

Appendix A:

List of Materials EPA shared with Small Entity Representatives

- Agenda for Pre-panel meeting, June 19, 2014
- Power Point Presentation: “An Overview of the Small Business Advocacy Review Panel Process,” June 19, 2014
- Power Point Presentation: “Medium- and Heavy-Duty Vehicle Greenhouse Gas Rule (Phase 2) – SBAR Pre-Panel Outreach Meeting,” June 19, 2014
- Fact Sheet: “EPA and NHTSA: Joint Rulemaking, Different Responsibilities”
- “Outreach Document for Potential Small Entity Representatives: Heavy-Duty Vehicle GHG Phase 2 Rulemaking (Phase 2),” June 19 2014
- “Flexibility Concepts from Current and Previous EPA Regulations”
- ICCT Whitepaper: “Costs and Adoption Rates of Fuel-Saving Technologies for Trailers in the North American On-Road Freight Sector”, February 2014
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- Agenda for Panel Outreach meeting, February 20, 2014
- List of SERs
- Power Point Presentation: Small Business Advocacy Review Panel Process Recap, February 20, 2014
- Information from Farmers Branch, Texas on PCBs in light ballasts (included as written comment in Appendix B)
- Power Point Presentation: PCB Use Authorization Update Rule. Small Business Advocacy Review Panel Outreach Meeting, February 20, 2014

Appendix B: Written Comments Submitted by Small Entity Representatives

The U.S. Environmental Protection Agency (EPA) conducted a pre-panel outreach meeting with potential Small Entity Representatives (SERs) on June 19, 2014. EPA, along with Panel partners, Small Business Administration's Office of Advocacy (SBA), and Office of Management and Budget's Office of Information and Regulation Affairs (OMB), hosted one supplementary outreach conference call for the trailer manufacturer SERs on October 28th, 2014, and three separate Panel outreach meetings with SERs from the three separate sectors on November 5 and 6, 2014.

After the June 19th pre-panel outreach meeting, potential SERs submitted five sets of written comments, which are provided in this appendix. The following people submitted the comments:

- Jan Hoover, Diamatrix
- Adam Jump, Indiana-Phoenix, Inc.
- Brad Schrock, E-One Inc. (later determined was not a small entity and therefore did not participate as a SER in the formal Panel outreach meetings)
- Karen Teslovich, CNG CNG One Source, Inc.
- Andy Suhy, Power Solutions International, Inc.

For the October 28th and November 5th and 6th Panel outreach meetings, the following six SERs submitted written comments, which are provided in this appendix:

- Jeff Thompson, Timp Inc. (submitted two sets, one before the 10/28 meeting and one after the 11/5 meeting)
- Jan Hoover, Diamatrix (submitted two sets, one after the 10/28 meeting and one after the 11/5 meeting)
- David de Poincy, East Manufacturing Corp. (submitted two sets, one after the 10/28 meeting and one after the 11/5 meeting)
- Adam Jump, Indiana-Phoenix, Inc.
- Andy Suhy, Power Solutions International, Inc.
- Karen Teslovich, CNG One Source, Inc.

***B1: Written Comments from Potential Small Entity Representatives following 6/19/2014
Pre-panel Outreach Meeting***

From: [Jan Hoover](#)
To: [Wiggins, Lanelle](#)
Subject: RE: follow up from EPA's Pre-panel Outreach Meeting
Date: Tuesday, July 01, 2014 12:00:08 PM
Attachments: image001.png
image002.png
image003.png
image004.png
20140701 Written Response & Questions.pdf

Lanelle,

Attached is a pdf with some questions I have along with answers to the questions in the GHG SER Outreach document. Some of the questions I cannot answer because, as a trailer manufacturer, I do not fully understand what the process or requirements will be.

If you have any questions regarding my questions or answers please let me know.

Thank you,

Jan Hoover
Diamatrix
215-949-4790



From: Wiggins, Lanelle [mailto:Wiggins.Lanelle@epa.gov]
Sent: Monday, June 23, 2014 4:24 PM
To: Adam Jump; Andy Suhy; Bill Harp; Bradley Schrock; Fred Pearson; Jan Hoover; Jeff Simms; Josh Pietak; Karen Teslovich; Neil Johnson; Trey Gary
Cc: Brakora, Jessica; Passavant, Glenn; Ranns, Nathan; Wysor, Tad; Rostker, David J.; Whiteman, Chad
Subject: follow up from EPA's Pre-panel Outreach Meeting

Dear Potential Small Entity Representatives (SERs),

Thanks to those who participated in Thursday's Pre-panel Outreach Meeting. My apologies once again for the technical difficulties we experienced at the beginning of the meeting.

As promised by EPA's Glenn Passavant, the following link is for the National Research Council of the National Academies report, "Reducing the Fuel Consumption and Greenhouse Gas Emissions of Medium- and Heavy-Duty Vehicles, Phase Two: First Report" : http://www.nap.edu/catalog.php?record_id=18736

I am also resending OTAQ's powerpoint presentation (see attached). At least one of you told me that you could not open the most recent version that I sent to you on 7/18. The only difference between it and the version you were sent on 6/4 is the title page (date and place).

Finally, just a reminder that you may submit optional written comments and/or questions over the next two weeks to my email (wiggins.lanelle@epa.gov). Any comments/questions will be used to update the materials, and shape the discussion for the formal Panel Outreach meeting. Those comments/questions are **due COB Monday July 7th**.

Please do not send me confidential business information (CBI). If you do have CBI that you would like to share with EPA, please prepare and submit to me a redacted version with CBI removed and indicate that you have a CBI version you would like to also submit. I will help you submit it directly to an EPA/OTAQ staff person equipped to handle CBI.

At this time, we are hoping to hold the formal Panel Outreach meeting sometime in September.

Lanelle Bembenek Wiggins

RFA/SBREFEA Team Leader

US EPA - Office of Policy (1803A) - 1200 Penn Ave NW - Washington DC - 20460

202.566.2372



To: Lanelle Wiggins - EPA
From: Jan Hoover – Diamatrix, 215-949-4790

Questions I have

- Reference slide 11 in presentation regarding the comment “....continue to rely on computer simulation.....”. How and what does this mean to trailers and trailer manufacturers? Is it GEM simulation?
- Would it be possible to see the GEM simulation run, even if not for a trailer? What is the basis for the GEM simulation?
- Is the GEM simulation a certification tool? What is the process? Latter may be answered with the question above.
- How would the items on slide 37 of the presentation affect trailer manufacturers? Or what would be required of trailer manufacturers relating to the contents of this slide?
- I really don't understand the ABT Program. Would it be possible to receive an explanation of it and how that might affect trailer manufacturers?
- On the conference call one of the people at your location stated that it would be good to have a separate call with the trailer manufacturers to explain more in detail the current processes. Is that something that can be arranged?

Answers to question for all SER's

1. Unsure at this time what the impact would be to our company or if we would need to add equipment or staff.
2. Unsure at this time what flexibilities could reduce the burden on small entities.
3. I am not sure I can answer this question at this time as I do not fully understand what will be required of us. One concern I have is that NTSB has recommended to NHTSA that they consider establishing a Side Underride regulation. I am not sure how a Side Underride regulation and the GHG regulation will mesh with one another if both are instituted.
4. We build some special trailers such drop frame dry freight van trailers and trailers with belly boxes that we may not be able to use existing technologies (side skirts) for reduction of CO2. This could create an issue of compliance or increased burden on us. What they will be specifically, if any, is unclear at this time.
5. I cannot answer this question at this time.
6. I am unsure if additional lead time would be necessary.

7. At this time I cannot think of any sector-unique business or competitive issues that you should understand.
8. Yes, I anticipate that we will have unique legal, administrative and record keeping burdens as a result of compliance since we do not currently have any such reporting. What specifically these will be is unclear at this time.

