Fleet Electrification Guide

Dominion Energy Virginia

Dominion Energy®

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Introduction

The electric vehicle (EV) market is rapidly expanding, providing more options and benefits for fleet electrification.

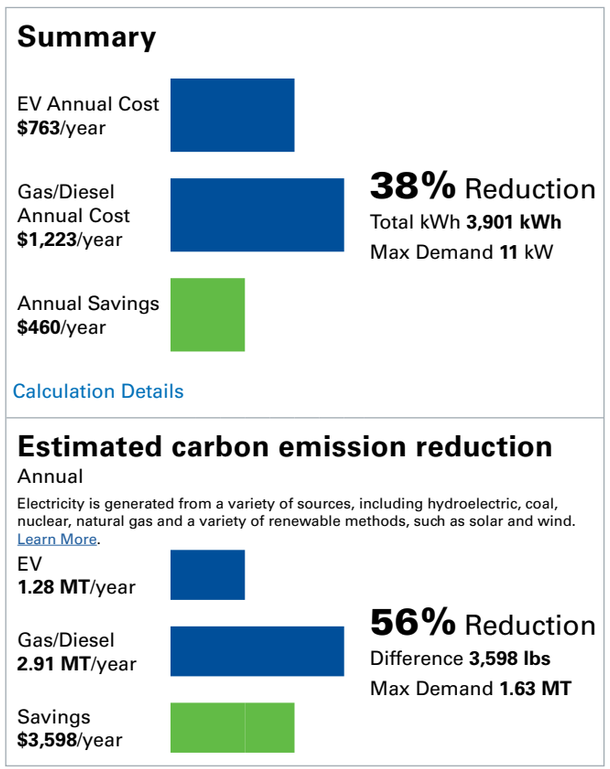
Dominion Energy is here to support customers as they make the transition to EVs. We're energy experts, trusted partners, and we know the grid. Our expertise, guides, tools, and programs are designed to help customers through each step of their journey.

This guide is intended to support you as you begin the fleet electrification planning process. It provides a framework and key considerations for developing a fleet electrification plan. Each fleet is unique, and we encourage you to adopt the approaches that align best with your specific needs.

We look forward to working with you and helping you make the most out of your fleet electrification investments.

Step 1: Getting Started

*Try our **online savings calculator** to estimate the benefits for your fleet.*



Example: Estimated savings of an electric vehicle relative to a gasoline vehicle.

Learn the Benefits of Electrification

Transitioning your fleet to electric can reduce costs, decrease fossil fuel emissions, and promote a healthier work environment.

Fueling with electricity is less expensive than gasoline or diesel and electricity prices are much more stable than gasoline or diesel prices. In Virginia, it costs less than half as much to travel the same distance in an EV as it does in a conventional vehicle. There are only about 20 moving parts in an EV drivetrain compared to about 2,000 in a combustion vehicle. With less moving parts to maintain, EV fleets save money and time on replacement and service costs.

EVs produce no tailpipe emissions. The electricity used to charge EVs comes from the electric grid, which is growing cleaner every day.

Identify Stakeholders and Set Goals

Fleet electrification often involves collaborating with multiple internal and external stakeholders and decision makers. Identifying and engaging those stakeholders and decision makers is key to implementing a successful transition.

Getting buy-in and addressing concerns early will avoid obstacles and potentially costly changes later in the process. Some organizations use a formal project structure with a charter, executive sponsor, and defined metrics. Others use a less formal approach. In both cases, presenting the benefits of electrification can be a powerful motivator – especially when those benefits are aligned with broader objectives and values.

Consider starting with a goal setting exercise. Reviewing the goals of peer organizations, your industry, or your locality can provide inspiration and guidance. Be sure to request input from stakeholders and decision makers. Clear goals that are measurable and timebound are most effective; goals can also evolve over time with changes in technology and market conditions. Customers with established goals can plan more confidently and execute more effectively.

Fleet Electrification Stakeholders

- Fleet Manager
- Drivers
- Facilities
- Energy/Sustainability Team
- Operations
- Finance and Procurement
- Maintenance Staff
- Human Resources and Training
- Legal
- Customers
- Contractors

Define Your Fleet Needs

Selecting the right EVs for your fleet begins with understanding your operating needs. Fleet managers often have an inherent understanding of those needs based on years of experience. Even so, clearly defining those needs can help other stakeholders involved in the process to inform and support the transition to electric.

Many organizations use their existing fleet vehicles to characterize operating needs. For example, a shuttle service may have a fleet of four 32-passenger diesel shuttle buses, each with a 400-mile range, so they'd like an electric shuttle bus with the same capacity and range. However, taking a deeper look at the utilization and duty cycles of your vehicles may reveal more opportunities.

If operations data reveals that two of the shuttle buses never carry more than 20 passengers and travel a maximum of 100 miles per day, then a wider range of electric vehicle options could be considered. This type of evaluation is sometimes referred to as "right-sizing," and it can significantly reduce a fleet's total cost of ownership. Note: We'll continue to use the shuttle bus example throughout this guide. Here are some suggested data points to help with your needs assessment:

- Vehicle year/make/model
- Vehicle body style
- Fuel type
- Annual odometer readings
- Average daily mileage
- Duty cycles
- Dwell times
- Target replacement date
- Accessory loads
- Climate/route terrain

A driver survey can be a good way to identify other needs and to let the stakeholder group know about your plan. This allows the company to better understand their drivers' knowledge and comfort level about the process and identify areas to prioritize. We've provided a sample driver survey as an appendix.

Step 2: Analysis and Planning

Key Concepts

Range.
This is how far the vehicle can travel on a single charge. The EPA has a standard test for determining the rated range, and a number of climate and operating factors will affect the actual range.

Efficiency.
Like a gasoline vehicle's miles per gallon, an electric vehicle's miles per kilowatt-hour (kWh) will tell you how efficient the vehicle is.

Charging capability.
An EV's charging capability identifies the type of charging equipment it can use and how quickly it can charge.

