to suspend or revoke Partner status and terminate this Agreement if the Partner defaults under this Agreement or misuses a SmartWay trademark.
4. The Partner consents to EPA disclosing all information collected in the Tool to the United States Environmental Protection Agency (EPA) and to the contractor responsible for hosting the SmartWay database, for the purposes of administering the SmartWay Program and trademarks only.
5. The Partner understands that this Agreement does not constitute authorization to use the SmartWay trademark, and that such authorization can only be obtained by entering into a separate agreement with the EPA.
6. The Partner agrees that it will not claim or imply that its participation in the SmartWay Transport Partnership constitutes EPA's approval or endorsement of anything other than the Partner's commitment to the program. The Partner will not make statements or imply that EPA, or the United States, endorses the purchase and/or sale of the Partner's products and services or the views of the Partner.
7. The annual submission of this SmartWay Tool constitutes agreement to all terms in this Partnership Agreement.

## WHAT'S NEW IN THE 2024 RAIL TOOL?

1. Miscellaneous text and format updates for clarification.

The following sections describe the information needed and the process for completing the required sections of the Rail Carrier Tool. The **Rail Carrier Tool Technical Documentation**<sup>2</sup> explains more about the data sources and calculation methodology used by the Tool; this guide focuses on the essentials for completing the Tool.

---

<sup>2</sup> You can access the Rail Carrier Tool Technical Documentation through the SmartWay Partner Portal.

# Data Collection Requirements

## ESTABLISHING YOUR DATA COLLECTION YEAR

Before beginning your data collection, identify the last calendar year for which you have full annual (12 months) data. This means that you have data from January of the calendar year through December of the same year. Newly formed fleets require a minimum of 12 months of data. If you do not meet these requirements, please apply once you have the required data.

## REQUIRED DATA

To complete the Rail Carrier Tool, you will need to compile data regarding your fleet(s) characteristics and activity levels. See [above](#) for a complete list of required data.

# Tool Screens and Data Entry

## DOWNLOADING THE SMARTWAY RAIL CARRIER TOOL

To download the SmartWay Rail Tool, visit: <https://www.epa.gov/smartway/smartway-rail-carrier-tools-and-resources>. Save the Tool in a folder on your hard drive; this folder should house copies of your data and future updates.

## HOW TO SET SECURITY LEVELS FOR THE SMARTWAY TOOLS

In some cases, Microsoft Excel will ask you to adjust your security settings before opening the Tool. Instructions should appear on your screen *if* you need to change your security settings before running the Tool.

If you need additional assistance with your security settings, see "[How do I set the Security Level When Opening SmartWay Tools?](#)" above.

## INTRODUCTORY SCREENS

Upon opening the Tool, you will see a **Welcome** screen, followed by five screens which orient you to the Tool. The **Assistance for New Users** screen appears first and allows users to access additional screens, including Tool selection guidance, data collection needs, Tool help and navigation, and the SmartWay Partner Tool Schedule for the current year. These are general information screens and may be skipped if you are already familiar with the Tool. However, upon proceeding you **MUST** select the box at the bottom of the Partnership Agreement screen, indicating that you agree to the terms of the Partnership Agreement.

## STEP 1. ENTERING PARTNER NAME

Your Partner Name is the official name that your customers would recognize for your company—in other words, the name someone hiring you would look for. Under Step 1 on the **Home** screen:

1. Type your Partner Name EXACTLY as you would like it to appear on the SmartWay website and in other EPA communications in the field as indicated. For example, you may enter:

 ABC Company



 ABC Company, Inc.



Your company will be listed **exactly** as you've entered it here. Therefore, it is important to pay special attention to proper capitalization, abbreviations, annotations, and punctuation.

2. Proceed to Section 2 to enter Contact Information.

## STEP 2. COMPANY AND CONTACT INFORMATION

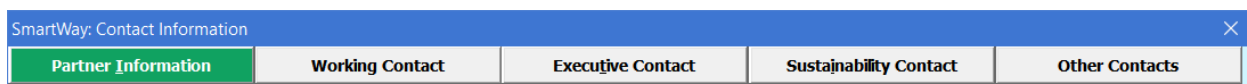
The SmartWay Tool asks for:

-  **General company information** such as location, web address, phone number, etc.
-  **A Working Contact** for any questions about your company's participation and Tool submissions. The **Working Contact** is the individual designated by the Executive Contact to directly interface with SmartWay regarding specific tasks involved in the timely submission of the Tool. The Working Contact is responsible for coordinating the assembly of information to complete/update fleet data; completing and updating the Tool itself; maintaining direct communication with SmartWay; and keeping interested parties within the company apprised of relevant developments with SmartWay. (NOTE: To ensure that e-mails from SmartWay/EPA are not blocked, new contacts may need to add SmartWay/EPA to their preferred list of trusted sources.)
 

