

Driveway to Greener Fleet and Sustainability



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Driveway to **Greener Fleet and Sustainability**

The transportation and commercial fleet sector are the largest contributors to greenhouse gas (GHG) emissions, with the majority being carbon dioxide (CO₂) emissions. In 2014, U.S. greenhouse gas emissions from transportation accounted for nearly 26 percent of the total, making it the second-largest contributor to U.S. greenhouse gas emissions after the electricity sector.

In fact, transportation is the only sector whose greenhouse emissions increased between 1990 and 2008. With the burning of gasoline and diesel accounting for 59 percent and 24 percent of the transportation sector's emissions, respectively, significant reductions in auto and truck emissions are essential to climate change mitigation efforts.



Idling impacts fleet maintenance and vehicle life

In 2017, annual heavy-duty gasoline vehicles accounted for 13 megatonnes of greenhouse gas emissions in Canada, while heavy-duty diesel vehicles contributed 47 megatonnes. These totals add up to increases of 11 and 28 percent, respectively, between 2005 and 2017. Combined, emissions from these heavy-duty vehicles comprised nearly 30 percent of the total amount of heat-trapping pollution from Canada's transportation and commercial fleet sector, which added up to 201 megatonnes in 2017.

Research on the subject tells us that every hour of idling has the equivalent effect in terms of wear and tear as 75 miles of driving on the road. It's not just the wear and tear as unnecessary idling can cause buildup in a truck's engine. In that same hour, about 22 pounds of carbon dioxide is released into the environment. For perspective, 20 pounds of CO₂ would fill 1,200 gallon jugs. A reduction of even one hour of idling in a week could save about a thousand pounds of CO₂ per year per truck, or the size of a three car garage. Reduction in idling brings down the number of oil changes needed and reduces maintenance expenditures.

Increasing vehicle fuel efficiency and reducing idling is a cost-effective way to significantly lower the transportation sector's emissions and reduce vehicle lifecycle cost without requiring major infrastructure adjustments.



Managing what you can't measure

It is true; if you can't measure something and know the results, you can't possibly get better at it. It's nearly impossible to reduce your emissions without knowing how much you contribute first. Well, you can for regular emissions reporting or smog check but that does not give the whole picture. As a fleet manager, you need to identify polluting vehicles faster and fix problems, but how do you do it?

Let's look at a more accurate reporting method: telematics. Today's vehicle tracking technologies collect information on MPG and real fuel consumption straight from each car's engine's computer and then

run analysis on this data to spit out actionable insights. Taking steps towards becoming a more environmental fleet can be made easier with the installation of modern GPS fleet tracking solution. Azuga, a leading provider in telematics, can help you frequently and consistently monitor emissions in real-time. One simple dashboard can provide fleet and operations managers with an overview, as well as the ability to dive into vehicle-by-vehicle results. Using an engine diagnostics-based system can help fleets reduce harmful emissions and control maintenance costs. In the process, you'll save money and reduce the company's environmental footprint.



That's just the tip of the iceberg

For most fleets, carbon footprinting is perceived to be about reducing emissions purely for environmental reasons. In reality it is about saving money and complying with safety measures and has a lot more to do with reducing maintenance costs.

If you envision an efficient and environmentally-friendly fleet, it's crucial that businesses step back and invest time and effort to improve our understanding of it. Here are the top areas you can start seeing a positive impact.