Select Compatible EVs

Planning your fleet's electrification transition is key to prioritizing the performance and functionality of your fleet. When scoping the needs of your infrastructure, you should consider immediate and long-term fleet electrification opportunities. Planning for immediate acquisition opportunities and potential future EV procurements can minimize construction costs in the long term.

There are many electric options for most light, medium, and heavy vehicle needs. With the information you assembled to define the needs of your fleet, you can search for EVs with compatible sizes and capabilities. Review our directory of electric vehicles to see if there are models that fit your needs.

- Passenger Vehicle Models and Savings
- Class 1-8 Vehicle Models and Savings

As you look at function and range requirements, the most important factors to consider in choosing an EV for your fleet will be vehicle range, fuel efficiency, and charging capability. An EV's range is the number of miles a vehicle can travel on a single charge. Even if your route distance is beyond the vehicle's range, commercial EVs may still be a good fit, as long as you've planned for charging along the route. See the next section for additional details on developing a charging plan.

Sometimes EV compatibility is a clear "yes" or "no," but often it can be a "maybe." You should decide on areas that you're willing to be flexible with your needs. While an electric version of a preferred model may not be available, there are likely other options that may be more suitable. As you analyze your existing vehicles and work to right-size your fleet, you can begin to distinguish potential electric vehicle models that fit the needs of your vehicle replacements.

If you have or can install telematics, this is the most rigorous validation you can do short of putting an EV to work. Vehicle telematics utilize GPS tracking systems and onboard diagnostic systems to transmit data including speed, location, fuel consumption, and more. Utilizing this data can help fleets identify and achieve operational improvements, and it provides a strong basis for screening vehicles to identify your best opportunities to electrify. Dominion Energy's Fleet Charging Program offers telematics assessments for fleets with complex operations.

Select Compatible EVs (continued)

A vehicle replacement timeline allows you to see near- and long-term electrification opportunities. It can show you how planned EV purchases are spread over a span of years to align with goals, funding, existing vehicle replacement schedules, and EV availability. In turn, this timeline will aid in infrastructure planning as you prepare for the vehicles you will be electrifying and look ahead at long-term charging needs. An example of a vehicle replacement schedule is shown below with the same example of the shuttle bus example shown on page 7.

Examples of vehicle replacement schedules.

	Vehicle Type 1: Shuttle Bus			Vehicle Type 2: Cargo Van	
Year	Existing: Ford 32-passenger diesel shuttle bus (beginning quantity)	Electric Type 1: GreenPower Motor Co. EV Star+ (acquisitions)	Electric Type 2: Future 32-passenger shuttle with 250+ mi range (acquisitions)	Existing: Dodge ProMaster (beginning quantity)	Electric: Ford eTransit (acquisitions)
1	4	1		7	1
2	3	1		6	2
3	2			4	2
4	2		1	2	2
5	1		1	0	0

The shuttle bus example shows how staged adoption can align operating needs with current and future EV capabilities. There are several shuttle bus options today with a range of 100 miles. Additional options are expected to enter the market soon with ranges of up to 300 miles. In contrast, cargo van options meeting the operating criteria are readily available, and the cargo van fleet can fully transition over the next four years as the existing vehicles reach their replacement criteria.

Charging Infrastructure Scope

Selecting and managing the time and power of charging will have a major impact on your electric fueling cost. Charging at lower power and aligning with off-peak periods, when other electrical demands on the grid are lower, are strategies that will generally deliver the lowest cost. Charging power levels are commonly classified as:

Level 1

If your fleet consists of light-duty vehicles with an average daily travel range of 40 miles or less, you may only need Level 1 charging. Level 1 charging cables typically come with vehicles and offer power equivalent to a standard 120-volt electrical outlet, roughly 1 kilowatt (kW). That's about as much as a home coffee maker uses. Level 1 is most often used in residential homes but can also be used in workplaces. It's a nice option to have if all your Level 2 charging stations are already utilized.

Level 2

Most light- and medium-duty fleets use Level 2 as their primary means of charging. Level 2 chargers are cost-effective and can be installed virtually anywhere with 208- to 240-volt power. Systems range in size and complexity from the most basic units costing around $500 to multiport networked models costing upwards of $5,000. Level 2 units also support a range of power, from 3 kW to 23 kW, with most units operating in the 6 to 12 kW range.

Direct Current Fast Charging (DCFC)

For larger vehicles and larger batteries, or when more rapid fueling is needed, DCFC is common. Whereas Level 1 and Level 2 charging both deliver alternating current (AC) electric power to the vehicle from the electrical grid, these fast chargers convert that AC grid power to direct current (DC) and deliver that to the vehicle for a faster charge. This format is used in public charging stations, especially along heavy-traffic corridors. DCFC chargers currently range from 20 to 350 kW.

The table below summarizes the range (miles) that different levels of power can add to different vehicle types in one hour.

Approximate range (miles) added in one hour of charging.

Charging Levels	Light Duty	Medium Duty	Heavy Duty
	Representative Vehicle Efficiency		
	~3 mi/kWh	*~1.5 mi/kWh*	*~0.5 mi/kWh*
Level 1 (1 kW)	3 mi	1.5 mi	0.5 mi
Level 2 (7 kW)	21 mi	11 mi	4 mi
Level 2 (19 kW)	57 mi	29 mi	10 mi
DCFC (50 kW)*	150 mi	75 mi	25 mi
DCFC (150 kW)*	450 mi	225 mi	75 mi

**Above 80% battery state of charge, fast charging rates decrease significantly to protect the battery. Thus, values in the table overstate the speed of charging when the battery nears full charge.*

It's important to note that not all vehicles support all levels of charging. There are some light-duty vehicles that offer limited DCFC speeds. There are some heavy-duty vehicles that support only DCFC. When selecting a vehicle, the charging capability is an important consideration. Your charging plan must align with vehicle capabilities.