Answers to questions to trailer manufacturers

1. Yes, we have experience with side and rear fairings along with LRR tires. We have not seen any benefits with the implementation of these technologies. One drawback is where in our facility we can store and install fairings. In limited quantities it has not really been an issue, but if done on most or all of our production, it could require us to create a location in which store and install these.
2. We possibly could experience a hardship in creating an area in which to install fairing in our facility as mentioned above. Aside from that we will have increased labor, but assuming we can pass that on to our customers, I do not anticipate any additional hardships.
3. See questions 1 and 2 regarding considerations that would need to be made.
4. I am unsure at this time what flexibilities would be helpful.
5. I would expect that we would both acquire technologies from vendors along with developing technologies in-house.
6. We do not have any specific experience regarding a response to the California requirements and do not have many customers in the western part of the country. Most of our customers and our major customers are located east of the Mississippi.

Questions for All SERs (Indiana Phoenix Inc. Answers in red)

1. How do you anticipate the potential regulations would affect your business?

For example,

would this require the purchase of any unique equipment or the hiring of additional staff? **We would need to add additional staff and depending on the ruling, FEA software and updated computers.**

2. What flexibilities do you believe may reduce small entity burden (or, can flexibilities be structured in a way to better provide assistance to small entities in reducing potential burdens)? **Depending on the ruling, partial exemption, partial delayed compliance and/or less stringent compliance.**

3. Do you anticipate any significant issues or circumstances not addressed in the materials provided? **Will there be grant money available to help offset cost of compliance at any level?**

4. If you serve a niche market or are located in a unique geographical location, do you anticipate any specific burdens and/or issues resulting from the potential rulemaking? **Our niche market is Front Discharge Cement Mixers. A ruling including technologies such as aerodynamics or tire inflation system will likely be cumbersome for the end user or damaged as these vehicles are commonly in off road circumstances.**

5. Do your answers to any of the above question differ depending on the start date or stringency level of the standards? **Yes, the length of time available to engineer in the requirements as well as the volume of engineering required.**

6. Do you believe that additional lead time would be necessary for you to comply with new standards? **Depending on what the ruling is and when it occurs. Yes.**

7. Are there any sector-unique business or competitive issues that we should understand? **Aerodynamic requirements would not be practical on a front discharge cement mixer.**

8. Do you anticipate any unique legal, administrative or record-keeping burdens associated with compliance? **Administrative and record-keeping.**

Questions for Manufacturers of Vocational Vehicle Chassis

1. What GHG-reducing technologies does your business implement already?

We were exempt for model year 2014 and now exempt for model year 2015.
To date, we have not sold any new vehicles that would be subject to these GHG reducing requirements.

2. Do you have any specific experience with lower rolling resistance drive and steer tires? **No**. With tire inflation systems? **No**. With light weighting of components? **No**.

With engines certified to the heavy-duty Phase 1 standards (e.g., MY2014 engines)? **Yes, Cummins ISX12**

3. How feasible do you find each of the aforementioned technologies?

LLR tires: moderately feasible. Inflation system: Not very feasible.
Light Weighting: Not very feasible. Phase 1 Engines: Moderately feasible.

4. Have you experienced any effects (manufacturing changes, consumer responses) from these technologies? (move down)

No. See response to question number 1.

5. How do you anticipate the proposed standards will affect your engineering development process? **Depending on the ruling, it will likely overwhelm our engineering development process.**

Thank you,

Adam Jump/Engineering Manager
Kevin Kelly/Project Engineer

From: [Schrock, Brad](#)
To: [Wiggins, Lanelle](#)
Subject: E-One Comments on Phase 2 of Greenhouse Gas Emissions for Heavy Duty Vehicles
Date: Monday, July 07, 2014 3:38:48 PM

Ms. Wiggins,

I, on the behalf of E-One Inc. would like to make a comment on the phase two ruling of the greenhouse gas emissions regulations for heavy duty vehicles. We are concerned on the ability to be able to trade credits between different vehicle types within the same class of vehicles. Being able to trade between different vehicle types is imperative to our business model and potential future growth.

We would like to be able to discuss this in future meetings with the EPA.

Sincerely,

Brad Schrock
Manufacturing Engineer
E-One Inc.
(352) 861-3429

On Jul 3, 2014, at 11:57 AM, "Wiggins, Lanelle" <Wiggins.Lanelle@epa.gov> wrote:

Hello potential SERs,

I just wanted to send a reminder that any written comments you wish to submit in response to the June 19 meeting are due by close of business (COB) Monday, July 7. You can think of these initial written comments as a way to let EPA know of any issues that were not clear or that you'd like more information on during the formal Panel outreach meeting. You will also have the opportunity to submit written comments after the formal Panel outreach meeting.

The presentation given on June 19 was meant to be introductory. Most of the material highlighted requirements for large manufacturers in Phase 1 (2014-2018) an example of the topics we're considering for Phase 2. As small businesses, you continue to be exempt from certifying for 2014-2018. However, EPA is investigating the option to include small businesses in the second phase of this rulemaking, which would begin after 2018. The purpose of the SBREFA process is to give you an opportunity to tell EPA how you think regulations would impact your business and help us identify appropriate flexibilities that will keep the rule from having a significant economic impact on your company. The [ChartofFlexibilitiesfromPreviousRulemakings.pdf](#) file lists some small business flexibilities implemented in previous rulemakings, which included options such as delayed implementation, reduced stringencies, and reduced testing burdens.

Your comments from the first presentation will be helpful as we prepare for our second meeting in September. During this meeting we will provide more details about Phase 2 and it will be much more of a discussion. We provided a list of questions in the outreach document (GHG SER Outreach Doc.pdf) that will give you an idea of the information we hope to gain in our second meeting. We understand that you may not have enough information at this point to be able to answer them with certainty, but they can be used as a guide for the written comments you're generating from the first presentation. We welcome general comments, questions about things that were confusing during the presentation, or requests for specific information we should provide in the second meeting to help answer the questions.

Please don't hesitate to contact us at any time if you have questions.

Stay cool and enjoy the holiday this weekend!

Lanelle

Lanelle Bembenek Wiggins

RFA/SBREFA Team Leader

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Preliminary Comments Following the June 19, 2014 Meeting with the EPA

CNG One Source intends to submit further written comments following the formal Panel Outreach Meeting

CNG One Source anticipates the potential regulations to impose burdens on its small business. Not only is CNG One Source a small business, but we are likely to manufacture a very small percentage of CNG engines for medium and heavy duty. That being said, the great expense of research and development coupled with the high costs of formal emission testing will limit the commercial availability of new CNG engine designs.

CNG One Source would like to ask specifically what testing will be required for each age category for medium and heavy duty CNG engines. For very small entities such as CNG One Source, could alternative methods accomplish the same goals? For example, could portable emission testing equipment satisfy the requirements? Could state emission testing be sufficient?

Our company is committed to not only achieving the best emissions possible, but to designing a safe and durable engine system as well. Having an engine receive emissions certification does not suggest that the engine is safe or durable. This is confusing to consumers. Consumers pay high prices for natural gas engines for medium and heavy duty applications, and many times later discover that the maintenance costs are even higher. Part of that initial expense is the cost of certification that is passed to the customer. It appears that new customers often believe that because the engines are expensive, that they are also safe, durable, and require little maintenance.

CNG One Source would like to see a way to show that the engines are also made of safe and durable components. Any CNG engine can likely pass emissions testing on the dyno. But when that engine is put into the field, it may not perform. At this point in time, the only thing that customers look for in a “quality” system, is whether or not the engine or conversion system is EPA approved. They don’t understand the difference.

CNG One Source has never tampered with emissions, and does not intend to do so. However, we would like to ask about enforcement of the existing EPA regulations. If the EPA is not going to enforce the anti-tampering regulations, then what incentive is there for emerging companies to follow the regulations? The shade tree mechanics already offer conversions that are not EPA compliant. Other small businesses have thrived performing what we call “illegal” conversions,

while CNG One Source has “walked the straight and narrow” to our own detriment. Our competition is the myriad of companies doing what they want and are ignoring the regulations. Those are the companies that are selling the most conversions. If there is no enforcement, the country will continue to be the Wild Wild West with CNG. CNG One Source experiences the uneven playing field due to the lack of enforcement. Companies not following regulations offer much less expensive systems, and companies such as CNG One Source cannot come close to competing with them. However, if the front end costs of compliant systems were lower, CNG One Source would recommend an annual or every three year emissions inspection which would facilitate continued maintenance on the systems and improve long term durability. As an example, once the engine is installed, there is no follow through to maintain valve adjustments, which adversely impact performance, durability, and emissions. Finally, by reducing costs up front and adding emissions testing, the industry will improve its products as a whole.