**An Executive Contact:** The **Executive Contact** is the company executive who is responsible for agreeing to the requirements in the SmartWay Partnership Annual Agreement, overseeing the Working Contact (as appropriate), and ensuring the timely submission of the Tool to SmartWay. The Executive Contact also represents the company at awards/recognition events. This person should be a Vice President or higher-level representative for the company.
-  **A Sustainability Contact (optional):** The **Sustainability Contact** is the individual assigned responsibility for monitoring the company's environmental performance. The Sustainability Contact may be the same as the Working or Executive Contact (and specified by checking the "Same as" boxes in the Sustainability Contact section) but cannot be the same as any Other Contact.
-  **Additional contacts (optional):** Additional contacts may include anyone who is not the Working, Executive, or Sustainability contact but may be involved with SmartWay (e.g., press/media contact, fleet manager, etc.).

**Note** that you MUST have at least two contacts listed in the contact information section of the Tool, and the Working and Executive Contacts must be different, in order to proceed. SmartWay recommends developing an internal succession plan to make sure that your Rail Carrier Tool submission schedule is maintained, in the event that a Working Contact is reassigned, or leaves the company for any reason.

Under the **Partner Information** tab:



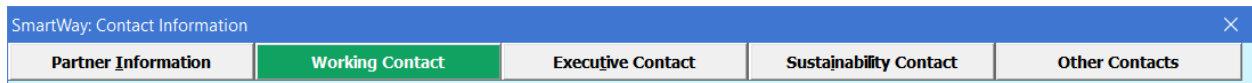
*Note: Use the Tabs at the top of the window to navigate between the 5 information screens*

*Each field marked with an asterisk must be filled out. You will not be able to submit the Tool to SmartWay without this information.*



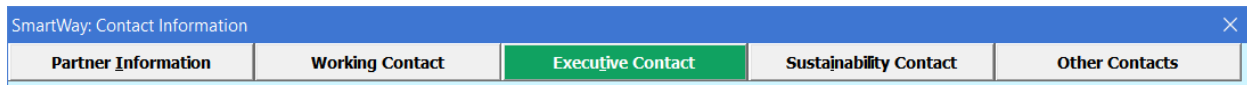
1. Enter the Company address, phone numbers, and website (optional).
2. Enter the Working Contact name and title.
3. Enter the Executive Contact name and title.
4. Enter the Sustainability Contact name and title (optional).

#### Under the Working Contact tab:



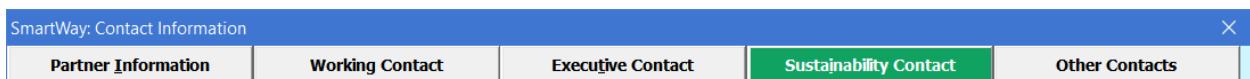
1. Enter the Working Contact information. If the Working Contact shares the same address as the company, you may select the **Use Partner Address** button to auto-populate the address section of this record. Enter the email address twice to confirm its accuracy. When confirmed a ✓ will appear to the right.

#### Under the Executive Contact tab:



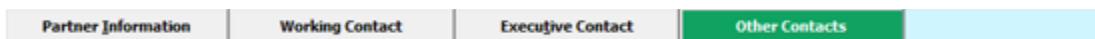
1. Enter the Executive Contact information. If the Executive Contact shares the same address as the company, you may select the **Use Partner Address** button to auto-populate the address section of this record.

#### Under the Sustainability Contact tab:



1. Enter the Sustainability Contact information, if applicable. If the Sustainability Contact shares the same address as the company, you may select the **Use Partner Address** button to auto-populate the address section of this record.

#### Under the Other Contacts tab:



1. Enter Other Contacts (if applicable) by selecting the **Add New Contact** button.
2. Enter the first Other Contact then select **OK** when done.