Other Charging Systems

While Level 2 and DCFC systems account for the majority of EV charging installations, there are other technologies that may be appropriate for specific vehicles and applications. One of these is pantograph charging, a common charging application for electric transit buses. Its use in this application has been favored due to the ability to deliver high-powered charging (up to 600 kW) in a drive-through configuration and without need for the driver to directly interact with the equipment. It can even be installed at a bus stop, with the bus receiving a top-up in a matter of minutes while waiting for passengers.

Charging Management

Complementing the equipment selection, a managed charging plan will enable you to utilize your charging most effectively and support your fleet's charge-readiness. While one could manage charging manually, there are a wide variety of software solutions available to streamline the process. Charging management software integrates with charging equipment to deliver a range of capabilities that may include:

- Restricting access to authorized users
- Scheduling charging start/stop
- Controlling the maximum power of all chargers
- Adapting charging based on price signals and/or demand response events
- Tracking and reporting energy use and costs

Many providers offer end-to-end software to manage EV charging sites, stations, chargers, and connectors. At a minimum, it is important to select a charging solution that empowers you to program charging times that will have your fleet vehicles ready when you need them, while taking advantage of available use rate programs and spreading out your energy demand to minimize charges and unnecessary equipment upgrades.

Dominion Energy's Fleet Charging Program can help you select and install networked EV charging equipment and software that will meet the needs of your fleet. Find information on the charging options available in Dominion Energy's Fleet Charging Program overview.

Develop a Charging Plan

Managing a fleet of EVs requires a proactive plan for the time and location of charging. Charging locations may include on-site, off-site, and en route. The time includes both the start time(s) and duration, which is linked to the power at which you charge. Higher-power charging equates to a shorter session time but also generally means higher cost infrastructure and higher ongoing electricity bills.

Electric rate schedules are used to calculate customer bills for the generation and distribution of electricity. Most commercial customers are on rate schedules that have four types of charges:

- A flat monthly service fee
- Energy charges, measured in kilowatt-hours (kWh), which can vary based on the total use and the time of use measured in kWh
- Demand charges, measured in kilowatts (kW), which apply to your maximum use for any month
- Taxes and fees

Energy and demand charges are the largest and most controllable part of the bill. We've deployed tools and assistance to model these costs and support your development of a least-cost charging plan. We recommend a four-step procedure to develop a charging plan. Each of these steps is supported by our online calculator.

1. **Calculate energy requirements**
   The daily energy (kWh) needs of your fleet can be estimated from the daily miles that vehicles need to travel and the efficiency (miles/kWh) of the vehicles. To plan adequate capacity, consider days with long trips and the lower vehicle efficiencies that occur in extreme conditions (e.g., a very cold day or hauling a heavy load).

   That doesn't mean you need to plan for the absolute worst case, as the diversity in daily use of different vehicles and off-site charging options mitigate the risk of that scenario. Estimating energy needs based on the 80th percentile of daily travel distance and a conservative 30% below rated efficiency is a good place to start for many fleets.

2. **Select a rate plan for your location**
   Review the descriptions of the available rate plans and determine which is most applicable to your site. Most rate plans are designed for customers with a certain level of power demand (kW). To estimate demand, divide your daily energy requirement (kWh) by the amount of time (hours) that vehicles are parked at the location and available to charge. (Hint: It's okay to make a guess here, as you can return to this step to make edits after getting more detail in the next step.)

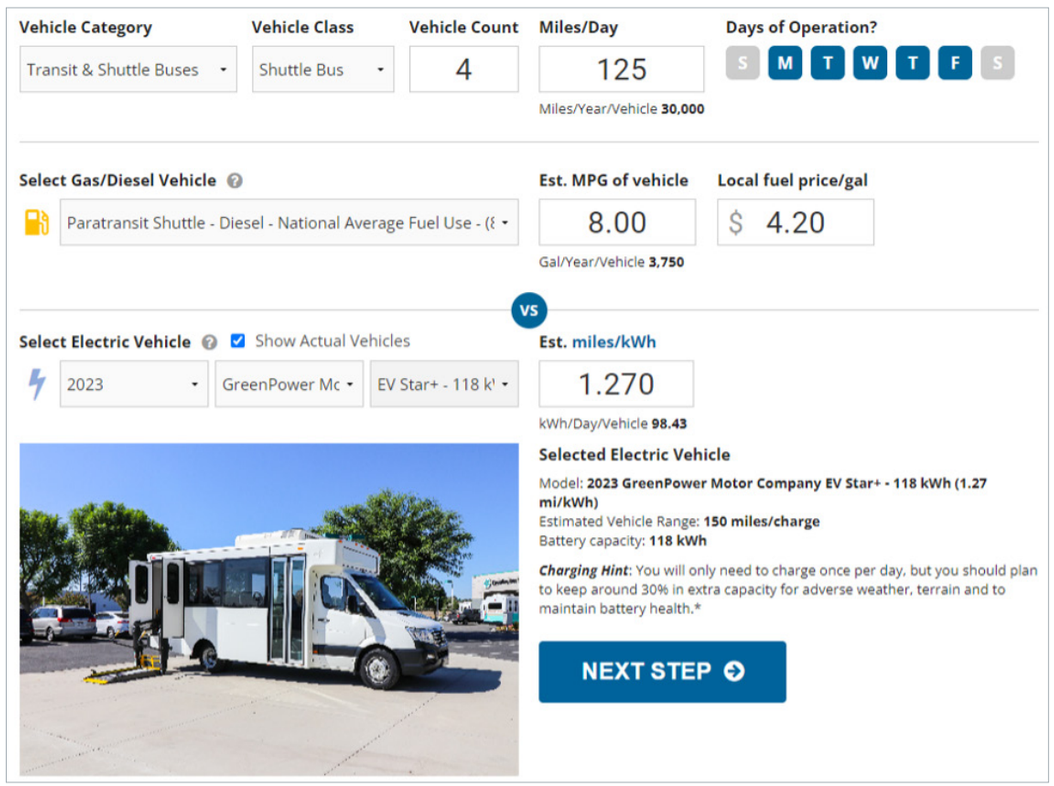
3. **Find your best charging times**
   Document the preferred charging start and end times. For most fleets, this will be during their off-hours, overnight. Stagger the charging times as much as possible to reduce the maximum demand. Our online calculator makes a suggestion, but you may need to adjust to align with your operating schedule.

