



# *Driving Toward Sustainability —*

*How fleets benefit from alternative fuels.*



# *A municipality, an electric company, a package delivery service and a tech giant.*

*They don't seem to have much in common, but they actually share some major similarities.*

**NYC**

The City of New York



Florida Power & Light Co.



UPS

**Google**

Google



*They all operate large fleets*



*They all embrace environmental sustainability*



*They all use biodiesel or renewable hydrocarbon diesel to fuel their large fleets*

In fact, companies all over the country are focusing more on sustainability because:

- They believe it is the right thing to do.
- They know it's smart business in terms of reducing risks and helping bottom lines.

Sustainability — the adoption of practices that have long-term benefits for the environment.

# *The benefits of switching to alternative fuels*

Major companies everywhere are putting more emphasis on environmentally friendly approaches to transportation and fleet management. Because not only are they adapting to a changing world, they're realizing how using alternative fuel benefits their own interests — from increasing their profit margins to boosting their reputations.

Alternative fuels can provide companies with:

- 1 Financial incentives
- 2 Proven performance
- 3 Good PR
- 4 Reduced emissions



*“Developing alternative, economically viable energy sources is critical to UPS’ commitment to reduce our environmental impact, improve communities and foster economic development opportunities around the world.”*

— Mark Wallace, UPS senior vice president, global engineering and sustainability  
when his company announced a major renewable hydrocarbon diesel agreement

# *Both the private and the public sectors are moving toward sustainability.*

In 2015, the NAFA Fleet Management Association launched an accreditation program for sustainable fleets. This includes points for using alternative fuels and reducing emissions. NAFA created the program to encourage fuel savings and to promote sustainability. It says members who are more energy-efficient will see benefits to their bottom lines and their customer base.

The U.S. Department of Energy developed the National Clean Fleets Partnership to help private fleets cut petroleum use. As part of the Clean Cities program, the partnership supports the nation's economic, environmental and energy security efforts. It also provides fleets with resources, expertise and support in incorporating alternative fuels. Members include some of the most influential companies in the world, such as Coca-Cola, Verizon, Frito-Lay and more.

## The American Business Act on Climate Pledge

The American Business Act on Climate Pledge is another good example of efforts toward sustainability. The act is an initiative led by the White House in which companies that do business in the United States declare their support of a global climate agreement to:

- Significantly reduce their emissions
- Increase low-carbon investments
- Use more clean energy
- Build more sustainable businesses
- Put forth efforts to tackle climate change



*The American Business Act on Climate Pledge has a far-reaching influence.*

- More than 150 companies had signed the pledge.
- Companies included in the pledge operate in all 50 states.
- These companies employ nearly 11 million people and represent more than \$4.2 trillion in annual revenue.<sup>1</sup>

<sup>1</sup> White House <https://www.whitehouse.gov/the-press-office/2015/12/01/white-house-announces-additional-commitments-american-business-act>

# Pressures for fleets to be sustainable

Sustainability is about more than fuel. However, improving fuel efficiency and reducing carbon emissions are issues that have taken center stage in both environmentally and business-friendly practices.

That is particularly true for fleets. And it is hard to overstate the consequences for fleets from this growing push for sustainability.

## Who is putting pressure on fleets to be sustainable?

### From Groups

The public, investors, employees and customers.



### From Customers

A company's record on sustainability may be a factor in keeping existing business and winning new business.



### From Inside the Company

Because use of alternative fuels can help an organization conserve fuel and improve its financials.



*It is no shock to learn that Google advocates for sustainability. But what may come as a surprise is how far they go to leave a smaller carbon footprint.*

- Google operates an employee shuttle service in San Francisco that gave 2.5 million rides in 2013.<sup>2</sup>
- Google buses run on 5% biodiesel blend, also known as B5.

<sup>2</sup> Google Green website <https://www.google.com/green/efficiency/oncampus/>

# A closer look at advanced fuels.

Two distinct types of advanced fuels are meeting the needs of organizations that operate fleets and embrace environmental sustainability, including:



## Biodiesel

Primarily made from vegetable oils, animal fats and recycled cooking oil, biodiesel is renewable and biodegradable. It's also a cleaner-burning alternative to petroleum diesel that can be used to power vehicles and the heating systems of buildings.



