

# Futureproof Your Fleet

## Fleet Owner/Manager Readiness Checklist

### 1. Stakeholders

Have you conducted a needs assessment?	<p>What are your organization’s priorities when piloting and deploying low and zero emission vehicles? Below are several common priorities:</p> <ul style="list-style-type: none"> <li>• Minimize operating costs</li> <li>• Minimize capital costs</li> <li>• Reduce air pollution</li> <li>• Minimize disruption to current service levels</li> <li>• Comply with policy / political mandates</li> <li>• Comply with legal or regulatory requirements</li> </ul> <p>What percentage of your fleet do you plan to transition to low and zero emission vehicles?</p> <ul style="list-style-type: none"> <li>• What is the ideal size of a pilot?</li> <li>• What are the technical and performance specifications for the vehicle and related infrastructure?</li> <li>• What would you classify as being the costs and benefits of adopting low and zero emission vehicles?</li> <li>• What are the key constraints to adoption that you think can be addressed with a pilot?</li> </ul>	Yes / No
Does your organization have a fleet transition plan?	<ul style="list-style-type: none"> <li>• Are there any plans or policies in place to support the introduction of low and zero emission vehicles and charging/refueling infrastructure?</li> <li>• Are there any goals set to deploy low or zero emission vehicles? For example, will new vehicle procurements screen for alternative propulsion technologies?</li> </ul>	Yes / No
Are there any external factors encouraging decarbonization?	<ul style="list-style-type: none"> <li>• Are there any uniform or industry-based standards within your fleet’s operating area that are specific to alternative propulsion technologies?</li> <li>• Are your suppliers, customers or employees encouraging the adoption of low or zero emission vehicles?</li> </ul>	Yes / No

## 2. Fleet Vehicles

Do you know your organization's fleet operating profiles (duty cycles)?	<ul style="list-style-type: none"> <li>• Do you have information about the fleet's operating profile? This can include data about routes, operator behaviour, payload, seasonal variations, capital, operating and maintenance costs, availability of fuel/energy that reflect the actual conditions of the service area, etc.</li> <li>• Can you separate the fleet's distance requirements from auxiliary loads related to operating your fleet (such as payload and takeoff units)?</li> <li>• Are there more than one user group that has a different duty cycle from the rest of the fleet?</li> </ul>	Yes / No
Have you looked at potential vehicles that can meet your organization fleet's duty cycle(s)?	<p>A review of vehicles should cover items that meet the requirements of the fleet, such as:</p> <ul style="list-style-type: none"> <li>• Number of manufacturers that offer vehicles that meet the fleet's different duty cycles</li> <li>• Vehicle range</li> <li>• Energy/fuel requirements (for on-Route and depot refueling/ charging)</li> <li>• Route specific capabilities and add-ons (such as climate, topography, parasitic uses such as heaters)</li> <li>• Total cost of ownership</li> <li>• Availability of vehicles</li> <li>• Speed of commissioning</li> </ul> <p>Additional questions include:</p> <ul style="list-style-type: none"> <li>• Will vehicles comply with all applicable regulations, codes, standards, policy statements and guidance?</li> <li>• Do vehicle specifications take into account the intended local environmental and operating conditions such as climate, topography and operator behaviours?</li> </ul>	Yes / No
Have you piloted any alternative propulsion technologies before? Have you looked at performance data to inform your decisions?	<p>In addition to any pilot data your organization may have, there are numerous resources available to identify how alternative propulsion technologies can perform within your organization's fleet. These resources can cover:</p> <ul style="list-style-type: none"> <li>• Vehicle reliability</li> <li>• Performance data in different traffic conditions and climates</li> <li>• Battery composition and state of health</li> <li>• Access to components, spare parts and fuel</li> <li>• Operations and maintenance practices</li> </ul>	Yes / No