4. **Review results and refine your plan**
   After 1 and 2, you will likely have a result that works, but you may also have realized that there are other ways to optimize. For example, you may consider a vehicle with different charging capabilities or a larger battery that allows you to do all of your charging during off-peak. You can save your configurations and, if you have flexibility, evaluate these additional options to arrive at your best solution.

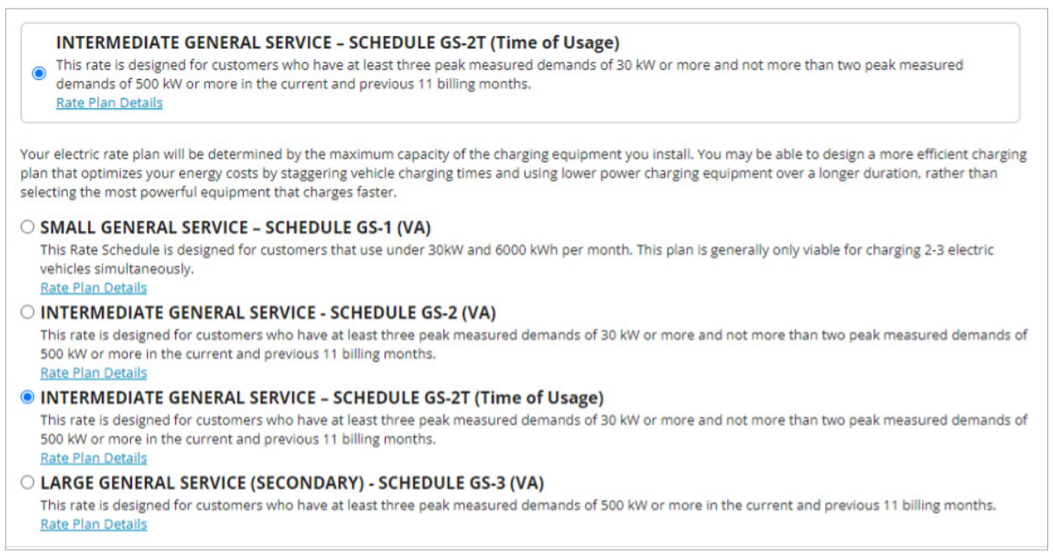
Sample Charging Plan

Returning to our example of the shuttle bus fleet, we'll consider a future in which all four buses are being electrified. The fleet will have an average daily mileage of 125 miles and vehicle efficiency of 1.27 miles per kilowatt-hour. The steps below illustrate how this example is entered in the online calculator.