In addition, CNG One Source experiences the uneven playing field by having to pay expenses for certification that are disproportionate to what big business has to pay. New and innovative technologies to improve natural gas engines will continue to be stymied if this continues. Furthermore, other government agencies, such as the Department of Energy through NREL, has stated to us that they will never fund a small business again. So small businesses will have little resources to develop their ideas which will further curtail the industry.

CNG One Source would like to explore these issues further, contribute more with this process, and provide more detailed feedback during the next comment period. We sincerely appreciate the opportunity to work with you on these issues.

Thank you,

Karen Teslovich

Lanelle Wiggins,
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RE: Comments from June 19, 2014 Pre-Panel Meeting on GHG Phase 2

Dear Lanelle:

Thank you for providing our company with an opportunity to participate in this process. We look forward to the next steps in this process and will likely have more to add as the process proceeds further into the details about GHG Phase 2.

We have reviewed all of the material presented during the pre-meeting and have also reviewed and considered the "Questions for All SERs" provided. Below are some general comments considering both the review of information and the questions for SERs.

Our company would generally fall into the category of being a Secondary Engine Manufacturer. We mostly purchase "new" incomplete long block engines and fit them with the fuel and emission control system. We then certify the completed engine assembly to the appropriate regulatory standard for the given market. Further, our company specializes in OHHD engines that are spark ignited and are fuel by alternative fuels (LPG and CNG). We do plan to offer gasoline fueled OHHD engines in the near future as well.

As a result of being a secondary engine manufacturer we do not control the design and content of the long block engine assembly. In the GHGPhase2SBAR_Panel_FINAL 2014-06-17.pdf slide deck presented during the meeting, there was a slide which displayed "Engine GHG-Reducing Technologies." For Spark-Ignition, this slide presented Reduced Friction, and Stoichiometric Gasoline Direct Injection as technologies. Similarly, technologies were presented for Compression-Ignition Engine. The GHG Reducing technologies all involve improving the overall efficiency of combustion which will directly reduce GHG emissions. All of these GHG-reducing technologies apply directly to the design and construction of the long block engine assembly. The specific spark ignited engine technology of Stoichiometric Gasoline Direct Injection provides a much greater benefit with gasoline as a fuel than it does with LPG or CNG fuel.

Small businesses, especially secondary engine manufacturers, are at a disadvantage when it comes to applying new technologies to their engine products. Secondary engine manufacturers purchase new incomplete long block engine assemblies from large automotive companies, typically, and these long engine blocks are always design for the specific applications of the automotive manufacturer's vehicle products. As such, the secondary engine manufacturer has no ability to control or influence the content of the long block engine assembly.

The integration of leading edge GHG reducing technologies by the large automotive companies will present the small business entity with challenges and hardships to adopt. As mentioned above, the automotive companies develop their powertrain (engine) technologies specifically for their own vehicle applications. There is no consideration given for outside entity use of the technology.

Automotive companies do sell long engine blocks to secondary engine manufacturers. The development, certification and application of the long block is the complete responsibility of the secondary engine manufacturer. When applying a purpose designed long engine block into a different market, the secondary engine manufacturer can face challenges requiring redesign and reconstruction of certain aspects of the long block engine.

These challenges, in many cases, will require interaction between the secondary engine manufacturer and the automotive company (long engine manufacturer) in support of the changes required by the secondary engine manufacturer's application/market needs. In many cases, the automotive company has no interest; motivation; resources or willingness to support the needs of the secondary engine manufacturer. There are many reasons for the automotive company not being able to support the secondary engine manufacturer, but the primary reasons are low volume, time and pending internal requirements.

The secondary engine manufacturer finds itself in a position of not being able to effectively pursue changes that may be required to apply current leading edge technology. The general point here is it takes the small business / secondary engine manufacturer time to adopt new technology, given the general lack of support from the entity that owns the technology.

Considering the current position of small businesses / secondary engine manufacturers, compliance with more stringent standards will require change over time. Small businesses will need to invest in human resources and more technological capability in order to comply with more stringent regulations, similar to large automotive entities. This capability will require time to adopt and evolve inside the small business. The small business will likely never evolve to have the capability of a large automotive company, but a closing of the gap will take time and financial resources. All of this will require a business case to support. The small entity will struggle to support the required investment to move toward more stringent standards; however, some movement can likely be accommodated by progressive small businesses.

In summary, our current comments are stated in these points.

- The GHG reducing technologies all impact the design and construction of the long engine block assembly.
- Small businesses / secondary engine manufacturers have very little ability to influence the content of the new long engine block engine assemblies purchased from automotive companies.
- Small businesses / secondary engine manufacturers receive very little support from the long block engine manufacturer for challenges faced when developing and applying the long block engine assembly into new applications.

- The small business / secondary engine manufacturer will need to invest in developing new/additional internal technological capability to be able to accommodate more stringent standards.
- The small business / secondary engine manufacturer will require additional time, beyond that required by a large entity, to adopt more stringent standards.

We look forward to further participation in this process. Thanks for you time and consideration.

Regards,



Andy Suhy
Director, Emissions Development and Compliance

B2: *Written Comments from Small Entity Representatives for the 10/28/2014 and 11/5-6/2014 Panel Outreach Meetings*



Lanelle Wiggins
US-EPA – Office of Policy
1200 Penn Avenue NW
Washington, DC 20460

October 24, 2014

In response to your questions posed on page 44 of the Small Business Trailer Manufacturers presentation that you supplied in your email dated ;

1. We have been installing almost exclusively Low Rolling Resistance Tires for the past two years.

We have been installing automatic tire inflation systems for approximately a dozen years and currently have about a 3% adoption rate.

We have not installed any side skirts on our trailers. We only build bulk commodity trailers – primarily used to move grain, aggregate, and other free flowing materials – and a large portion of these materials are discharged into augers that are “swung” into position underneath of the trailer. As such, use of side skirts would preclude the ability of our customers to unload the trailers. Side skirts are not a practical solution for our style of trailer.

That said, all of our trailers have a portion of the trailer that we refer to as the Hopper Assembly which fills the majority of the space below the lower rail and between the tractor tires and the trailer tires. This Hopper Assembly would negate most of the positive impact of adding siding skirts to our trailers, even if it was practical to do so, as our trailers do not experience the same air turbulence pattern that traditional dry freight trailers generate. Most of them do not operate at highway speeds for other than short periods of time.

We have also not had any experience with rear air skirts/fairings. I do not see a practical reason why they could not be physically attached. They would interfere with the current access system that is mounted on the rear of the trailer, which is used to inspect the load, but I am sure that we could design a solution to that issue. We would of course have to insure that the rear fairings did not interfere with the statutorily required lighting on the rear of the trailer.

2. Hardships that we would anticipate would be;
 - a. Acceptance of the additional equipment by the end user. Each of our trailers is built uniquely to the customer’s specification and they are reluctant to allow us to add anything to the trailer that they didn’t specify. We have this same issue with any aspect of the trailer that is required by statute.
 - b. As these trailers are used to haul bulk commodity, any additional weight associated with adding any aerodynamic devices would be seen as a negative and result in resistance

from the marketplace as it will reduce the amount of “product” that they can haul per load.