## Renewable Hydrocarbon Diesel

Also made from oils and fats, renewable hydrocarbon diesel is produced by a different method than biodiesel. It has the same ASTM D975 specification as petroleum diesel, so it can easily be added to the existing pipeline system and into the diesel stream. In addition, renewable hydrocarbon diesel can be blended with biodiesel and petroleum diesel.



The voluntary BQ-9000® program for biodiesel suppliers goes a step further, combining the ASTM specs with a quality-systems program. The program includes:

- Storage
- Sampling
- Testing
- Blending
- Shipping
- Distribution
- Fuel management

Of course, environmental advantages would not be enough if biodiesel and renewable hydrocarbon diesel were not viable, quality fuels. Thankfully, biodiesel and renewable hydrocarbon diesel meet stringent ASTM specifications.

# *OEMs also support the use of advanced fuels.*

*Biodiesel and renewable hydrocarbon diesel have made lots of fans — thanks to the relative ease of incorporating them into fleet operations.*

- 1 Almost 90 percent of medium- and heavy-duty truck OEMs support the use of B20 and higher blends in their equipment.<sup>3</sup>
- 2 Renewable hydrocarbon diesel can be used without making changes to diesel engines or infrastructure.
- 3 Fleets from every corner of the country are discovering firsthand that biodiesel is an easy-to-implement, renewable, and economically viable alternative to conventional diesel that can yield almost immediate results.<sup>4</sup>



<sup>3</sup> National Biodiesel Board <http://biodiesel.org/using-biodiesel/oem-information>

<sup>4</sup> Clean Cities Now newsletter, summer 2015 [http://www.afdc.energy.gov/uploads/publication/ccn\\_19\\_1.pdf](http://www.afdc.energy.gov/uploads/publication/ccn_19_1.pdf)

# *But how do advanced fuels perform?*

***Fleets large and small demand proven performance. And for good reason. Companies cannot sacrifice performance for sustainability. With biodiesel and renewable hydrocarbon diesel, that's not a concern.***



## **Improved lubricity**

Biodiesel can add fuel lubricity to diesel fuels at blend levels as low as 1 percent.<sup>5</sup> This is especially helpful because ultra-low sulfur diesel has led to less lubricity in petroleum diesel, and modern diesel engines rely on fuel to help the lubricating process.



## **High combustion quality**

Biodiesel raises the cetane number of the fuel, speeding up combustion. Plus, the government says hydrocarbon diesel's high combustion quality results in similar or better vehicle performance compared with conventional diesel.<sup>6</sup>

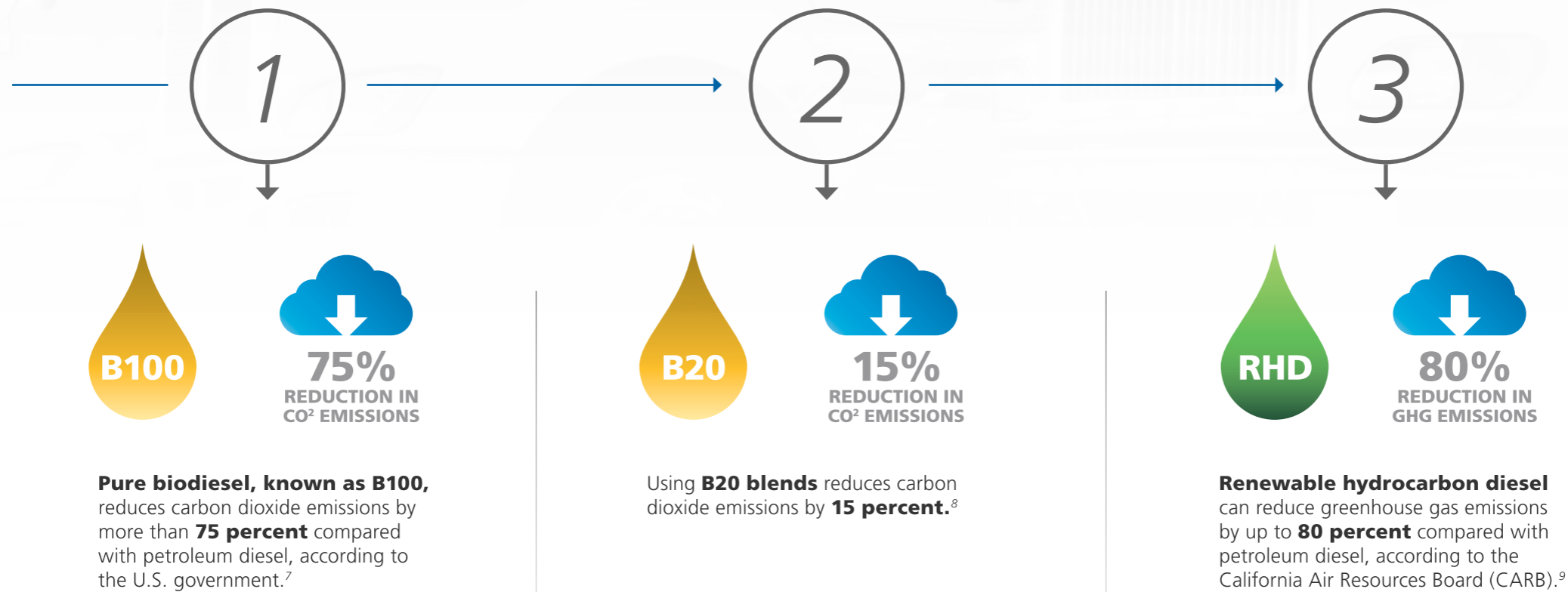
<sup>5</sup> Alternative Fuels Data Center [http://www.afdc.energy.gov/fuels/biodiesel\\_benefits.html](http://www.afdc.energy.gov/fuels/biodiesel_benefits.html)