**NOTE:** You must supply at least two unique contacts on the contact screen to ensure EPA has access to at least two people for Tool submission follow-up.

***NOTE: In some cases, companies with multiple fleets will gather information from different sources within the company. You may find it useful to have this additional contact information stored within the Tool.***

You can add more contacts to the **Other Contacts** box by repeating this process. If you wish to edit an existing contact's information, highlight the name you wish to edit and then select the **Edit Selected Contact** button. You can remove an existing contact by highlighting the contact and then selecting **Delete Selected Contact**

To make sure you have filled out all required contact information, select **Validate Screen** at the bottom of the screen on the **Partner Information** tab. If any information is missing or invalid, a dialogue box will appear informing you what additional information is required.

Next select the **HOME** button to return to the **Home** screen and go to Step 3.

### **STEP 3. FLEET DESCRIPTION(S)**

The SmartWay Rail Tool allows you to characterize your freight operations at the fleet level. In the Rail Tool, a fleet is defined as any business unit that a customer has discretion to hire.

If you have multiple fleets that can be hired by customers individually, you should create multiple fleet records in the Tool and characterize their operations individually. You should not include internal company fleet definitions or designations – only separate fleets as they would be identified and hired by your customers.

***SmartWay highly recommends developing your list of fleets offline using a company organization chart or perhaps a customer interface webpage. The best strategy is to have a clear idea of how to define your fleets before filling out the Tool.***

To complete the **Fleet Description** screen:

1. On the **Home** screen, select the **Fleet Description(s)** button to display the **Fleet Descriptions** screen.
2. Confirm that the Partner Name that appears automatically is correct and appropriate for your fleet. If not, make changes in the field under the heading "Partner Name."
3. Enter the "Fleet Identifier" for your first (or only) fleet. This field may be left blank if you only have one fleet. In this case your final Fleet Name will simply be your Partner Name.
4. Enter additional fleets as needed:
  - a. To enter another fleet, select the **Add Another Fleet** button.
  - b. To delete a fleet, select the box next to the row you wish to delete, and then select the **Delete Checked Rows** button.

- c. Once you have confirmed or modified the Partner Name and specified the Fleet Identifiers, the full Fleet Names will be displayed on the screen to the right, exactly how they will be displayed on the SmartWay website.
5. Next, enter the Class of the associated rail fleet (1, 2, or 3):
  - a. Class 1 includes the largest North American rail companies;
  - b. Class 2 includes mid-sized, regional companies; and
  - c. Class 3 includes local shortline companies.
6. Next, for each fleet, check the "Internal Use Only" checkbox only if this fleet is used exclusively as part of a composite fleet to be submitted by your company in the SmartWay Logistics tool. Checking the box will only allow the "parent" multimodal carrier to see and select this fleet in the Online Logistics Tool. Leaving this box unchecked will allow all users of the Online Logistics Tool to see and select the fleet.
7. Once all fleet information has been input correctly, you may select the **CREATE FLEET(S)** button at the bottom of the page. You will be prompted then to confirm that you have identified all of your fleets. Return to the **Fleet Description(s)** screen if needed, otherwise select **OK** and you will automatically be returned to the **Home** screen.

#### STEP 4. SELECTING A FLEET FOR DATA ENTRY

1. Using your mouse, on the **Home** screen select and highlight the name of the fleet for which you wish to enter data.
2. Double click the name; you will then be taken to the **Power Units data entry** screen for that fleet.

#### Completing The Power Units Screen

You will need to provide power unit information about the selected fleet.

1. Specify the number of power units or hours per year operated during the reporting period, by engine tier level. Depending upon the **Data Input Method** selected, this information may be broken out by line haul and switch engines. Under method 1 you may aggregate your fleet's line-haul and switch units together, while method 2 requires that you report the unit type counts separately. Methods 3 and 4 are similar, but require inputting hours of operation by tier, rather than unit counts.<sup>3</sup> For Class 1 operators, please refer to R1 form, schedule 710 for details. The different engine tier level definitions are provided below:
  - Non-tier – manufactured before 1972
  - Tier 0 – manufactured between 1972 and 2001

---

<sup>3</sup> In general, method 4 will provide the most accurate estimate for NO<sub>x</sub> and PM emissions.