- c. Any significant change in the weight or cost of the trailer will cause a dramatic reduction in sales for a several year period of time as customers will defer purchasing the units with the additional aerodynamic devices as long as they can. They would more readily accept the increased cost than the increased weight.
 - d. If the required change included side skirts our business would be devastated as the customer base simply would not purchase the trailers at all. Those that would still buy the trailers would remove the side skirts as soon as they purchased the trailer as the skirts would prevent them from being able to unload the trailer.
3. Other considerations we would have to make in our manufacturing processes could include;
 - a. Depending on what the requirements end up being, we would have to try and hire additional employees to handle the installation of the additional componentry, which is difficult to do in the small, rural community in which we are located.
 - b. Again depending on the requirements, we would most likely have to invest in enlarging our facility to allow space for the installation of the additional devices.
 4. Flexibilities that we believe that would be helpful would include;
 - a. Alternatives to compliance that did not include the use of side skirts.
 - b. Alternatives to compliance that did not require us to do actual aerodynamic testing as we could not afford that expense.
 5. We would hope to be able to acquire technologies from vendors.
 6. Our customer base is located throughout the country but we have a much higher concentration of users in the Midwest. Our trailers are all shorter than those covered by the California ordinance so we have no feedback from our customer base on the California requirements.

In closing I would just like to explain our particular product briefly. As stated above, we build strictly bulk commodity trailers used to move free flowing commodities. They have an open top which is covered with a tarp when in transit. Externally they are shaped like a rectangular box. Internally they are shaped like a large funnel. Beneath the lower rail of the trailer –between the tractor tires and the tires of the trailer - is a hopper assembly. This hopper assembly is funnel shaped and extends to within about 15” of the ground and has trap doors on the bottom which are used to release the load out of the trailer.

Over 85% of our production is trailers that are 42’ in length or shorter. None of our production is longer than 50’ in overall length. Most of our production is built to a 96” overall width and most have an overall height of 110” to 122” – so they fit inside of the envelope in the air cut by the tractor.

As they are used to haul bulk commodities – weight and strength are the two most important features of our trailers. They are built primarily of aluminum. Our most popular models – the 40’ and 42’ overall length units – weigh only about 9000#. Customers have the ability – and do – to buy options to reduce the weight such as aluminum wheels, lightweight hub & drum and other aluminum structural

components. That said, being bulk commodity trailers, they will always fill them to achieve the legal loaded limit but the lighter the trailer, the more commodity that they will move per trip and hence the lower the number of trips.

Over 50% of our production is sold directly to farmers and they are used to move grains out of the field and from the farm to market. The balance of the production is used by commercial firms to move bulk commodities between different processing centers.

Our units are highly configured. We sell primarily to farmers and owner/operators and they all have different opinions on what they want from an appearance and functionality standpoint. Our average order size is for 1.3 trailers. It would be impractical for us to try and certify our product on a basis that required actual aerodynamic testing. The cost would exceed our revenue.

As mentioned above, our trailers are unloaded out of the bottom of the trailer and typically into an auger system which is “swung” into place underneath of the trailer. The auger would reside and travel through the same space as the space the side skirts would be installed. That is why they are not a practical solution for our particular type of trailer.





I look forward in participating in the conference call next week and hope that my input will be of benefit to the process.

Thank you

Jeff Thompson
Vice President
Timpte Inc.



To: Lanelle Wiggins - EPA
From: Jan Hoover – Diamatrix, 215-949-4790

Input

- On slide 10, I would add 49 CFR 568 - VEHICLES MANUFACTURED IN TWO OR MORE STAGES. Which manufacturer would be responsible for the reporting and certification in this case?
- On slide 40 other costs to consider. There will be engineering, purchasing and material handling costs associated with any device added to the trailers. Engineering will need to evaluate options, create drawings and bills of materials, ensure compliance of other components (lights, etc.) and to avoid interferences with other items on the trailers. Purchasing will have to buy the additional items, receive the items and process the invoices. Material handling will have these additional items to store and deliver to the line.
- Aerodynamic testing will be a huge expense, not only to small businesses, if we are required to do this. It would be beneficial if we could pick devices from an approved menu or list. If we are required to test and verify every device it would be a huge burden on small business and might put us out of business.
- Model year on slide 26. Our model year changes, officially, on January 1. However, if we have an order that starts in December and will finish in January, that entire order will be of the new model year. I cannot speak for other manufacturers. You will need to contact them directly. Possibly TTMA could get that from their membership but it will not be all inclusive.
- Trailer options or models that would preclude the use of some aero devices:
 - Rear and side mounted liftgates or similar devices. A liftgate is a work performing device that raises and lowers freight to and from the ground and the trailer.
 - Belly boxes and similar devices. Belly boxes are mounted under the trailer and can be used for storing tools or equipment necessary to the freight being hauled.
 - Trailers with heater units or similar options installed would not permit the installation of nose mounted aero devices.
 - Vents specified at the front and rear. Vents are usually used to provide airflow through the trailer while it is running on the highway. These may produce interference with nose or rear mounted aero devices.

- Side door steps. Steps are used to permit the entry into the trailer through the side door. The structure of and bracing of these steps may preclude the use of certain side aero devices.
- Trailers with more than three axles or trailers with spread axles. With these configurations there would be no room or very little room for side and underbelly devices to be installed.
- Trailers for intermodal use have underneath clearance criteria and lift pads that MAY cause issues with specific aero devices.
- Drop frame trailers. Drop frames trailers have a drop in the floor at or near the landing gear. The trailers or trailers similar to them would not be conducive to some aero devices.
- We build some trailers where we build a “shell” that our customer may convert into a portable office or add machinery to. The modifications that are done may require the removal of aero devices, if installed, or preclude the use of them altogether. How would these types of trailers be handled under the regulation?

Questions I have that were not fully addressed on the call

- How are the trailer families defined? Slide 33 refers to “manufacturers define families.....”
- On slide 33 there are the general certification steps. What is involved in each step and how do we accomplish each step? How is this affected by using a menu of pre-approved aero devices, if any? I am trying to get a feel for what kind of time is required.
- How is reporting done? Is it yearly, quarterly, or other? Can reporting be done quarterly, if not currently set up that way.
- It was asked if we could get access to the existing GEM calculator for tractors. I think this would be helpful.
- On slide 27 there is a comment about maintaining records of data. What data records need to be kept and maintained? How long do these records need to be kept?
- On the TTMA/EPA conference call on 10/17 it was suggested that EPA, Ann Arbor, could hold a meeting to go over the reporting/GEM process with trailer manufacturers (not just small businesses). Is that still on the table?

Answers to question for all SER’s

1. I am still not quite sure at this time what the impact would be to our company or if we would need to add equipment or staff. We definitely will have to spend what seems like a significant amount of time with certifications and reporting. If this is the case and we will likely have to add staff. We may also be required to hire shop personnel to install the aero devices.
2. Flexibilities that could reduce small entity burden.
 - a. Exempt small businesses completely.
 - b. Exempt small businesses for a period of time.

- c. Reduce the level of compliance for small businesses.
 - d. Allow manufacturers to pick aero devices from a pre-approved list rather than having to test themselves. It is understood that manufacturers would test if they come up with a device that is not on the approved list.
3. The materials appear to address all issues.
 4. We build some special trailers such drop frame dry freight van trailers and trailers with belly boxes that we may not be able to use existing technologies (side skirts) for reduction of CO2. This could create an issue of compliance or increased burden on us. What they will be specifically, if any, is unclear at this time.
 5. If stringency levels are too great to start and technology does not exist to meet those levels it would be an issue. But I do not think that it would change my answers to any of the questions above.
 6. Based on what I perceive that EPA will propose, I do not think that additional lead time will be required. That is, if we are permitted to pick from approved aero devices and not to have to test there should be no additional lead time. I also think that we would be able to figure out the reporting and record keeping prior to the effective date. Workshops for reporting and certification would be greatly beneficial.
 7. At this time I cannot think of any sector-unique business or competitive issues that you should understand.
 8. Yes, I anticipate that we will have unique legal, administrative and record keeping burdens as a result of compliance since we do not currently have any such reporting. What specifically these will be is unclear at this time.
 9. I am not aware of any potential regulatory conflicts.

