



Office of the  
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# Best practices for fueling government- owned vehicles

Many governments are responsible for fleets of police, fire or utility vehicles, schools or transit buses, motor pools, or maintenance vehicles. Some governments operate their own fuel tanks, while others use retail fueling stations or a combination of both. Although more governments are converting to hybrid or electric, fuel continues to be a significant expense in fleet operation budgets, typically second only to vehicle purchases.



Considering the costs of fleet operations, governments should try to minimize their fuel expense by preventing loss, waste or misuse. Unfortunately, employees with access to fuel can easily misappropriate it for personal use.

Whether you manage your own pumps or contract with commercial providers, you should take steps to ensure you are safeguarding fuel. Your government needs to have internal controls in place to limit access and monitor usage to ensure it is appropriate and authorized.

The following are some best practices to consider when evaluating your fuel program and the related internal controls.

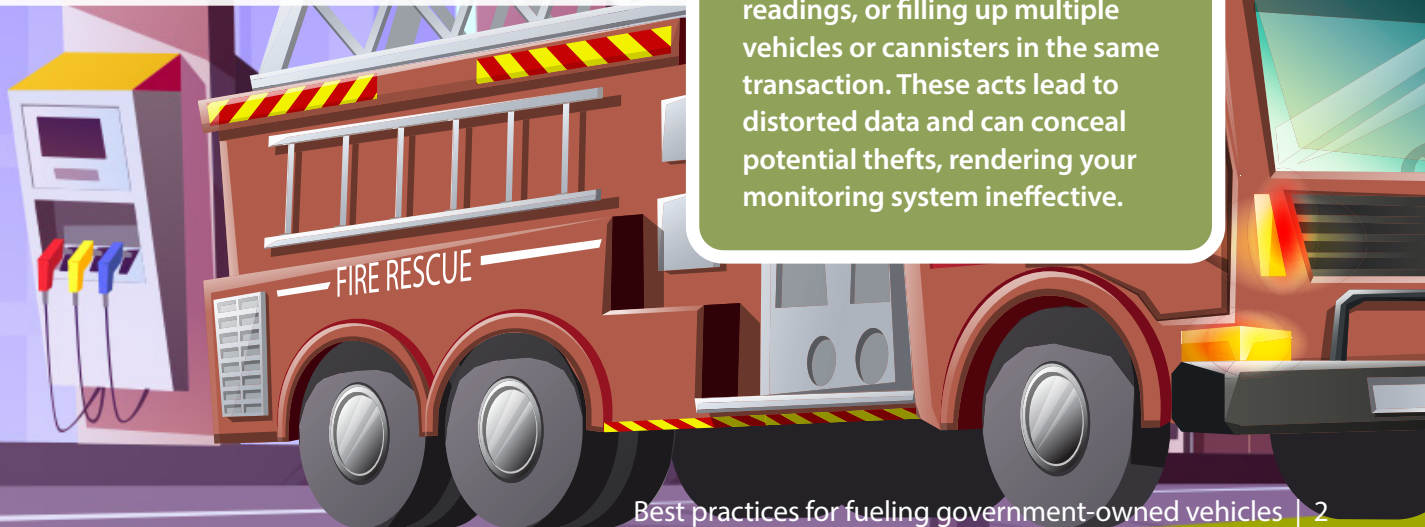


## Setting expectations for your fuel program (whether you provide the fuel on site or contract with commercial providers for fueling at retail locations)

- **Adopt and enforce a fuel program policy.** Your policy should describe expectations for all employees involved in the fuel program, whether they authorize or issue fueling devices, manage the fuel tank inventory, monitor the fuel usage, or dispense fuel as a driver. It should address your key internal controls related to fuel purchasing, granting access to the fuel, fuel dispensing, and monitoring. It should also describe how to report and address excessive fuel usage, losses or other discrepancies.
- **Educate employees on your policy.** Make sure that drivers know what to do—and what not to do—so that you can collect the information you need to monitor fueling activities. You may require drivers to take training, acknowledge they have read your policy, or sign a usage agreement.



Governments lacking clear policies and employee expectations are likely to find their drivers sharing fuel cards or employee PINs, entering inaccurate odometer readings, or filling up multiple vehicles or cannisters in the same transaction. These acts lead to distorted data and can conceal potential thefts, rendering your monitoring system ineffective.