- Tier 0+ - manufactured between 1972 and 2001, and remanufactured after 2010
  - Tier 1 – manufactured between 2002 and 2004
  - Tier 1 – manufactured between 2002 and 2004 and remanufactured after 2010
  - Tier 2 - manufactured between 2005 and 2011
  - Tier 2+ - manufactured between 2005 and 2011 and remanufactured after 2013
  - Tier 3 - manufactured between 2012 and 2014
  - Tier 4 – manufactured after 2014
2. Next, Class 1 operators must enter your fleet's Total Locomotive Unit Miles/Year data under Part B. Break out your unit miles data by line haul and switching categories, as appropriate. This data is available in the R-1 forms for Class 1 railroads (see lines 8-14 of Schedule 755). Class 2 and 3 operators do not enter this information.
  3. Finally, you will need to provide a detailed description of the data sources used to obtain your power unit data (e.g., R-1 Form section and line numbers).

**Figure 2. Power Units Screen**

**Figure 2. Power Units Screen**

Power Units	Operations																																	
<p><b>Please enter information on your power units. Select the data entry method (1 through 4) for part A, and then fill out the required information in the boxes provided. Next fill out the part B data. Finally, describe the sources for all the data on this page in the text area below.</b></p>																																		
<p><b>Part A: Power Unit Inventory</b></p> <p><b>Select Data Input Method</b></p> <p><input type="radio"/> 1. # of total Power Units</p> <p><input checked="" type="radio"/> 2. # Power units - line haul vs. switch</p> <p><input type="radio"/> 3. hours per tier</p> <p><input type="radio"/> 4. hours per tier - line haul and switch</p>		<p><b>Part B. Total Locomotive Unit Miles/Year</b></p> <p>? Unit Trains <input style="width: 80%;" type="text"/></p> <p>? Way Trains <input style="width: 80%;" type="text"/></p> <p>? Through Trains <input style="width: 80%;" type="text"/></p> <p><b>Subtotal</b> <input style="width: 80%;" type="text"/></p> <p>? Train Switching <input style="width: 80%;" type="text"/></p> <p>? Yard Switching <input style="width: 80%;" type="text"/></p> <p><b>Subtotal</b> <input style="width: 80%;" type="text"/></p> <p><b>Total</b> <input style="width: 80%;" type="text"/></p>																																
<p>? <b>Engine Tier</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2"># of Power Units</th> </tr> <tr> <th>Line Haul</th> <th>Switch</th> </tr> </thead> <tbody> <tr> <td>? non-tier</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 0</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 0+</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 1</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 1+</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 2</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 2+</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 3</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> <tr> <td>? 4</td> <td><input style="width: 80%;" type="text"/></td> <td><input style="width: 80%;" type="text"/></td> </tr> </tbody> </table>			# of Power Units		Line Haul	Switch	? non-tier	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 0	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 0+	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 1	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 1+	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 2	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 2+	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 3	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	? 4	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	<p><b>Describe the source of information used to generate the user input values</b></p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div>
	# of Power Units																																	
	Line Haul	Switch																																
? non-tier	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 0	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 0+	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 1	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 1+	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 2	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 2+	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 3	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																
? 4	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>																																

### Completing The Operations Screen

You will need to provide operations information about the selected fleet:

1. Specify your fleet's annual fuel consumption and ton-mile data. Record annual fuel use per year by fuel type (diesel, biodiesel, LNG, CNG, and electric) and train category (freight, passenger, and switch).
  - a. Petroleum diesel, biodiesel, and LNG entries must be in gallons per year.
  - b. Specify CNG units indicating standard cubic feet or gasoline-equivalent gallons per year.
  - c. Electricity use is specified in kWh/year.
  - d. If you indicate biodiesel consumption data, you must also specify the fleet average fuel blend level (between 0 and 100).
  - e. For Class 1 operators, please refer to R-1 form, schedule 750, lines 1 - 3 for details.
2. Specify your gross, revenue, and non-revenue ton-mile data. This data is available for Class 1 operators from R-1 Report Section 755, lines 104, 110, and 113, respectively.
3. Specify your total annual railcar miles for the fleet.