Answers to questions to trailer manufacturers

1. Yes, we have experience with side and rear fairings along with LRR tires. We have not seen any benefits with the implementation of these technologies as we are not the end user. We have heard from customers that they see a benefit in fuel reduction but those numbers are not concrete.
2. We will have increased costs associated with engineering, purchasing and material handling at the plant level. We will also have increased costs, either at the plant or at the corporate level, for certification and reporting. We could also have increased costs if we are required to do testing rather than using a pre-approved aero device list.
3. We will need to determine a place in the plant that we can install and store the aero devices. Depending upon the devices we may actually have to restructure our line stations to accommodate there assembly/installation.
4. See question 2 in previous section.
5. I would expect that we would both acquire technologies from vendors along with developing technologies in-house.
6. We do not have any specific experience regarding a response to the California requirements and do not have many customers in the western part of the country. Most of our customers and our major customers are located east of the Mississippi.



East Manufacturing Corp.
1871 State Route 44
Randolph, OH 44265

November 4, 2014

Re: Comments and Questions to the EPA- GHG Fuel Efficiency Standards (Phase 2)

- East designs and manufactures four basic types of All aluminum lightweight trailers.
 - End Dump trailers
 - End Dump truck bodies
 - Platform Trailers (Flatbed and Dropdeck)
 - Refuse Trailers (Tippers and Walking Floors)

- The total annual US Market for these four types of trailers is very small compared to Vans and Reefers.
 - End Dump trailers/bodies are estimated to be 6,000 to 10,000 units annually.
 - Platform trailers are estimated to be 15,000 to 28,000 units annually.
 - Refuse trailers are estimated to be 3,000 to 4,000 units annually.

- None of the trailers East builds are covered under the EPA's SmartWay program.
 - The only devices currently applicable to our product types are Rolling resistant dual tires, Wide base single tires, Tire pressure monitoring systems and Automatic Tire Inflation systems.
 - LRR tires today are limited in availability, sizes and certain applications. It is unknown if they may have an adverse effect to tire wear on Flatbed and multi-axle end dumps that are subjected to "High Scrub" tire situations. Causing owners to buy more tires in a shorter time period. This will increase the usage of materials and drive operating cost up and profitability down for Owner operators and Fleet owners.

- Averaging, Banking and Trading will most likely not be available to East Mfg or other Small Business manufacturers simply due to the small number of trailers built annually of each product type.
 - This inability to use Averaging, Banking and Trading will put small manufacturers at a market disadvantage compared to large business manufacturers.

- Year Model designation is all over the board. Each manufacturer can decide when to change year models within two years. In the past most manufacturers changed over in June or July of each year. Today most change over January 1st of each year. This was driven by Fleet and customer requests. There is currently no government mandate regulating the timing of year model change for trailers. (Example: Today on January 1, 2015 most manufacturers will be building 2016 year model trailers). Conversely, there is nothing to keep manufacturers from pushing off the change to a year model out one or even two years at this point. Thereby delaying the mandate to comply with these regulations.
- Due to the specific applications of our trailer types we fear that adding aerodynamic side fairings, front and rear fairings could create unsafe conditions, higher warranty costs and product liability issues if required to be installed. (More discussion is needed here)
- A high percentage of the products we build are specified with 4 or more axles up to 8. We feel that none of the current Aerodynamic device currently used today would be able to be installed and if they could would be of little to no effect. (More discussion needed here)
 - Products spec'd with more than 4 axels should be fully exempted from this program.

The following are answers to the Questions to All SERs on page 42 of the document provided by the EPA on 11/5/2014.

1. Yes these regulations would require East to add additional clerical staff, more Direct labor and additional Material Handling/indirect labor.
2. Since averaging probably will not work for small entities some other method of leveling the playing field between large and small manufacturers should be developed.
3. We believe there will be many unknown adverse issues and circumstances not thought about today as a result of these regulations.
4. Trailers serving Niche markets are too small in annual production to affect the overall output of GHG CO2 emissions.
5. Extending the start date for small business entities will allow us to evaluate technology and the effects of the cost associated on our businesses.
6. Yes we would like to see the time extended for compliance for all small business manufacturers so that we have more time to study the requirements and they associated perceived benefits.
7. Yes there should be more open discussion around all four of our product types.
8. Yes we anticipate Product Liability laws suits on dump and refuse trailers due to causing potential trailer rollovers and/or damage to equipment in landfills and construction sites.
9. There may be possible trailer length law issues associated with Boat tails on our Refuse trailers.

The following are answers to the Questions to All SERs on page 44 of the document provided by the EPA on 11/5/2014.

1. No
2. Yes
3. Unknown at this point. Too early in the process.
4. Full or partial Exemption for our product types.
5. We would have to acquire technologies from vendors as we do not have the resources for a full R&D study.
6. (a) No
(b) Most of our customers are located East of the Mississippi river.

We appreciate your consideration of our comments, questions and requests.

Regards,

David J. de Poincy
President/COO



East Manufacturing Corp.
Office: 330-325-9921 Ext. 212
Cell: 817-948-5733
Fax: 330-325-7851
ddepoincy@eastmfg.com



Lanelle Wiggins
US-EPA – Office of Policy
1200 Penn Avenue NW
Washington, DC 20460

November 10, 2014

To expand on the earlier responses to your questions of the Small Business Trailer Manufacturers;

1. As to Annual Mileage, Speed and Life Span

We believe that the average life span of one of our trailers is about 20 years but has different stages of life and associated mileage similar to some of the information that you collected on dry vans and reefers.

In the first 5 years of their life we believe that the average annual mileage for our trailers is 51,000 miles.

In the second 5 years of their life we believe that the average annual mileage for our trailers is 36,000 miles.

In the third 5 years of their life we believe that the average annual mileage for our trailers is 10,000 miles and in their last five years of life the average annual mileage would be 5,000 miles.

The average speed in the first five years would be 50 miles an hour and drop an average of 5 miles per hour for each of the next five year brackets.

2. Tractor type and utilization

Something else that is somewhat unique about our style of trailer is that they are typically married to a tractor – unlike dry vans and reefers which frequently pull different trailers all of the time.

As stated previously about half of our sales are directly to farmers. In those applications the tractor is typically an older unit – commonly a tractor from the 80s or 90s. Our commercial customers commonly have later model tractors – say 1 to 8 years old.

3. Certification Year

In reference to the conversation on Certification Year, as was discussed on the phone, tying the certification to the model year is more difficult for trailer builders than was described for automobile manufacturers.

I would suggest for our environment that tying the certification year to the calendar year would work the easiest.

4. Averaging/Banking

Due to the low volume of construction of any given configuration of trailer, it is difficult for us to see how Averaging and Banking would benefit smaller manufacturers. It could easily put us at a disadvantage to larger trailer builders, especially those that might build a variety of different styles of trailers.

Thank you

Jeff Thompson
Vice President
Timpte Inc.

From: [Adam Jump](#)
To: [Wiggins, Lanelle](#)
Subject: General comments made during conference call on Nov.6th 2014 12:30-2:30 pm (Eastern) - Panel Outreach Meeting with Vocational Chassis Manufacturer SERs
Date: Monday, November 17, 2014 2:19:40 PM
Attachments: Comments made during conference call.doc

Lanelle,
Please see attached comments made on Nov.6, 2014.

Thank you,

Adam Jump
Engineering Manager
Indiana Phoenix, Inc.
200 Dekko Drive,
Avilla, IN 46710
Work: 260-897-4651
Cell: 260-402-9348
Fax: 260-897-4646

Comments made during conference call:

- All the trucks we build are 6X6 configuration with up to two tag axles and two pusher axles.
- The majority of the trucks we build use super single tires on the rear drive axles and all use super single on the steer axle.
- Most of our customers use a cog type traction tire since they spend a lot of time on construction sites.
- The take rate on the air conditioning option is about 10% and it is assembled in-house.
- Since these vehicles are front cab, rear engine configuration the refrigerant lines are approximately 20 feet long.
- Weight reduction as a means of achieving compliance is ineffective since our customers are payload driven.
- Delivery is usually within 25 miles of the batch plant due to the cure time of the concrete.
- The drum must be turning anytime there is concrete in it.
- Hydraulic pumps are either on-engine or FEPTO driven and the only power used through the transmission is to move the truck.
- The on-engine hydraulic pump is commonly used for both power steering and discharge chute control.
- We have not evaluated our AC system for compliance to SAE J2727.