<sup>6</sup> Alternative Fuels Data Center [http://www.afdc.energy.gov/fuels/emerging\\_green.html](http://www.afdc.energy.gov/fuels/emerging_green.html)



# Environmental benefits

And on top of proven performance, the environmental case for biodiesel and renewable hydrocarbon diesel is a slam dunk.



<sup>7</sup> Alternative Fuels Data Center [http://www.afdc.energy.gov/fuels/biodiesel\\_benefits.html](http://www.afdc.energy.gov/fuels/biodiesel_benefits.html)

<sup>8</sup> Alternative Fuels Data Center [http://www.afdc.energy.gov/fuels/biodiesel\\_benefits.html](http://www.afdc.energy.gov/fuels/biodiesel_benefits.html)

<sup>9</sup> California Air Resources Board, staff report, November 2013 [http://www.arb.ca.gov/fuels/multimedia/meetings/renewabledieselstaffreport\\_nov2013.pdf](http://www.arb.ca.gov/fuels/multimedia/meetings/renewabledieselstaffreport_nov2013.pdf)

# Benefits in action

- 1 **Florida Power & Light reduced carbon dioxide emissions by 3,407 metric tons** in 2012 according to Work Truck Magazine.<sup>10</sup> Believed to be the largest biodiesel user in Florida, it had more than 1,700 biodiesel-powered vehicles as of 2014.
- 2 The state of California determined that **biodiesel had the lowest carbon impact among fuels** — besting gasoline, ultra-low sulfur diesel, ethanol and compressed natural gas (CNG).<sup>11</sup>  
  
California enacted the world's first low-carbon fuel standard, requiring the reduction in carbon intensity in transportation fuels, and it continues to lead the country in terms of greenhouse gas reduction practices.

New York City, which has the largest municipal fleet in the U.S., has discovered firsthand the benefits of transitioning to up to a B20 blend in its diesel vehicles.

- 3 In 2015, the City of San Francisco **cut its greenhouse gas emissions by 60 percent**<sup>12</sup> by replacing petroleum diesel with renewable hydrocarbon diesel in its fleet.
- 4 **UPS declared its intention to buy up to 46 million gallons of renewable hydrocarbon diesel over three years.**  
  
The fuel **will reduce life cycle greenhouse gas emissions by up to 90 percent** compared with conventional petroleum diesel.<sup>13</sup>

“Biodiesel fits within our existing infrastructure, eliminating the need to invest a lot of money in upgrading underground storage tanks,” says Keith Kerman, chief fleet officer of the City of New York. “It has been a fairly fluid and seamless transition.”<sup>14</sup>

<sup>10</sup> World Truck Magazine, April 2014 <http://www.worktruckonline.com/channel/utility/news/story/2014/04/fpl-recognized-by-epa-for-clean-fleet-outreach-efforts.aspx>

<sup>11</sup> California Air Resources Board, staff report, November 2013 [http://www.arb.ca.gov/fuels/lcfs/lcfs\\_meetings/040115\\_pathway\\_ci\\_comparison.pdf](http://www.arb.ca.gov/fuels/lcfs/lcfs_meetings/040115_pathway_ci_comparison.pdf)

