



**BIODIESEL END-USER SURVEY:
IMPLICATIONS FOR INDUSTRY GROWTH
FINAL REPORT OUT**

ASG Renaissance
Dearborn, MI
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BACKGROUND

In the spring of 2003, the National Biodiesel Board (NBB) commissioned ASG Renaissance to conduct a commercial business survey among major diesel-powered truck fleet operators in the U.S. The purpose of the survey was to obtain qualified information on fuel preferences from fleet managers who have hands-on experience in making informed fuel choice decisions. The names and contact numbers for potential survey participants were obtained from OEM/engine manufacturer customer lists, trade association members, the NBB and diesel event attendees. The survey was conducted through telephone interviews with fleet operators and managers.

Mission: Provide an end-user perspective on the use of and interest in Biodiesel.

Vision: Make available to OEM, engine manufacturer and fuel system providers a comprehensive insight into the diesel operator “headset.”

Key Deliverables: Quantifiable information with which to make rational decisions that ensure customer satisfaction, loyalty and ultimately maximize profitability for all decision makers in the chain from manufacturers to fuel providers to end-users.

SUMMARY

Attitudes among diesel operators surveyed suggest that Biodiesel is here to stay, and the market is growing.

- The vast majority (91%) of fleets surveyed have a positive attitude concerning Biodiesel
- Almost half are using Biodiesel, with B20 being the blend of choice
- Over half (51%) said support for Biodiesel use from the OEM/engine manufacturer would “definitely” be a consideration in their future purchase decisions

Fleet Survey Participant Profile

Large Fleets: Fleets surveyed represented 50,821 diesel-powered vehicles in operation with 550 diesel vehicles in the average fleet.

Cross-Section of Users: Fleets surveyed represented EPACT mandated fleets, federal and state agencies, fuel providers and power companies, as well as municipalities and commercial fleets

The vehicle units in operation in the sample return is representative of class 2-5 GVW Big-Three OEM registrations in a given year:

Class 2-5 Ford/GM/Dodge		
	Sample (%)	Registrations (%)
Ford	63	62
GM	26	28
Dodge	11	10
Total	100	100
Percent of Total Sample*	73	NA

*Memo: Responses from fleets operating other brands were also obtained (27% of sample): Mack, International, Volvo, VW, Freightliner, and other class 6 and above makes.

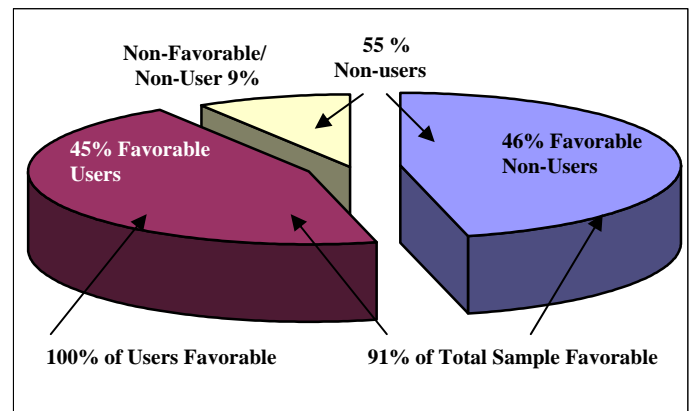
Survey Response Profiles

- More than 50 fleets responded, out of about 70 contacts; a 71% response rate.
- Although this was not a random sample of all fleets, and therefore is not a complete cross-section of all diesel operators, the respondent fleet profiles suggest that the answers obtained are indications of the possible responses of a large majority of fleet operators:
 - Units in operation of respondent fleets is comparable to registrations of major OEMs
 - Interest levels on Biodiesel parallel other information obtained by the NBB - fleets at large, feedback from the National Association of Fleet Administrators (NAFA)
 - The wide range of entities surveyed – public, private and commercial – and high response rate (71%) are also indicative of the appropriateness of the sample
- In almost every case, the respondent was a fleet manager or a person actively engaged in the operation of diesel-powered vehicles in the fleet and/or in the purchase decision for new diesel vehicles for the fleet
- These fleets are larger multi-make operators
- They encompass federal, state and local government as well as utility (power) companies and commercial operators
- End uses included vehicles for maintenance/repair work, cargo hauling and people carriers. Among the people carriers, both commercial and public transit entities were interviewed
- More than 50,000 diesel-powered vehicles are included in the fleets operated by survey participants, with the median fleet size comprised of almost 600 vehicles

Survey Response: Overall Disposition Toward Biodiesel

Majority of Users/Potential Users are Favorably Disposed to Biodiesel:

- Over 4 out of 10 (45%) of the fleet operators surveyed are presently using Biodiesel.
- All of the present users are favorable with regard to their Biodiesel experiences.
- Over 4 out of 10 (46%) were non-users of Biodiesel, and were favorably disposed to using the fuel.
- Among the total sample of fleet operators, over 9 out of 10 (91%) had favorable impressions of Biodiesel, with about half this number (45%) the result of positive experience.