Questions:

- In the event that gliders are required to be compliant, what emissions level engines must be used?
- Since all the trucks we build have pusher and/or tag axles and commonly have different tires than the drive axles, how will these be handled in the GEM model?



To: Lanelle Wiggins - EPA
From: Jan Hoover – Diamatrix, 215-949-4790

Input

- Costs of aero devices.
 - We see side fairings (skirts) range from around \$600 to \$800 not including installation or FET. Installation is around \$300. Pricing does seem to be coming down.
 - We have no experience with rear fairings.
 - LRR tires. The \$320 you mention is good for an average. We have some manufacturers that are less and some that are more.
 - ATIS ranges \$500 to \$700 not including installation or FET. Installation varies depending on the system and what can be prepped ahead of time.
- Volume of production by family. Our dry freight van plant builds 2500 to 3000 units per year. The percentages shown following this are subject to change based on our customer's needs. That is, we could easily build higher or lower percentages of any trailer type in any given year.
 - 50% - 53' and longer vans.
 - 25% - 28' vans.
 - 15% - Other length vans.
 - 10% - Drop frame and special vans. Could include belly boxes, etc.
- On slide 10, I would add 49 CFR 568 - VEHICLES MANUFACTURED IN TWO OR MORE STAGES. Which manufacturer would be responsible for the reporting and certification in this case?
- On slide 40 other costs to consider. There will be engineering, purchasing and material handling costs associated with any device added to the trailers. Engineering will need to evaluate options, create drawings and bills of materials, ensure compliance of other components (lights, etc.) and to avoid interferences with other items on the trailers. Purchasing will have to buy the additional items, receive the items and process the invoices. Material handling will have these additional items to store and deliver to the line.
- Aerodynamic testing will be a huge expense, not only to small businesses, if we are required to do this. It would be beneficial if we could pick devices from an approved

menu or list. If we are required to test and verify every device it would be a huge burden on small business and might put us out of business.

- Model year on slide 26. Our model year changes, officially, on January 1. However, if we have an order that starts in December and will finish in January, that entire order will be of the new model year. I cannot speak for other manufacturers. You will need to contact them directly. Possibly TTMA could get that from their membership but it will not be all inclusive.
- Trailer options or models that would preclude the use of some aero devices:
 - Rear and side mounted liftgates or similar devices. A liftgate is a work performing device that raises and lowers freight to and from the ground and the trailer.
 - Belly boxes and similar devices. Belly boxes are mounted under the trailer and can be used for storing tools or equipment necessary to the freight being hauled.
 - Trailers with heater units or similar options installed would not permit the installation of nose mounted aero devices.
 - Vents specified at the front and rear. Vents are usually used to provide airflow through the trailer while it is running on the highway. These may produce interference with nose or rear mounted aero devices.
 - Side door steps. Steps are used to permit the entry into the trailer through the side door. The structure of and bracing of these steps may preclude the use of certain side aero devices.
 - Trailers with more than three axles or trailers with spread axles. With these configurations there would be no room or very little room for side and underbelly devices to be installed.
 - Trailers for intermodal use have underneath clearance criteria and lift pads that MAY cause issues with specific aero devices.
 - Drop frame trailers. Drop frames trailers have a drop in the floor at or near the landing gear. The trailers or trailers similar to them would not be conducive to some aero devices.
 - We build some trailers where we build a “shell” that our customer may convert into a portable office or add machinery to. The modifications that are done may require the removal of aero devices, if installed, or preclude the use of them altogether. How would these types of trailers be handled under the regulation?
 - Extendible container chassis.
 - Container chassis in general.
 - Specialty container chassis.
 - Extendible flatbed trailers.
 - Flatbed trailers in general.
 - Typically flatbeds have winches mounted under the side rail that could preclude the use of some side fairings.

Questions I have that were not fully addressed on the call

- On the conference call on the 5th I asked about the pre-certification, certification application and end of year compliance. Specifically, I wanted to try to understand what is required through each step to make some determination as to what resources we will have to have in place. Unfortunately we got sidetracked a little and my question was not fully answered and I still do not have an understanding. Would it be possible to have someone explain the process to me? Is there somewhere I can look to get a better understanding?
- On the TTMA/EPA conference call on 10/17 it was suggested that EPA, Ann Arbor, could hold a meeting to go over the reporting/GEM process with trailer manufacturers (not just small businesses). Is that still on the table?

Answers to question for all SER's

1. I am still not quite sure at this time what the impact would be to our company or if we would need to add equipment or staff. We definitely will have to spend what seems like a significant amount of time with certifications and reporting. If this is the case and we will likely have to add staff. We may also be required to hire shop personnel to install the aero devices.
2. Flexibilities that could reduce small entity burden.
 - a. Exempt small businesses completely.
 - b. Exempt small businesses for a period of time.
 - c. Reduce the level of compliance for small businesses.
 - d. Allow manufacturers to pick aero devices from a pre-approved list rather than having to test themselves. It is understood that manufacturers would test if they come up with a device that is not on the approved list.
3. The materials appear to address all issues.
4. We build some special trailers such drop frame dry freight van trailers and trailers with belly boxes that we may not be able to use existing technologies (side skirts) for reduction of CO2. This could create an issue of compliance or increased burden on us. What they will be specifically, if any, is unclear at this time. In addition, container chassis and flatbeds could be an issue for using aero devices.
5. If stringency levels are too great to start and technology does not exist to meet those levels it would be an issue. But I do not think that it would change my answers to any of the questions above except for the one regarding flexibilities.
6. Based on what I perceive that EPA will propose, I do not think that additional lead time will be required. That is, if we are permitted to pick from approved aero devices and not to have to test there should be no additional lead time. I also think that we would be able to figure out the reporting and record keeping prior to the effective date. Workshops for reporting and certification would be greatly beneficial.
7. At this time I cannot think of any sector-unique business or competitive issues that you should understand.
8. Yes, I anticipate that we will have unique legal, administrative and record keeping burdens as a result of compliance since we do not currently have any such reporting. What specifically these will be is unclear at this time.

9. For van type trailers I cannot think of any conflicts with regulations regarding addition of aero devices. However, on container chassis the conspicuity tape is applied to the main rails of the trailer. If a side fairing is used the conspicuity tape will not be visible.

Answers to questions to trailer manufacturers

1. Yes, we have experience with side and rear fairings along with LRR tires. We have not seen any benefits with the implementation of these technologies as we are not the end user. We have heard from customers that they see a benefit in fuel reduction but those numbers are not concrete.
2. We will have increased costs associated with engineering, purchasing and material handling at the plant level. We will also have increased costs, either at the plant or at the corporate level, for certification and reporting. We could also have increased costs if we are required to do testing rather than using a pre-approved aero device list.
3. We will need to determine a place in the plant that we can install and store the aero devices. Depending upon the devices we may actually have to restructure our line stations to accommodate there assembly/installation.
4. See question 2 in previous section.
5. I would expect that we would both acquire technologies from vendors along with developing technologies in-house.
6. We do not have any specific experience regarding a response to the California requirements and do not have many customers in the western part of the country. Most of our customers and our major customers are located east of the Mississippi.

November 19, 2014

Lanelle Wiggins
RFA/SBREFEA Team Leader
EPA Office of Policy
1200 Penn Ave NW
Washington DC - 20460
202-566-2372
wiggins.lanelle@epa.gov

RE: Comments from November 6, 2014 SBAR Panel Meeting on GHG Phase 2

Dear Lanelle:

Thank you for providing our company with an opportunity to participate in this process. The SBAR Panel meetings earlier this month were very informative.

Immediately below are a summary of the initial comments that we made from the Pre-Panel meeting back in June of this year. I wanted to provide them by way of review because, they are definitely a barrier that secondary engine manufacturers have to deal with. Imposing more stringent GHG regulations on secondary manufacturers, especially those that fit into the category of small businesses – which most do, makes it very difficult to architect base engine specific technology.