1 Calculate energy requirement



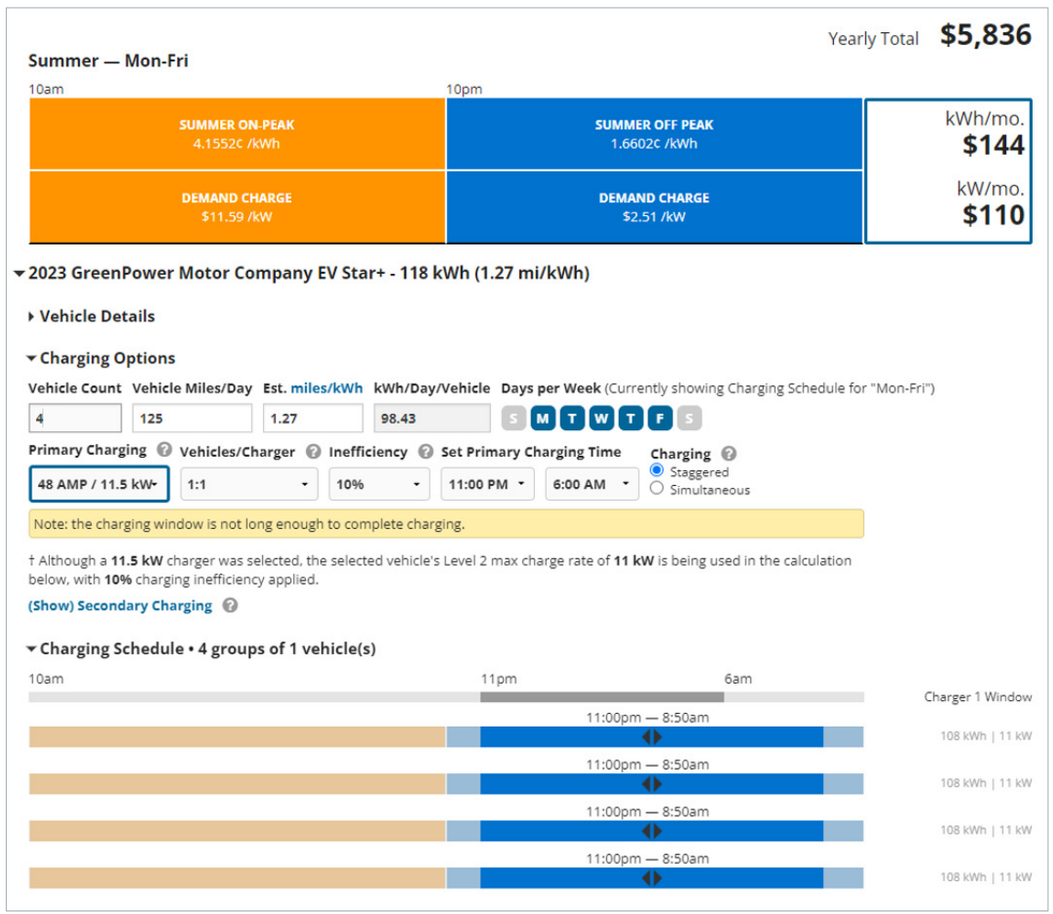
2 Select a rate plan for your location



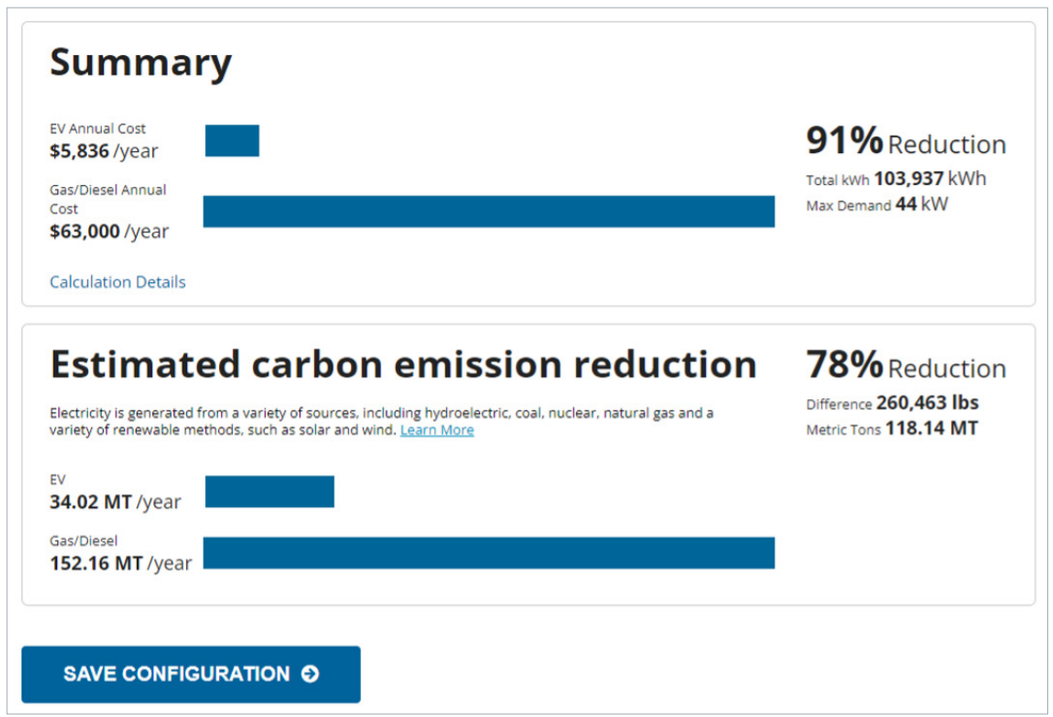
These rate plans are specific to Dominion Energy Virginia.

Sample Charging Plan (continued)

3 Find your best charging times



4 Review results and refine your plan



Budgeting and Funding

EVs generally appear more expensive in a simple upfront cost comparison, but that's not the full story. When factoring in potential funding sources and operating/maintenance savings, fleets increasingly find a lower overall total cost of ownership (TCO) with EVs. That, together with environmental benefits, is triggering a tremendous shift in the fleet industry. Whether or not you decide to complete a TCO analysis, tallying up the costs and identifying funding sources will help complete your plan.

Vehicles

For fleet operators, obtaining quotes on vehicles from manufacturers or distributors is likely to be a familiar process. However, new EV options are quickly emerging, including from new manufacturers, and it can take some additional research to identify where they are available and at what price. The manufacturer's website will generally have the most up-to-date information on who to contact for purchase information in your area. If you work with a third-party upfitter, be sure to check with them regarding updated requirements and pricing.

Infrastructure

The cost of charging infrastructure varies considerably with the type of equipment, site conditions, and available electrical infrastructure. The full cost of a networked, Level 2 charger is around $4,000 per port for the equipment and $6,000 per charger for the ***make-ready***, whereas DCFC project costs are on the order of $50,000 per port for the equipment and $50,000 per charger for the make-ready.

Through Dominion Energy's Fleet Charging Program, we will estimate your project costs and show you which portion of the cost can be offset by incentives.

Funding

While initial investments may seem overwhelming, there are incentive opportunities at the federal, state, local, and utility levels to help offset costs. Check our website for current incentive opportunities.

Make-Ready:

An industry term for preparations needed to install an EV charger on a site. Preparations include engineering, permitting, trenching/boring, electrical service, transformer, panels, meters, conduit, and conductors.

The table below shows a sample fleet electrification budget for a 5 year period with a 1:1 replacement schedule. This example assumes vehicle ownership, but it's worth noting that due to the different purchase and operating costs of EVs relative to gas/diesel vehicles, some fleets are choosing to explore alternative ownership models when approaching the transition to EVs. These models are discussed further in the next section.

Sample Electrification Budget for Shuttle Bus Fleet

Year	Baseline Vehicle	Electric Vehicle	Charging Infrastructure	Incentives	Incremental Investment
0	$74,000	$180,000	$40,000	$146,000	$0
1	$76,220	$171,000	$0	$40,000	$54,780
2	$78,507	$162,450	$0	$40,000	$43,943
3	$80,862	$154,328	$27,000	$53,500	$46,966
4	$83,288	$146,611	$0	$40,000	$23,323
5	$85,786	$139,281	$0	$40,000	$13,494

Total Cost of Ownership Comparison

The total cost of ownership represents the complete financial cost during the life of the vehicle, from purchase to end of life. Many EVs cost more than their conventional counterparts upfront but are a more cost-effective investment over their lifetime. It takes a bit more data and number crunching to arrive at the total cost of ownership comparison. We provide some of the key inputs and links to useful tools below.

Operations and Maintenance

Operations and maintenance costs are where EVs shine. The clearest benefit is in the fueling cost savings, though many EVs are also expected to deliver significant maintenance cost savings.