- **Require authorization forms.** Each driver's manager should formally approve any fueling access. Only those employees with an actual need to obtain fuel as part of their job duties should be granted dispensing rights. Maintain documentation of any initial authorization, as well as subsequent changes.
- **Segregate duties for approvals and granting access.** Those who approve access to fuel dispensing should not be the same people who order, issue, or record the issuance of fuel cards or keys. Approvers should periodically verify they approved all new issuances.

Governments should not grant fueling access to employees with vehicle allowances. Since these employees are paid a monthly stipend to cover the cost of using their personal vehicle for work purposes, they should not use the government's fuel in their personal vehicle or drive a government-owned vehicle (except in rare circumstances).

A key concept of segregation of duties is that no one employee should have two or more of the following duties for a financial process: approve, reconcile, keep records, or take custody of assets. Otherwise, you give too much control to one person and you are more susceptible to fraud or errors. See SAO's [Segregation of Duties](#) for more information.

## Purchasing and managing bulk fuel for your government's fuel tanks

- **Competitively procure bulk fuel contracts.** Consider formally bidding fuel purchases (or using a state contract that has been formally let). This can help you obtain favorable pricing, as well as give you priority access to fuel during shortages.
- **Understand the pricing in the contract.** Before you enter into a contract, make sure you understand the language in it and how pricing will be determined. If the vendor offers a rebate, establish a monitoring process to ensure it is accurately calculated and paid to you.
- **Verify delivery quantities.** For example, you could take measured readings of the fuel tanks before and after each delivery. Management should establish a threshold for when staff should question delivery differences. Document your verification of the delivery and retain it as invoice support.
- **Reconcile each fuel tank balance monthly.** Maintain perpetual fuel inventory records and periodically compare them to actual amounts on hand. Start with your beginning inventory, add the amount of fuel purchased based on delivery records, subtract



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the amount of fuel used based on usage records, and calculate the balance remaining. Compare the calculated balance to the measured fuel tank level, and follow up on discrepancies exceeding the threshold management has established.

**Table 1: An example of fuel tank reconciliation**

Fuel inventory analysis	Gallons
Beginning inventory, per the government's records	4,890
Add deliveries (per receipts)	185,333
Less usage (per logs)	(179,555)
Ending inventory	10,668
Actual inventory, per physical tank reading (e.g., stick reading)	10,100
Variance (the difference between the actual inventory and the calculated inventory; a negative amount indicates fuel unaccounted for and points to a potential fuel loss)	(568)

- **Segregate duties for fuel tank reconciliations.** As per segregation of duty principles, those who reconcile the fuel tank balances should not have access to the fueling stations.
- **Verify bulk fuel statements before payment.** The approver should compare quantity billed to the verified delivery records. They should also verify that the price per gallon agrees to contract terms. As per segregation of duty principles, the fuel statement approver should not be able to dispense fuel.

## Protecting your government's fueling stations

- **Review physical security measures.** Locking the perimeter gates at night is not enough. Consider additional measures, such as turning off the fuel pump breakers at night or when not in use, installing lockable nozzles, locking the pump enclosure, pointing cameras at the fueling area, and installing license plate readers. If you use padlocks, periodically replace them and inventory the keys.



- **Use a system to control fuel access and collect data.** Install a system that requires authentication to dispense fuel. If this is not possible, make sure your tank has a dispensing meter so you can manually record data in a logbook. No matter what type of system you use, you should collect the following data: the employee's name, vehicle or equipment identifier, the date, time and location, the amount and type of fuel, and the odometer reading.

Common systems include:

- **Manual** – Drivers manually record usage in a log. An administrative employee enters the log data into a spreadsheet or database to allow for effective review and monitoring.
- **Small device system:** Drivers access fuel by inserting a device associated with the vehicle, such as a card, chip, key, fob or tag, and by entering credentials, such as an employee PIN, and the odometer reading. Someone periodically uploads the transactional data to a monitoring system.
- **Automated technology** – Vehicles are outfitted with permanently affixed technology that allows the fuel pump to recognize the vehicle and read the odometer. To access the pump, the driver must scan an employee identification badge. The fueling data is automatically transferred to a monitoring system, often in real time. These systems typically offer “deny limits,” which further prevent unauthorized use by denying fueling that falls outside of prescribed limits.