Engine Idle Time

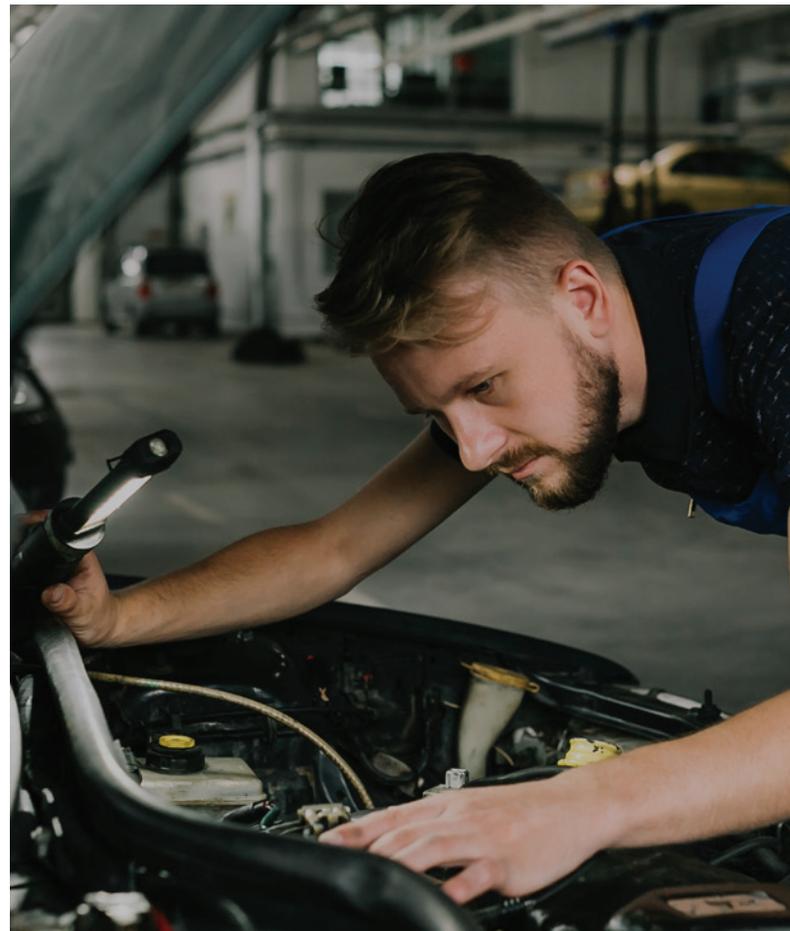
- According to the U.S. Department of Energy, 6 billion gallons of diesel fuel and gasoline are wasted by idling vehicles each year. This is taking a significant toll on our environment and global warming.
- The 2003 study supports Natural Resources Canada, NRCAN's position that "idling for over 10 seconds uses more fuel and produces more CO2 emissions than restarting your engine."
- Idling can be eliminated by using a modern fleet tracking system that includes engine diagnostic capabilities. With the right telematics tool, you can enact environmental company policies on idling, and monitor the data against those policies to reduce carbon emissions.
- Reducing unnecessary idling can save a significant amount of fuel and reduce Greenhouse Gas emissions.

Vehicle Maintenance

- Keeping your vehicles in proper running condition is critical for reducing harmful emissions in the atmosphere. Most of the fleets managers have little or no visibility into current engine conditions.
- An engine that needs service can easily contribute to higher emissions levels. These small problems left unchecked and not fixed can turn into big problems, costing you more vehicle downtime and repairs.
- As we mentioned earlier, modern vehicle tracking technologies collect information straight from each car's engine's computer including diagnostic trouble codes (DTC). Telematics solutions can instantly notify you or your mechanic when a vehicle check engine light or other code occurs.
- Proactive maintenance will also help you save time, money, and further damage to the vehicle and the environment.