### 3. Infrastructure

<p>Have you confirmed the power capacity for facility charging?</p>	<ul style="list-style-type: none"> <li>• How much power will be available at the site (depot / on-route charger)?             <ul style="list-style-type: none"> <li>• Is the power source reliable?</li> <li>• Are there any modifications needed to deliver this power?</li> </ul> </li> <li>• Is there investment in electric vehicle public charging infrastructure?</li> </ul>	<p>Yes / No</p>
<p>Is there access to reliable and affordable alternative fuels to or near one or more facility?</p>	<ul style="list-style-type: none"> <li>• Is there a low carbon fuel station available at or near your organization's facility?</li> <li>• Have you discussed supply options with your natural gas provider and/or renewable diesel supplier?</li> </ul>	<p>Yes / No</p>
<p>Has your local utility provided information about facility power capabilities?</p>	<ul style="list-style-type: none"> <li>• Can the local utility provide detailed information about power and transmission capabilities to each facility? Do you have single line diagrams for each facility?</li> <li>• Will there be a transformer at the facility?             <ul style="list-style-type: none"> <li>• What are the transformer's features?</li> <li>• Who could own the transformer?</li> <li>• Can the transformer be used to support potential power needs?</li> </ul> </li> </ul>	<p>Yes / No</p>
<p>Are infrastructure upgrades required to your organization's facilities?</p>	<ul style="list-style-type: none"> <li>• Will there be a substation available to support power needs?</li> <li>• What are the power capabilities of the substation?</li> <li>• Where is the substation located to accommodate the site?</li> <li>• What kind of energy storage and on-site generation activities are available to support the power needs?</li> <li>• Will the utility offer to support any upgrades?</li> <li>• Will fuel storage be required at the facility?</li> <li>• Is a refueling station feasible at the facility?</li> <li>• Have you assessed the merits of depot versus on-route charging/refueling?</li> </ul>	<p>Yes / No</p>
<p>Have you conducted a charging or refueling infrastructure market scan?</p>	<ul style="list-style-type: none"> <li>• What is the availability of charging/ refueling infrastructure options?</li> <li>• What are the charging/refueling speeds for available solutions?</li> <li>• What are the commissioning speeds for charger/refueling infrastructure?</li> <li>• Did you confirm that the options comply with uniform or industry-based standards?</li> <li>• Are alternative technologies compatible with existing refueling specifications or third-party operating agreements?</li> </ul>	<p>Yes / No</p>

#### 4. Facilities

Has your organization conducted a readiness assessment for each of your organization's fleet facilities?	<p>Items to consider when conducting a facility assessment include:</p> <ul style="list-style-type: none"> <li>• A daily sequencing of events to determine what activities are undertaken at the facility</li> <li>• Visualization of how operators interact with the facility at all times of the day</li> <li>• Determination of how a vehicle flows through the facility, starting from being driven from the storage garage, fueled, serviced, and made available for use</li> <li>• Identification of the administration area, operations area, operations administration area, parts storage area, vehicle storage and servicing, and maintenance area which may be affected by alternative propulsion technologies</li> <li>• Determination of areas that require modifications or retrofits to meet safety regulations or codes for alternative propulsion technologies</li> </ul>	Yes / No
Have you looked at any regulations that can influence your choice of alternative propulsion technologies?	<ul style="list-style-type: none"> <li>• Do building codes include any mandatory requirements that can affect how facilities accommodate low or zero emission vehicles?</li> <li>• Did you review any safety codes or standards that specify how to safely store, fuel/charge and service/maintain low or zero emission vehicles?</li> </ul>	Yes / No
Are there any incentives available to modify facilities?	<ul style="list-style-type: none"> <li>• Are there financial and nonfinancial incentives available for purchases, facility upgrades and/or refueling/ charging infrastructure installation?</li> </ul>	Yes / No

#### 5. Environmental

Have you determined the environmental impact of your current fleet?	There are different resources available to compute the GHG emission profile of fleet operations. This includes CO2 as well as other particulate matter.	Yes / No
Have you considered the environmental benefits of transitioning your fleet?	Different propulsion types have different GHG emission profiles. There are several resources available to help quantify the environmental benefits of decarbonizing your fleet.	Yes / No

## 6. Economics

<p>Have you determined the costs of alternative propulsion technologies?</p>	<p>Questions that can be considered include:</p> <ul style="list-style-type: none"> <li>• Have you computed the total cost of ownership of different vehicles and compared the cost to operate the fleet's existing propulsion types?</li> <li>• Are there electricity demand charges?</li> <li>• What are the daily hour charges (over 24 hours) for anticipated power needs?</li> <li>• Are any of these rates subject to the global adjustment charge from utilities?</li> <li>• Are there any rate concessions available to support the BEV/PHEVs?</li> <li>• Are there any long-term supply agreements to subsidize the market price of alternative fuel?</li> </ul>	<p>Yes / No</p>
<p>Have you identified potential funding sources to support the adoption of low or zero emission vehicles?</p>	<p>There are several funding sources that can be available to support your organization's fleet decarbonization journey. Below are tips to help:</p> <ul style="list-style-type: none"> <li>• Identify public and private funding sources</li> <li>• Periodically scan funding portals for new opportunities</li> <li>• Distinguish between portfolio, program and project level funding opportunities</li> <li>• Identify capital versus operating funding</li> <li>• Note any funding that can be available for pilot versus full deployment</li> <li>• Consider identify in-kind contribution and the role of partners that can improve the success of a funding application</li> </ul>	<p>Yes / No</p>