Summary of Comments from June 2014 Pre-Panel Meeting:

- The GHG reducing technologies all impact the design and construction of the long engine block assembly.
- Small businesses / secondary engine manufacturers have very little ability to influence the content of the new long engine block engine assemblies purchased from automotive companies.
- Small businesses / secondary engine manufacturers receive very little support from the long block engine manufacturer for challenges faced when developing and applying the long block engine assembly into new applications.
- The small business / secondary engine manufacturer will need to invest in developing new/additional internal technological capability to be able to accommodate more stringent standards.
- The small business / secondary engine manufacturer will require additional time, beyond that required by a large entity, to adopt more stringent standards.

Below are a summary of our comments derived from participating in the SBAR Panel meetings on November 6th.



Summary of Comments from SBAR Panel Meetings on November 6, 2014:

- There has been discussion about making a specific GHG standard for NG fuel type to account for the lower carbon content of natural gas. We would be opposed to more stringent GHG regulations for NG fueled engines for the following reasons:
 - As a small business, we are going to be required to use ABT credits to bring some of our engine families into GHG compliance. Specifically, some of our gasoline engine models will require credits to bring CO2 into compliance. With the 627 g/hp-hr standard, there are a good amount of credits that can be generated from our NG fueled engine families. These credits will help us bring other families into compliance. More stringent GHG standards for NG fueled engines would impede our ability to bank credits.
 - Further stringency on GHG standards for NG fuel may not incentivize vehicle manufacturers to adopt NG engine models for their products.
- We would like to recommend that the establishment of a company's ability to use "small" business provisions of GHG standards be based on one of two criteria. Currently, the establishment of "small business" is based on the business size standards specified in 13 CFR 121.201. We would like EPA to give consideration, in future GHG rules, to also allow the establishment of "small volume manufacturer" based on total number of units sold. Such allowances are provided in the criteria section 40 CFR 86.094-14(b)(1) on the basis of 10,000 or fewer units. This would allow companies to qualify to use "small business/volume" provisions of the new rule by either means.
- The establishment of a "technology" credit to be applied to engine based GHG certification for use of such technologies as Start/Stop or other similar hybridization. Currently, there is no ability for an "engine MOR" to realize an advantage for such technology based on testing over the engine dynamometer based transient FTP cycle. An establishment of a technology credit based on the use of such technology would incentivize implementation of such technology by heavy duty engine companies. It is recognized that some method of establishing the level of a credit would need to be developed. There are many reports of hybridization based fuel efficiency improvements in the heavy duty vocational markets that cover a wide band of fuel efficiency improvements. The type of hybridization and duty cycle use of the vehicle are both contributors to the magnitude of the fuel economy improvement.

Thanks again for allowing our company to participate in this process. We look forward to remaining involved in this rule making as it continues through the process. Please do not hesitate to contact me directly should you have any questions or require clarification on any of our comments.

Best Regards,

Andy Suhy
Director, Emissions Development and Compliance

Medium and Heavy Duty Greenhouse Gas Emissions and Fuel Efficiency Standards – Phase 2
 Small Business
 Alternative Fuel Converters

Response to HD GHG Phase 2 Proposal from CNG One Source, Inc.

November 20, 2014

PPT	PROPOSED RULE OR COMMENT MENTIONED IN SER POWER POINT	IMPACT	FLEXIBILITIES AND OTHER COMMENTS
p.6	Small businesses are disproportionately burdened by certification expenses compared to large businesses and have few funding opportunities for research and development.	Small businesses must use a higher percentage of their budget for research and development and costs associated with certification. The government has specifically told us that they have no interest in funding small businesses involved with engine development. Therefore, the burden is entirely on the engine manufacturer. Larger companies with greater resources not only spend a smaller share on research and development, they are also candidates for federal funding. This excludes small businesses from realistically competing in the marketplace.	<p>If regulations burden small businesses, the agencies involved should identify and provide <i>realistic</i> resources to assist small businesses achieve certification.</p> <p>The EPA could provide personnel to assist small entities in the certification process rather than redirect the small entities to costly third party companies.</p>
p.6	Limited ability to control features of base engine architecture in the incomplete engines that they convert, which significantly reduces the options for reducing emissions.	Improvements could definitely be made on the base engines which would be helpful for a superior natural gas engine design. However, it appears that the OEM cannot justify the expense involved in making these changes, as they are not necessary for running the engines on diesel fuel. Therefore, secondary manufacturers and alternative fuel converters are limited in the amount of changes that can be made.	<p>Small entities could comply with emission standards within a range of the original engine’s emissions.</p> <p>When the industry improves, OEMs will be more likely to manufacture blocks that better support natural gas fuel.</p>

p.6	Small businesses will require additional time to invest in resources required to adopt new standards.	Small businesses will have to have more capital in order to comply with the new regulations. Changes in government regulations is discouraging to customers and investors.	Allow additional time (one year) for implementation by small entities.
p.6	Concern over lack of enforcement against companies that do not certify their converted engines.	The majority of natural gas vehicles in the United States are not EPA compliant. The EPA has not provided adequate enforcement, and there is no real incentive for companies to comply with EPA regulations. By choosing to register with the EPA and follow all regulations, CNG One Source is at a huge disadvantage. Our company will bear the burden of expense on the research and development, certification, and use of time and resources to satisfy the government. In real life applications, consumers and trucking companies are finding ways to convert their vehicles to run a natural gas because of the fuel cost savings. They literally weigh out the risk and cost of fines from the EPA with the price of EPA compliant engines. We have personally fielded such phone calls, and unfortunately, contrary to our recommendations, the trucking companies ultimately opted to purchase non-EPA compliant engines. In addition, we have visited with companies who have modified the EPA certified engines to improve performance. Some of these companies have even hollowed out the catalytic converter as well as making other dramatic modifications. There is already a very high level of non-compliance, and the more stringent the regulations and the more expensive the engines (noting that the prices of development, improved	<p>The only way to change behaviors and create compliance is to provide adequate enforcement. On the state level, there have been discussions that enforcement will discourage the industry, which seems to indicate that there is no desire anywhere to provide enforcement. If there is no real enforcement, what is the incentive to comply?</p> <p>Collecting fines from enforcement could provide revenue to the EPA to assist small entities in achieving certification.</p>

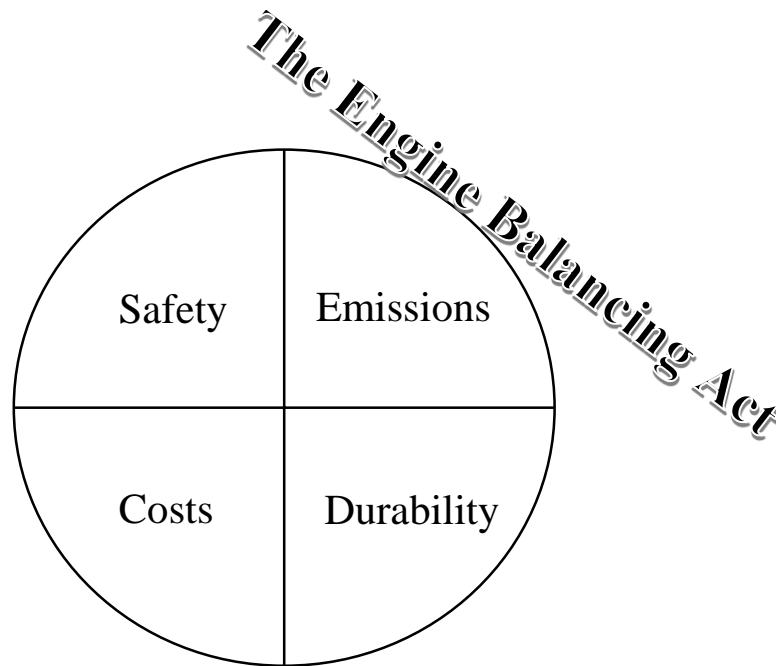
		components, and certification will be passed on to the consumer), the greater the degree of non-compliance.	
p.14	Converters will need to certify their engine and also work with the vehicle manufacturer to ensure their new vehicle meets the GHG standards with the alternative fuel engine.	Will secondary manufacturers and alternative fuel converters be <i>required</i> to work with the vehicle manufacturer? This could be a cumbersome process for some small businesses. In addition, when the industry grows and CNG engines become competitive in the market, OEM's can eliminate the small business "partner".	Allow engines to be certified independently so that they can be used in different vehicles and applications.
p.16	ABT allows a manufacturer to internally average similar models (by engine architecture or engine size), generate credits for future use if they over-comply, and sell banked credits to other under-complying manufacturers or buy another manufacturer's banked credits to cover their own deficits.	Although this system theoretically can benefit small entities, the system heavily favors large corporations. Most of these proposed regulations seriously favor large corporations and are dangerously close to creating a monopoly in the industry. Small entities are likely to specialize in limited types of engines only.	
p.18	EPA is considering more stringent CO ₂ emission standards, including CH ₄ and N ₂ O caps for all engine types.	According to the EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2012 published April 15, 2014, methane emissions are not known to be significant in the transportation sector.	More stringent standards are not necessary for natural gas engines.
p.18	Engine manufacturers may be required to provide engine fuel map data to vehicle manufacturers as inputs for EPA's vehicle certification model.	What data will be treated as CBI? Could this requirement encourage OEMs and vehicle manufacturers to take the conversion process in house and exclude the small businesses?	