- **Monitor manual overrides of the fueling system.** Fuel tanks have a manual mode for troubleshooting or emergency access, but usage cannot be tracked in this mode. Therefore, limit manual mode access to a limited number of authorized personnel. Make sure you have a process to record and monitor fuel used during these overrides.
- **Post warning or instructional signage at fueling stations.** Use signage to provide important reminders or instructions to users, and to deter theft.

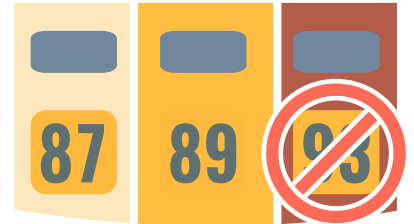


Governments with manual systems are most at risk for theft and abuse. Governments with small device-type systems have less risk, but the devices are not permanently attached and can still be used to fuel an unauthorized vehicle. Also, drivers can easily borrow or share PINs, which creates potential for abuse. An automated system poses the least risk, especially if the government effectively uses the deny limits.



## Using a commercial provider for fueling at a retail location

- **Obtain monitoring data.** Make sure that your vendor can electronically provide you with the usage data needed for monitoring purposes. This data should include the employee's name, vehicle or equipment identifier, the date, time and location of the fueling, the amount and type of fuel purchased, and the odometer reading. Ideally, the vendor should provide monitoring software with adequate exception-reporting features and the ability to establish parameters that would deny a transaction from occurring.
- **Consider restrictions for off-site fueling.** If you allow retail fueling, you may want to prohibit accessing full service or using premium fuel grades when they are not justified. In addition, you may want to prohibit any additional non-fuel purchases like oil or wiper blades.
- **Be mindful of your lowest cost option.** If you allow retail fueling in addition to your own fueling sites, then encourage drivers to use your stations when possible (assuming they are the less expensive option). Keep in mind that employees may continue to use the retail option even when it is not justified, so you should monitor activity and issue occasional reminders.
- **Verify billing statements before payment.** Reconcile drivers' fuel receipts to the vendor's monthly statement. If receipts are missing, drivers should submit timely explanations. In addition, verify you are charged the correct per-gallon rates. As per segregation of duties principles, those who approve fuel-usage billings should not have the ability to dispense fuel.



## Giving access to fuel pumps (at your pumps or retail sites)

- **Limit who can grant access to dispense fuel.** You should designate as few administrative staff as possible to issue fuel cards, keys, employee IDs, or otherwise give fuel-dispensing rights.
- **Separate recordkeeping from actual custody of fuel.** As per segregation of duties principles, those who maintain the records (e.g., tracking of fuel cards or keys, ability to edit fuel-mileage data) should not be the same people who have actual custody of the fuel asset (e.g., ability to dispense fuel, manage the fueling tanks).



- **Issue fuel-access devices to unique vehicles.** If you issue devices to access fuel, such as cards or keys, they should be assigned to each vehicle, not to each driver. You need to collect fuel-usage data per vehicle, so you can calculate average miles per gallon and compare it to the manufacturer's specifications, a key indicator for theft or abuse.

If your calculation shows that a vehicle is only getting 10 mpg—but it should be getting 30 mpg based on manufacturer specifications—then it is possible that more fuel is being purchased than is going into the vehicle. This is a common sign of theft.

- **Maintain justification for fuel access assigned to people.** If you assign fuel cards or keys to specific people for emergencies, make sure their use is limited and that you have a process to collect data on each vehicle fueled.

- **Establish a standard process to revoke access.** Administrative staff managing access to the fueling system must receive timely information about job duty changes, employees who are separating from employment, and vehicle transfers or retirements, so that they can update access to the system.

Performance audits from around the country frequently report former employees having access to the fueling system after their employment ended. Often, these credentials were inappropriately used to obtain fuel, indicating theft or credential sharing.