**Figure 3. Operations Screen**

**All Freight**

Fuel Used	Units	Freight	Passenger	Switching ?	Total
Diesel ?	(gallons/year)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Biodiesel: B <input type="text"/> ?	(gallons/year)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
LNG	(gallons/year)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
CNG	(cubic feet/year) ?	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Electric	(kWh/year)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

? Gross Ton Miles/Year	<input type="text"/>	R1: 755-104
? Revenue Freight Ton Miles/Year	<input type="text"/>	R1: 755-110
? Non-Revenue Freight Ton Miles/Year	<input type="text"/>	R1: 755-113
? Enter Total Railcar Miles:	<input type="text"/>	

**NOTE:** All ton-mile data should be entered as actual ton-miles, NOT 1,000s of ton-miles (as presented in the R-1 Report).

**NOTE:** The tool uses the fuel consumption, gross ton-mile and revenue ton-mile entries to calculate tons of CO<sub>2</sub> per ton-mile. If the resulting values are outside of expected ranges (less than 10 or greater than 90 tons per gross ton-mile, or less than 10 or greater than 60 tons per revenue ton-mile), the user must either change the fuel and/or ton-mile entries or enter an explanation for the unexpected values.

## SUBMITTING YOUR TOOL TO EPA

Once you have entered data for each of your rail fleets in Step 4 of the **Home** screen, you may create final submittal files.

1. Select the **Generate a (.xml) data file** which will open a new screen.
2. Select the checkbox to indicate you understand the terms of the SmartWay Partnership Agreement once again.
3. When ready, select **NEXT** to create a file with the following naming convention: Rail\_PartnerName\_Year\_V0.xml<sup>4</sup>

For example, Rail\_ABCompany\_2023\_V0.xml

where PartnerName is your company's name as entered for Step 1 on the **Home** screen, and Year indicates the year for which you are submitting your data.

4. Next specify the folder where you would like to save the .xml file, and a screen will appear.
5. Follow these instructions for submitting your .xml and .xlsm files to SmartWay. Note that the .xml file is approximately 10 times smaller than the .xlsm file.
6. Upon selecting **NEXT**, a screen will appear that allows you to close the Rail Carrier Tool or return to the **Home** screen.

■ **NOTE: DO NOT ZIP the .xlsm and .xml files. Send them to EPA as normal files attached in an e-mail. EPA security will not allow zipped files through the EPA firewall.**

■ **NOTE: DO NOT CHANGE THE NAME OF THE XML OR XLSM FILES.**

**IMPORTANT:** Email servers as well as individual email clients may block or designate incoming email as 'junk mail'. To avoid having SmartWay email blocked or designated as junk email ask your Management Information System staff who manage your email system to place the 'erg.com' domain name on your email system's safe senders list. This is because SmartWay email is currently generated from this domain name and does not match the EPA.gov domain

<sup>4</sup> If you create the XML file multiple times the file name will increment each time (e.g., Rail\_ABCompany\_2023\_V1.XML for the second iteration, etc).

name used by your SmartWay Partner Account Manager. In addition, you should add your Partner Account Manager's email address to your contact list.

Printable data collection worksheets are provided in the Appendix of this document to help you prepare for data entry.

Please visit <https://www.epa.gov/smartway/smartway-rail-carrier-tools-and-resources> for additional resources and technical documentation for more in depth exploration of each section of the Rail Carrier Tool.

## Results and Summary Reports

The **View Summary Data Reports** section gives you access to 7 reports to help you understand your data and use it to make better performance decisions. You can access these reports by selecting **View Summary Data Reports** at the bottom of the **Home** screen.

**Figure 4. View Summary Data Reports Screen**

Please select the report you would like to view:

<b>Internal Metrics</b>	Estimates fleet-level CO <sub>2</sub> , NO <sub>x</sub> , PM, and Black Carbon performance, expressed in grams per ton-mile (gross, revenue and non-revenue), and grams per mile (railcar and truck-equivalent miles).
<b>Fleet Summary</b>	Displays the name, Class and contact for each fleet defined.
<b>Power Units</b>	Displays all of the data you entered in the Power Units Information section.
<b>Operations</b>	Displays all of the data you entered in the Operations section.
<b>Comments</b>	Displays all of the comments that have been entered throughout the tool.
<b>Partner Feedback Summary</b>	Displays the feedback you provided in the Feedback section.
<b>Public Disclosure Report</b>	Displays the Scope 1, Scope 2, biogenic and non-carbon emissions.