p.19	<p>N₂O measurement may require additional equipment in some test facilities. EPA is considering the option of allowing AFCs to use “engineering analysis” to demonstrate that the base engine did not exceed the N₂O cap and their conversion process would not impact N₂O.</p>	<p>“EPA believes N₂O measurement devices can be purchased, if necessary, for ~\$100,000.” PPT p.24. This expense will either be incurred by the small business or passed along to the small business. Is the measurement so critical at this point, that the expense is justifiable?</p> <p>How much will facilities charge to take N₂O measurements? Even certification companies contract with a third parties for testing. Will there be a backlog with the number of engine manufacturers having to use a limited number of facilities?</p>	<p>An engineering analysis would be appropriate, although this will add engineering expenses as well.</p> <p>CNG One Source would like information on the process of becoming EPA certified to take such measurements.</p>
p.20	<p>Phase 2 standards have not been set yet. CH₄ may be more challenging for natural gas engines. Improper fueling can result in high levels of unburned CH₄ emissions. Converted CI (diesel) engines would need to ensure the crankcase is closed with a suitable ventilation system installed to reduce blow-by CH₄ emissions.</p>	<p>CH₄ standards should not be more restrictive. There is no clear evidence to support that mobile methane use from natural gas vehicles significantly affects CH₄ emissions.</p> <p>Improper fueling should not impact the engine’s emissions.</p>	<p>Further restrictions on methane emissions are unwarranted.</p>
p.21	<p>NAS 2014 report recommending separate CO₂ standards for natural gas fueled engines. NAS did not recommend new requirements for engines that use other alternative fuels.</p>	<p>This limitation is unnecessary and unfairly targets the natural gas industry. In fact, having separate standards is punitive to the natural gas industry, and why? It was just in March 2013 that the NAS stated in their report, “Transitions to Alternative Vehicles and Fuels”, that the ‘CNGV emphasis scenario’, is the only scenario which achieves 50% reduction in</p>	<p>At this time, there is no sound reason to implement different standards for natural gas engines. These limitations are barriers and will completely stifle an already struggling industry at a time when the technology and market adoption need to grow.</p>

		petroleum use by 2030. Unnecessary limitations are going to kill the natural gas industry before it even has a chance to become widely adopted.	
p.21	Phase 2 proposal may include additional requirements for natural gas-fueled engines to control methane emissions; OBD requirements for CNG and LNG methane leaks.	As stated earlier, methane leaks are presently not known to be significant as far as emissions are concerned. Again, this requirement is punitive to the natural gas industry.	<p>Currently the most common cause of methane leakage is a faulty pressure regulator. When the regulator fails, the engine ceases to operate, even if in motion on the highway. While this is a huge safety concern, as is as the flammability concern, it is not presently a significant <i>environmental</i> concern.</p> <p>Methane gas composition varies greatly depending on well gas, landfill gas, and utility grade gas. Even utility gas changes in composition during the winter months. Knowing this, how will the data be acquired for OBD? Vehicles running on low quality CNG (lower percentage of CH₄) will not be detected as readily as vehicles running on high quality methane (higher percentage of CH₄). Further, if vehicles run on lower quality gas, the engine components will be deteriorate much more quickly. However, to avoid MIL light and OBD issues with the EPA, operators could and would exploit this system.</p>

			<p>Detection of methane leakage by measuring mercaptan/odorant is faulty because:</p> <ol style="list-style-type: none"> 1. It doesn't exist for LNG as it transitions from liquid to gas. 2. Not all fuel stations use mercaptan/odorant, even though it is required by NFPA 52. <p>The engine manufacturer or converter might achieve desired EPA standards for certification. However, until the quality standard is built for CNG refueling stations, the OEM or AFC will continue to foot the bill to theoretically comply during testing but will not in real life applications.</p>
p.24	EPA believes N ₂ O measurement devices can be purchased, if necessary, for ~\$100,000.	These prices will either be incurred by small business or passed along to small business.	Is this necessary for AFC or secondary manufacturers? As stated above, an engineering analysis would be appropriate, although this will add engineering expenses as well.
p.24	EPA believes most of the GHG standards can be met with proper tuning of fuel and emission control systems requiring the cost of some additional engineering time.	"the cost of some additional engineering time" is likely hundreds of thousands of dollars when you consider all of the proposed changes in standards.	Increasing restrictions on emissions can compromise the integrity and longevity of the engine. Durability of the engine should be balanced with emissions standards.
p.24	If the base engine for conversion is a CI engine with an open crankcase, we estimate	This design will affect engine durability as the byproducts of the natural gas system will deteriorate	Allow open crankcase for two reasons:

	a closed crankcase ventilation system to cost ~\$500.	<p>the engine components. For example, H₂S combined with CO₂ will create fissures in the steel.</p> <p>Methane emissions occurring in a closed system would likely create an unsafe and potentially hazardous situation.</p>	<ol style="list-style-type: none"> 1. Methane emissions are not known to be significant in natural gas vehicles. 2. Maintain vehicle safety by eliminating potentially hazardous closed “ventilation” system.
p.24	Additional incremental increase in costs associated with this proposed rulemaking could include attorney fees to interpret regulations, accountant fees to manage sale and compliance figures, administrative staff for record keeping.	Most companies in the alternative fuels industry are struggling to make a profit as it is still a small niche market. Many companies have gone out of business or their stocks are failing. The additional incremental costs will excessively burden the small businesses who are the ones willing to comply with the EPA’s regulations and in turn suffer the direct, indirect and induced costs of meeting and managing these stringent regulations.	



From: [dePoincy, Dave](#)
To: [Wiggins, Lanelle](#)
Subject: East Mfg submitted CBI Information related to the EPA GHG Fuel Efficiency Standards Phase 2.
Date: Thursday, November 20, 2014 4:29:38 PM

Dear Ms. Wiggins,

Just a note indicating to you that I submitted Confidential CBI information for East Mfg today, related to the EPA GHG Fuel Efficiency Standards Phase 2.

It was requested that we share cost information and an indication of volumes used for LRR tires and Tire Pressure monitoring Systems. I have shared that information today in hopes that it will assist the EPA in writing a fair and balanced regulation considering the size and purchasing power of small manufacturers.

You may note that we buy tires from several manufacturers, but there are limited sizes available from each of them for our applications. I have also given an indication of the high volume purchases and the number of LRR tires that not available for those applications.

Also at the bottom of the list we show the 3 types of Tire monitoring/inflation systems that we buy/use along with the volume.

Our concern is that even if LRR tires and Tire systems were mandated for every trailer we build we would not be able to purchase the tires or inflation systems competitively compared to companies such as Wabash/Transcraft/Benson, Great Dane and Utility and it would put East in a non-competitive situation when quoting business against these companies.

Best regards,

David J. de Poincy
President/COO

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