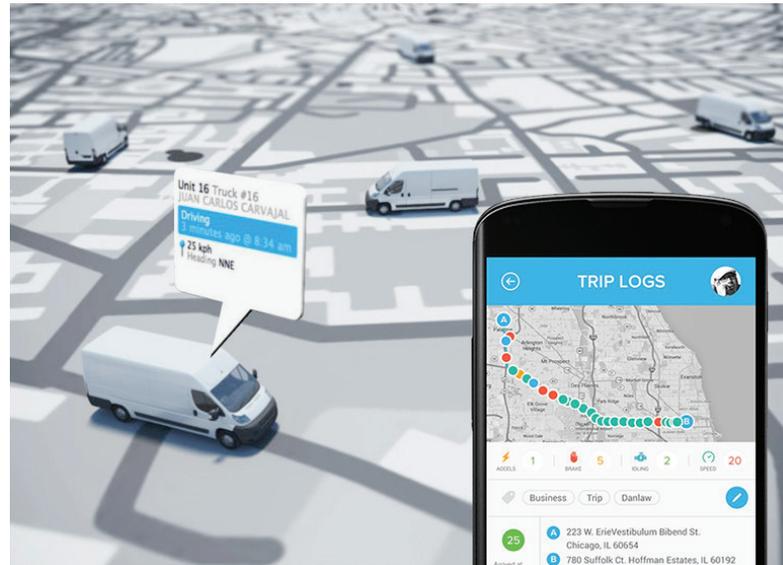
Vehicle Speeding

- Among all the potential measures available, implementing stricter speed limits could have an immediate effect on fuel consumption and emissions.
- Reducing speed can significantly lower emissions of other pollutants, particularly reducing NOx and particulate matter (PM) output from engines.
- Monitoring the speed of every vehicle in your fleet with instant notifications when someone exceeds a particular speed in your fleet can improve air quality. You can also review historical speeding reports and coach drivers to be safer.
- Significant fuel savings can be achieved by encouraging drivers to maintain a consistent speed, including effective enforcement of speed limits. Next-gen GPS trackers have posted speed limit (PSL) features to monitor and reduce speeding.



Route Optimization

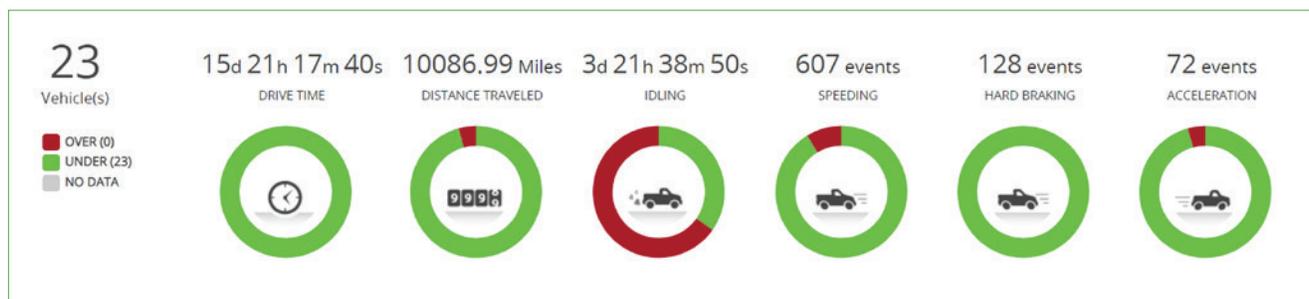
- There is another important objective for the managers to reduce carbon emissions by optimizing the transport routes of the fleet. Optimize your truck routes to cuts costs, optimize vehicle use, streamline operations and help you make the most of every drop of fuel while cutting carbon emissions.
- What if your drivers could make another customer visit on the way back without having another technician routed to the site from the office? The routing movements from different locations can be combined into efficient routes that reduce overall empty running. This inter-working of multiple fleets generates route plans with efficiency, which increases vehicle utilization, improves productivity and reduces empty mileage.



- Using telematics helps fleet managers reduce the number of miles driven. Fleet managers can identify whether their drivers are being routed in the most efficient way possible, and find out if they are deviating from their assigned routes, and have the ability to dispatch the closest vehicle.
- With GPS tracking based route optimization features, companies can reduce their total annual mileage, which in turn cuts fuel usage and carbon emissions and improve customer satisfaction greatly.