The **Feedback** section allows you to provide EPA with general feedback regarding the SmartWay program. This information is optional and is not required in order to submit your Rail Carrier Tool data to EPA. Selecting the **Give Us Feedback** button under item #5 on the **Home** screen will open this form.



# Appendix A: Worksheets for Data Collection

## WORKSHEET #1: CONTACT INFORMATION

#1. Enter your Contact Information:

### GENERAL COMPANY CONTACT INFORMATION

Company Name							
Headquarters Mailing Address							
City		State/Province		Zip		Country	
Main Phone Number		Toll-free Number		Cell number		Web Address	

### WORKING CONTACT INFORMATION

Working Contact Name							
Working Contact Mailing Address							
City		State/Province		Zip		Country	
Working Contact Phone Number				Email Address			

### EXECUTIVE CONTACT INFORMATION

Executive Contact Name							
Executive Contact Mailing Address							
City		State/Province		Zip		Country	
Executive Contact Phone Number				Email Address			

**SUSTAINABILITY CONTACT INFORMATION**

<b>Sustainability Contact Name</b>							
<b>Sustainability Contact Mailing Address</b>							
<b>City</b>		<b>State/Province</b>		<b>Zip</b>		<b>Country</b>	
<b>Sustainability Contact Phone Number</b>				<b>Email Address</b>			

**OTHER CONTACT INFORMATION**

<b>Other Contact Name</b>							
<b>Other Contact Mailing Address</b>							
<b>City</b>		<b>State/Province</b>		<b>Zip</b>		<b>Country</b>	
<b>Other Contact Phone Number</b>				<b>Email Address</b>			
<b>Contact's role in program</b>							

## WORKSHEET #2: FLEET CHARACTERIZATION

Complete this worksheet for each fleet you will be submitting in the Rail Tool.

**Specify Partner / Fleet Name (exactly as it should appear on the SmartWay website):**

Partner Name \_\_\_\_\_

Fleet Identifier \_\_\_\_\_

Railroad Class (1, 2, 3) \_\_\_\_\_

Internal Use Only?  Yes  No

### WORKSHEET #3: POWER UNITS INFORMATION

Complete this worksheet for each fleet you will be submitting in the Rail Tool.

#### Specify Power Unit Inventory by Engine Tier

Inventory Basis (circle one): # Units      Hours/Yr

Engine Tier	Line Haul	Switch	Total
Non-Tier			
0			
0+			
1			
1+			
2			
2+			
3			
4			

\* If you cannot differentiate line haul and switch inventories, enter # Units or Hours/Yr for Totals only

**Total Locomotive Unit Miles/Year (Class 1 Operators Only):**

Unit Trains \_\_\_\_\_

Way Trains \_\_\_\_\_

Through Trains \_\_\_\_\_

Train Switching \_\_\_\_\_

Yard Switching \_\_\_\_\_

**Describe the data source used to develop the above data:**

---

---

---

---

---

---

---

## WORKSHEET #4: OPERATIONS DATA

Complete this worksheet for each fleet you will be submitting in the Rail Carrier Tool.

**Enter Fuel Use/Yr:**

Fuel Type	Units	Freight	Passenger	Switching
Diesel	gal/yr			
Biodiesel <sup>^</sup>	gal/yr			
LNG	gal/yr			
CNG	gal/yr cu ft/yr *			
Electricity	kWh/yr			

\* circle one

<sup>^</sup> Biodiesel blend % (if applicable): \_\_\_\_\_

Gross Ton-Miles/Yr \_\_\_\_\_ (R1, Schedule 755, line 104)

Revenue Freight Ton-Miles/Yr \_\_\_\_\_ (R1, Schedule 755, line 110)

Non-Revenue Freight Ton-Miles/Yr \_\_\_\_\_ (R1, Schedule 755, line 113)

Total Railcar Miles per year \_\_\_\_\_ (R1, Schedule 755, line 30)



For more information:

U. S. Environmental Protection Agency  
Office of Transportation and Air Quality  
1200 Pennsylvania Ave. NW  
Washington, DC 20460  
(734) 214-4333

<https://www.epa.gov/>

U. S. Environmental Protection Agency  
National Vehicle and Fuel Emissions Laboratory  
2565 Plymouth Rd.  
Ann Arbor, MI 48105  
(734) 214-4200

<https://www.epa.gov/transportation-air-pollution-and-climate-change>