Fueling

Just like a gasoline vehicle, the price you pay to fuel an EV depends on the amount of fuel you consume and the price per unit of fuel. Dominion Energy has made it easy to estimate your electric fueling costs with our online savings calculator.

Maintenance

EVs require significantly less maintenance than internal combustion vehicles. One of the most comprehensive studies on the topic is presented in a 2021 report by Argonne National Laboratory titled "Comprehensive Total Cost of Ownership Quantification for Vehicles with Different Size Classes and Powertrains."[1] The study finds that battery electric vehicles have "systematically" lower maintenance costs than internal combustion engine vehicles, though with the caveat that data for the medium- and heavy-duty vehicle segments is sparse. EVs were estimated to have 60% of the maintenance cost of an internal combustion engine vehicle.

Tools

If you're a spreadsheet master, you can probably whip up your own TCO calculator in a few hours. Don't worry if you're not, as there are plenty of free tools available. Here is a free tool that we find
has a nice balance of power and ease of use:

Atlas EV Hub Fleet Procurement Analysis Tool

It's always a good idea to do some testing with a new tool. Plug in some inputs for your current operations and check the outputs to see if they look reasonable to you. If you need assistance, we're here to help. Qualified Dominion Energy customers can receive support with a total cost of ownership analysis from the Fleet Assessment Service.

[1] *Source: www.osti.gov/biblio/1780970*

Step 3: Implementation

Tips for Making a Strong Project Concept

A clear project concept provides a robust basis for bidding and a solid foundation for a charging project.

A strong project concept includes:

1. **A drawing that shows the layout of the site and EV charging location(s)**
2. **The number of required EV charging stations and ports**
3. **Future-proofing, i.e., a plan for incremental make-ready infrastructure for future EV charging stations**
4. **Hardware requirements, including rated output power, listing by a Nationally Recognized Testing Laboratory, type of connector, and network capabilities**
5. **Software requirements, including adherence to industry protocols, load management capability, access control, and payment tools (if necessary)**
6. **Warranty and maintenance term and coverage**

Identify and Mitigate Risks

Whether your fleet consists of a few vehicles or a few hundred, starting your fleet electrification plan is a big step. Every plan contains some risk, and this is no exception. Will the technology perform as expected? Will costs be higher than budgeted? These questions are important for considering, documenting, and mapping out possible mitigations if the risks turn into real issues. However, there are also risks to inaction. Not adopting a more cost-effective, lower-emission technology means missing an opportunity to optimize your operations and reduce environmental impacts.

There are two ways that any organization can take to mitigate risk in its transition to electric. The first is to stage the transition, beginning with a relatively small portion of the fleet and scaling up as real-world results prove out the benefits. This can work well so long as the long-term needs are also considered. When it comes to digging trenches, installing electrical conduit, and sizing service equipment, the most cost-effective approach is generally to do as much as possible at one time. Often called “futureproofing,” scoping out the make-ready infrastructure for 5+ years’ needs will ultimately save time and expense.

The second way to mitigate is to work with an experienced team. Dominion Energy is a trusted partner and will work with experienced equipment providers and contractors to help deliver a successful fleet electrification project. If you have a ready-to-go fleet electrification project, please check your eligibility for the Fleet Charging Program and submit your Interest Form. We can deliver a turnkey solution with upfront incentives on the make-ready and monthly on-bill payments.

Initiate Charging Project

After you have your initial plan approved, it's time to start your charging project. This may be in advance of or parallel to vehicle procurement, depending on the timelines identified during planning.

Many organizations have a well-established approach to construction projects. You may have identified your preferred method, or even your preferred vendors, during the planning process. Whichever approach you select, early planning and engagement with your utility provider to prepare for infrastructure support during your transition is critical.

Begin working with Dominion Energy in the early stages of fleet electrification and provide regular updates as you move forward in your planning. Through our fleet assessment services, our team can assist you with planning and evaluating site infrastructure options.

Procure EVs

Do EVs have that great new car smell? You bet! Your organization probably has an established buying process you should follow, though some fleets are considering different approaches when it comes to EVs.

Leasing

Fleets that want to test the waters with electric vehicles or other types of technology don't have to do it themselves or even use their own trucks. Leasing companies are providing that opportunity for fleets that desire to enter the EV space. A leasing company can help fleets start to incorporate electric vehicles into their operations, offering consultation on issues such as charging, regulations, and grant funding.

Training

Continued engagement with stakeholders during implementation will help the process of EV adoption proceed smoothly. This engagement includes simple progress updates, as well as training for those most directly affected by the transition. Key groups to train are drivers and maintenance personnel. Drivers get the best performance out of EVs as they learn to adapt their driving style to benefit from regenerative braking. Maintenance staff need to learn practices for working safely around high-voltage systems. Training will help these key stakeholders become comfortable and get the most out of your new electric fleet.

Evaluate and Adjust

Fleet electrification doesn't happen overnight. As you start using EVs, you'll learn what works best and make adjustments to your plan. An annual evaluation will help document your successes and identify opportunities for improvement. It's also a good opportunity to update your stakeholders and to obtain and incorporate their additional input.