## Collecting fuel data

- **Use a central fuel-usage database.** Record all fuel data in one central system so that you can effectively monitor usage, even if you collected the data manually through logs.
- **Manage access to your central fuel database.** Some administrative staff will need access to your central fuel database to grant or remove access, or to monitor data. Limit administrative access, and never give employees more than the level of security access they need to do their jobs.
- **Collect current odometer readings at the time of fueling.** You need correct odometer readings to calculate average miles per gallon. Emphasize the importance of correct readings with drivers, monitor the reasonableness of those readings, and then hold drivers accountable if they do not comply. If your system has the capability, deny fueling when the entered odometer reading is not within reasonable parameters (e.g., fueling is not within 350 miles of the last one).



## Reviewing access to dispense fuel

- **Review for inactivity.** Check for fuel cards, keys, user IDs, etc., that staff have not used in some time, and deactivate them to reduce the risk of inappropriate use. If you decide against deactivating, maintain documentation of the approval and justification.
- **Review active fuel users.** Twice per year, audit your listing of employees authorized to dispense fuel and ensure it is accurate and agrees to human resources records. Make sure there are no generic IDs in use.
- **Review the active vehicle list.** Twice per year, audit your vehicle listing (vehicles authorized to receive fuel) and verify each vehicle is currently in use. You might compare your vehicle list to departmental lists or the listing used for insurance purposes. Use the VIN to make sure each vehicle is unique.
- **Physically verify fuel cards or keys, if you use them.** At least once per year, reconcile your listing (or that of your credit card provider) to a physical verification of the fuel card, key or other device.





# Managing and monitoring fuel consumption

- **Implement deny limits to prevent unauthorized fueling.**

Your system may allow you to deny fueling if it does not fall within certain limits, such as fueling that exceeds the expected tank capacity. If you use deny limits, you should establish them at thresholds that will be effective in preventing unauthorized fueling.

- **Develop exception reports and exception flags.**

Your fueling system should produce exception reports that will flag potentially questionable purchases. That way, reviewers can efficiently identify and follow up on unusual transactions.

- **Establish a formal monitoring plan.** Develop clear instructions and training on how the assigned reviewers should monitor fueling transactions. You should assign the reviews to those with the most expertise about employee fueling patterns (knowledge of employee working hours, vehicle mileage, level of use, and routes). The subject matter experts will most likely be staff at the departmental level.

- **Monitor fuel usage for miscellaneous purposes.** Some governments may issue one access device to fuel gas cans, generators or weed trimmers. Monitor to ensure employees are not using that access to fuel vehicles (it will distort your data, specifically miles-per-gallon data) and that the amounts used are small and reasonable.

- **Review for unusual transactions monthly.**

Your reviewers should look for unusual transactions in the fueling data, using exception reports whenever possible to aid in efficiency. They should follow up with the driver (or the driver's supervisor) shortly after the transaction occurs to resolve any questions. Any issues should be reported promptly to those centrally managing the program.

- **Oversee reviewers.** Those centrally managing the fuel program should obtain assurance the various departmental reviewers are performing their review tasks on time and in the manner expected. You may consider requiring all reviewers to sign a monthly attestation form that the review was completed, as required by your policy and procedures. Make sure to hold departments accountable for incomplete reviews.

Additional deny limits or exception reporting to consider include unreasonable odometer readings given recent fueling activity (e.g., not within 350 miles of the last fueling), the wrong fuel type being used for the vehicle make or model, use of premium fuel, excessive fueling in a 24-hour period, nonfuel purchases on a fuel card, fueling outside of allowed days or times, or exceeding a maximum quantity when fueling small equipment.

Reviewers should look for an average miles per gallon that is lower than expected, as it can indicate some of the fuel was not used for that vehicle. Reviewers should also look for fuel pumped at unexpected times, days or locations, as well as any activity for drivers who are no longer employed. The extent of review depends on your government's ability to deny fueling transactions (see p. 4 for more information). For example, if you do not deny the wrong fuel type being used, then you should monitor for this.

## Additional resources:

- [Segregation of duties guide](#): Use the inventory chapter to further understand how duties should be segregated when managing fuel inventory.
- [Best practices for credit card programs](#): Use this resource when evaluating a credit card program and related controls, such as when you issue fuel cards.
- [Best practices for take-home vehicle programs](#): Use this resource to help you ensure your policies and program are well-defined and monitored for any take-home vehicles.

## For assistance

This resource was developed by the Center for Government Innovation, a service of the Office of the Washington State Auditor. Please send questions, comments, or suggestions to [Center@sao.wa.gov](mailto:Center@sao.wa.gov).

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