<sup>12</sup> San Francisco news release, July 2015 <http://www.sfmayor.org/index.aspx?page=846&recordid=919&returnURL=%20index.aspx>

<sup>13</sup> UPS news release, July 2015 <https://www.pressroom.ups.com/pressroom/ContentDetailsViewer.page?ConceptType=PressReleases&id=143811177421-236>

<sup>14</sup> REG Interview

# *Reducing emissions while boosting the bottom line.*

***Biodiesel and renewable hydrocarbon diesel are winners not only environmentally but financially, too. Some states offer financial incentives for the use of certain biodiesel blends.***

Fuel retailers in Illinois that offer a B11 blend or higher are exempt from the state excise tax of 6.25 percent. There are also about a dozen other incentives, some of which are available to the user.

Any financial advantage is a big deal. Fuel has long been a top expense for fleets, and it will remain that way. In fact, the Energy Information Administration predicts U.S. distillate fuel prices will rise by 23 percent between 2013 and 2040.<sup>15</sup>



---

<sup>15</sup> EIA Annual Energy Outlook, 2015 [http://www.eia.gov/forecasts/aeo/section\\_prices.cfm](http://www.eia.gov/forecasts/aeo/section_prices.cfm)

# Getting good PR for good reason

*Fleets that make the switch to advanced biofuels often are recognized for their efforts.*



UPS' decision to use renewable hydrocarbon diesel in its fleet landed in The New York Times.



Local newspapers and TV stations report when a city or business adds biodiesel or renewable hydrocarbon diesel.



Alternative fuel usage and sustainability practices are frequent topics in fleet trade magazines.



Also, the Department of Energy's National Clean Fleets Partnership recognizes the accomplishments of fleets in cutting petroleum use with its publications and websites as well as the news media.



Fleets have the opportunity to use the Clean Cities logo in their publicity efforts.



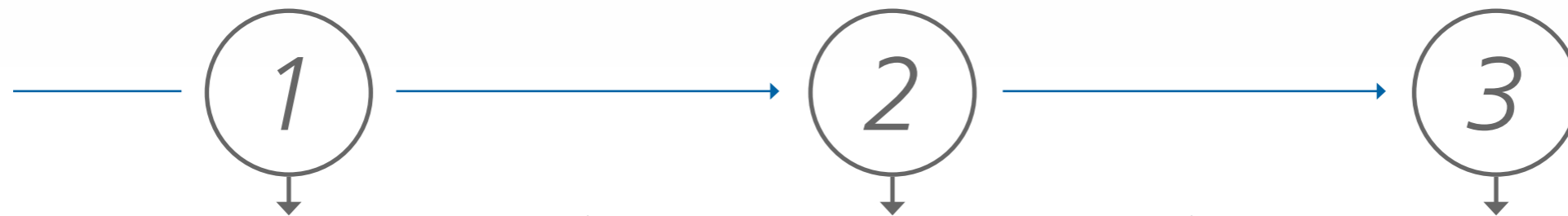
# So, what does running a fleet on biofuels look like?

The Greater Peoria Mass Transit District in central Illinois provides rides to more than 3.4 million passengers a year with a fleet of nearly 100 buses and paratransit vehicles.

It has a long history of supporting alternative fuels, and it began using biodiesel in 2006. It started with a B5 blend, moved up to B11 and now runs its fleet on B20 year-round.

“We have to leave this planet in better shape than it is in right now for our children, our grandchildren and our great-grandchildren.”

— John Anderson, the assistant general manager of maintenance City of Peoria



**While consuming about 600,000 gallons of biodiesel annually,** it has seen environmental and financial benefits.

**The district's vehicles have run smoothly on B20,** even in the frigid Midwest winters.<sup>16</sup>

**The public has taken notice too.** John Anderson, the assistant general manager of maintenance, remembers when someone expressed surprise after being stuck between two buses and not getting hit by black smoke from the exhaust.

# *The final word — Why moving toward sustainability makes good business sense.*

There's no doubt about it. Sustainability is the way of the future. And as the world moves toward more environmentally friendly practices, you can capitalize on many new opportunities for your business:

- 1 Financial incentives
- 2 Proven performance
- 3 Good PR
- 4 Reduced emissions

**Want more industry insights from REG?**  
Email [Troy.Shoen@regi.com](mailto:Troy.Shoen@regi.com) to sign up for the  
*Off the Rack* e-newsletter.