Technical and Financial Performance

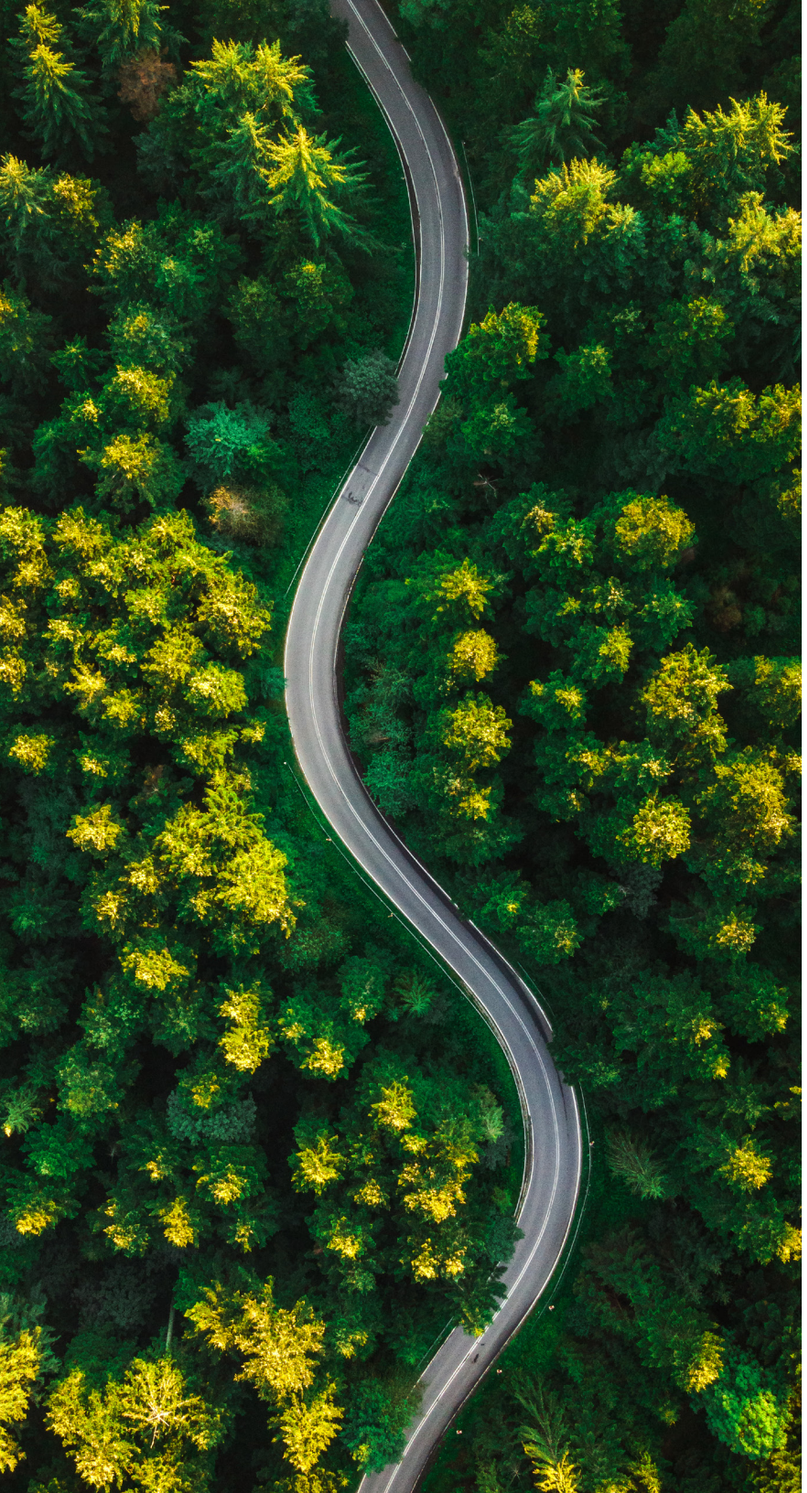
Much like how you've historically tracked your fuel economy and maintenance costs, you'll want to track your EV fleet performance. Chances are, with your EVs and EV charging equipment, you'll have access to even more data and tools than before. An abundance of data can be overwhelming, but returning to the basic proposition for an electric fleet will help to identify some useful performance indicators.

1. **Is the fleet meeting your organization's operational needs?**

   The measure of your organization's needs may be expressed in terms of hours operated, miles traveled, widgets delivered, or something else. The comparison to make is whether the EVs deliver the same or better quantity than their conventional vehicle predecessors or relative to your established benchmark. An annual number may conceal important seasonal factors, so it's worth tracking this monthly, if not weekly.

Example of average daily parcels delivered, by month.

Vehicle	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
EV	30	32	36	37	35	34	33	32	35	38	36	40
Other	31	30	36	36	35	32	34	30	32	36	38	41



1. **Is the fleet operating at or below the expected cost?**

   Data on your actual operations and maintenance costs can be compared to benchmarks created in your TCO analysis. You can also compare with the costs of any conventional vehicles you continue to operate, though in this case, consideration should be given to the rise and fall of oil prices to avoid making any big decisions based on short-term fluctuations.

Example of comparison of O&M costs to TCO benchmark ($/mile).

Category	Benchmark	Q1	Q2	Q3	Q4	Year
Fuel	0.35	0.37	0.32	0.36	0.33	0.34
Maintenance	0.10	-	0.20	-	0.20	0.10
Taxes & Insurance	0.05	0.20	-	-	-	0.05
Total	0.50	0.57	0.52	0.36	0.53	0.49

2. **Have emissions been reduced?**

   Emissions of climate-changing and local air pollutants can be calculated using a number of tools. Some fleets subject to regulatory reporting requirements will have specific tools and methods they must use. For those fleets that have flexibility and want a quick estimate, our online savings calculator can help. It already incorporates appropriate emission rates for Dominion Energy's electricity supply mix. Just enter your latest fleet efficiency and mileage inputs, and the calculator does the rest. Compare the result to your organization's goals for fleet emission reductions.

Example of performance against emission reduction goal.

	Goal	Achieved
CO2 Emission Reduction	50%	55%

These three metrics and the examples provided should help you get started with your evaluation. Do not be constrained by these. Each fleet is unique, and there may be other metrics that are important for your organization.

Optimize Charging

As we discussed earlier in this guide, when you charge and how quickly you charge can significantly change your fueling costs. The real-world, seasonably variable efficiency of vehicles also plays a part. While a good model upfront can provide a reasonable estimate of your electric fueling costs, the operational data you gather as your fleet transitions will allow you to fine-tune your strategy. Review your charging session data and your electric bill monthly to develop an understanding of the charging practices that drive the biggest impact on your bill and then assess whether there are opportunities to make changes.