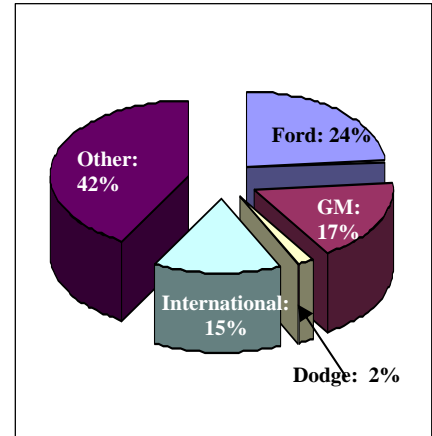


- Less than 1 out of 10 (9%) had a negative impression and did not want further information. Comments from this group suggested that cost was the major roadblock to further consideration.
- Because this was not a random sample of all fleets, the results cannot be portrayed as representative of all diesel users. It would appear, however, that there is a significant majority of diesel-powered fleets that are having positive experience and an even larger group who are interested in using the fuel.

Survey Results: Biodiesel User Footprint

Fleets presently using biodiesel

- Among Biodiesel Users: (45% of the fleets interviewed)
 - Multi makes encompass the Biodiesel user fleets, which collectively number almost 4,300 vehicles
 - 88% of these end-users run on B20 or higher blends:
 - 71% use B20, 4% B60, 13% B100
 - Only 16% use B5 or less
 - Note: Above includes multiple blend users
- 54% have two years or more run time on Biodiesel:
 - Two-thirds (67%) have experienced virtually trouble free operation
 - 29% had minor problems (solvent related)
 - Only 4% had fuel quality difficulties
- 71% did not have to make modifications to their storage or maintenance procedures
 - Storage tank cleaning, more frequent fuel filter changes were the most frequently mentioned changes to routine
- Almost all (96%) would recommend Biodiesel use to other fleets (The lone holdout was concerned about price, not performance)



SURVEY RESULTS: COMMENTS ON BIODIESEL USE (Among All Survey Participants)

- Want to be an environmental leader
- Will not use until NOx can be controlled
- Not presently using, but will start using this summer
- Cannot use because of lack of retail refueling outlets.
- Department of Administration is supplying other state agencies with Biodiesel
- Used to meet EPACT
- An OEM that would not give a statement on Biodiesel use has concerned the Department of Transportation
- Do not have tanks at all of our facilities
- Do not use Biodiesel on vehicles, but use on marine equipment
- Use B2 because of cost. Want to use B20.
- Must get cost down
- One of our fuels sites is dedicated to B20 exclusively
- Water companies come under EPACT

Survey Results: Qualitative Unsolicited Responses

Qualitative unsolicited responses to the survey provide clues to the status of the public reception of biodiesel.

Positive Drivers: The potential of receiving EPACT new vehicle purchase credits is a positive force in spurring interest in Biodiesel as an alternative fuel.

- The ability to just put it in the tank and go, as opposed to the incremental investment in various equipment add-ons, is an important consideration in terms of the conversion from straight mineral diesel fuel.

Environmental stewardship is also a positive motivator:

- Many public transit operators cannot gain access to certain areas for pickup (like airports) without burning a clean fuel.
- Major corporations are constantly looking for ways to express their environmental leadership, and Biodiesel is a cost efficient way to accomplish those objectives.

Potential Inhibitors:

- Cost is a major issue for some. Even Biodiesel users limit their use of the fuel to lower blends/lower numbers of vehicles operating on Biodiesel, because of cost.
- Lack of refueling availability – limited public/retail refueling, not having tanks on all company sites – is a concern for some.
- Reluctance of OEM's to make definitive statements about the impact on warranty when Biodiesel is used is another retardant to future Biodiesel consideration.

Survey Results: Moving Forward With Biodiesel

	Sample (%)	Number of Diesels Affected*
Extremely/Very Interested in learning more about Biodiesel	72%	36,591
Support of Biodiesel by OEMs/ Engine manufacturers will definitely/ most likely be a factor in the decision to purchase the products of those manufacturers	53%	26,935

*Memo: Number of diesel powered vehicles surveyed = 50,821

CONCLUSIONS

These findings represent a strong interest in Biodiesel.

- Over 7 out of 10 of the fleet operators surveyed (72%) have a keen interest in learning more about Biodiesel
- It also appears that Biodiesel support by an OEM/Engine Manufacturer will be a factor in their next vehicle/engine purchase decision process; over half (53%) indicating that factor will definitely/most likely influence their decision

The results substantiate NBB historical feedback and suggest that the momentum building for Biodiesel is continuing to grow and develop.

The NBB remains committed to this growth, and sharing end-user perspectives and insight with the OEM vehicle and equipment manufacturing industry is a cornerstone of the NBB's strategy to break loose support for B20.

Because end-users have had positive experiences, and Biodiesel is an EFACT fuel, Biodiesel usage will continue to grow. The pending Energy Bill, which provides an incentive to Biodiesel producers, will further peak the interest in Biodiesel as an alternative fuel by addressing the critical cost issue.

NEXT STEPS

OEMs that do not meet customer expectations with equipment and warranty provisions that support Biodiesel (B20 or lower blends), could run a significant sales risk if competitors take the lead. Therefore, an outreach education program, stressing the substantial interest in and positive experience with Biodiesel, will remain a top priority for the National Biodiesel Board.