Unauthorized Vehicle usage

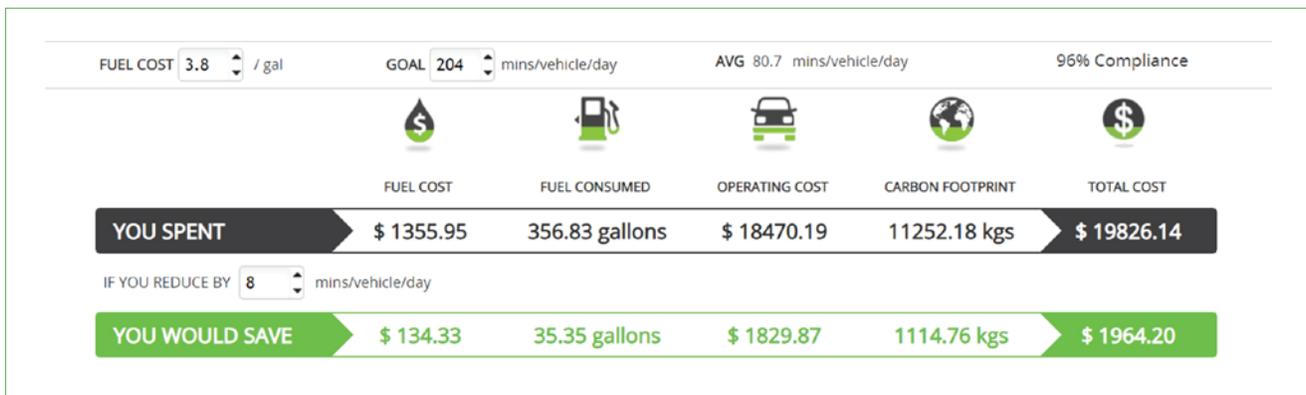
- After-hours or other unauthorized use of fleet vehicles waste fuel. Fuel and operating costs can quickly add up. Telematics solutions will help managers to set up real-time alerts to spot instances of unauthorized usage as it happens.
- Fleet management tools have built-in reports which can be customized to view the violations summary on any additional side jobs and after-hours use with real-time notifications. Proper reporting will give you the ultimate control over fuel usage and carbon footprints.



Promoting Fleet Sustainability

Fleets around the world are concerned with the impact of transportation on the environment and human health. With the increasing global average temperature, climate change has become a global concern. Emission reduction has become a common responsibility of fleet owners. Measuring your carbon footprint and taking action to reduce it has a positive environmental benefit.

This will help you differentiate your business from your competitors and increase employee retention. In some cases, customers prefer working with companies that are environment-friendly and they appreciate your organization's commitment to offsetting the impact the company makes. You should be able to increase your profit margins by reducing fuel consumption.



A sample dashboard view of Azuga highlighting the carbon footprint

Promoting fleet sustainability requires concurrent and persistent pursuit of compliance and monitoring - which will help you lower fuel usage, reduce carbon emissions, better utilize resources, and reduce transportation costs – all resulting in a big impact on your bottom line.

Environmental consciousness doesn't have to be expensive. Modern telematics tools, like Azuga, can cut CO2 emissions and save money within the first few weeks of usage. A smart telematics solution pays for itself and can yield greater ROI.



“ When an engine is idling, it’s not operating at its optimal temperature. In fact, the fuel is only partially burning which leads to a buildup of residue that damages engine components, which means idling is costly in terms of vehicle maintenance as well,”



Ananth Rani
CEO, and Co-founder, Azuga

About Azuga

Azuga is a leading global connected vehicle platform, helping our customers turn data from vehicles and their use into intelligence that improves operations and safety while reducing cost and risk. Azuga provides reliable end-to-end solutions for commercial fleets, government agencies, insurance companies and automotive industry suppliers, through leading hardware technology, the Azuga One platform, award-winning fleet applications and data analytics.

Our award-winning Azuga Fleet solution is used by thousands of businesses—from the small fleet of a few vehicles up to several thousand—and is lauded by our customers for its ease-of-use, robust features and affordable pricing.

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