Stakeholder Feedback

Firsthand experience with EVs turns many skeptics into enthusiasts. As you adopt EVs in your fleet, provide opportunities for exposure through training and test drives. Check in with drivers using an updated driver survey or other methods appropriate to your organization. Share the results of your annual evaluation and keep the lines of communication open.

Updating the Plan

As you gather more data and stakeholder feedback, you'll find reasons to update your plan. Market changes will also make more vehicles available, with new capabilities and at different price points. The same tools and approaches in this guide will help you make those updates.

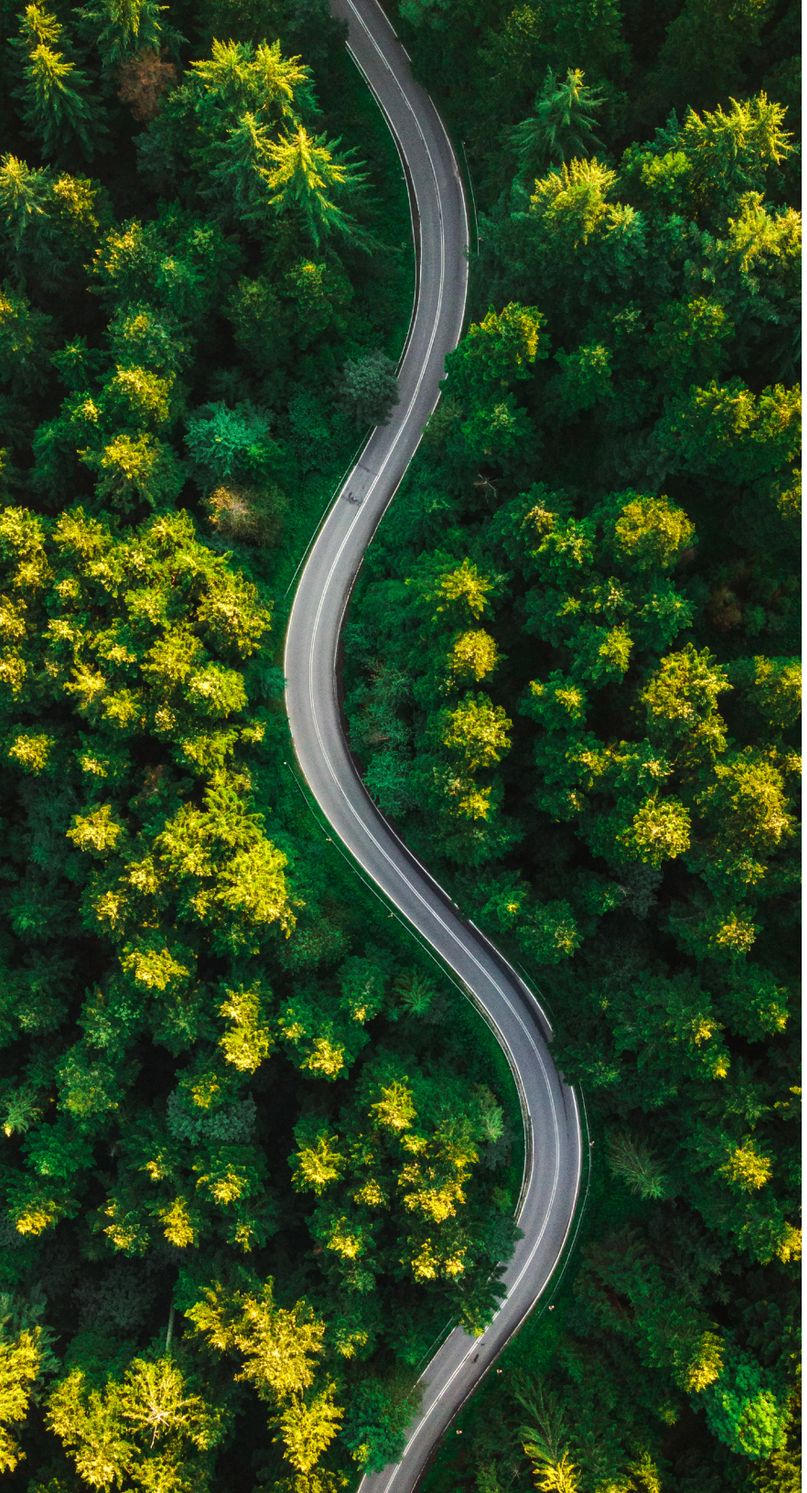
Dominion Energy is here to help. We look forward to helping you make the most of your fleet electrification investments.

Get started with your fleet electrification plan today.

Submit a request to Dominion Energy's Fleet Charging Program.

Appendices

Driver Survey



Survey

1. **About how long (total miles driven) is your typical daily route?**
   - ☐ Under 50 miles
   - ☐ 50 to 100 miles
   - ☐ 100 to 150 miles
   - ☐ 150 to 200 miles
   - ☐ 200 miles or more

2. **Have you ever used a plug-in electric vehicle (EV) before?**
   - ☐ Yes
   - ☐ No

3. **Do you believe an EV has the range to meet your fleet vehicle needs?**
   - ☐ No, definitely not
   - ☐ No, probably not
   - ☐ Yes, probably
   - ☐ Yes, definitely

4. **Do you believe an EV is likely to meet comfort and performance needs?**
   - ☐ No, definitely not
   - ☐ No, probably not
   - ☐ Yes, probably
   - ☐ Yes, definitely

5. **Overall, how comfortable would you be with driving an EV?**
   - ☐ Very comfortable
   - ☐ Somewhat comfortable
   - ☐ Neutral
   - ☐ Somewhat uncomfortable
   - ☐ Very uncomfortable

6. **Would you like any additional information about EVs?**
   - ☐ Yes
   - ☐ No

7. **If you answered yes to the previous question, please note the topic(s) that would be of most interest.**

8. **Please use the space below to provide any comments or questions you have about electrifying your fleet.**