Before the
DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
Washington, D.C. 20590

In the Matter of	)))	**Docket No. PHMSA-2012-0082-0180**
Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains	)))))))	

COMMENTS OF GROWTH ENERGY

Submitted By:

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I. INTRODUCTION AND SUMMARY

Growth Energy appreciates the opportunity to comment on the Department of Transportation, Pipeline and Hazardous Materials Safety Administration's ("PHMSA") notice of proposed rulemaking ("NPRM") on Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains, published in the Federal Register on August 1, 2014.[1] The NPRM proposes several amendments to PHMSA's Hazardous Materials Regulations (49 C.F.R. Parts 171–180) to address perceived risks in the rail transportation of Class 3 flammable liquids.

Growth Energy is a leading trade association representing eighty-five ethanol plants, eighty-three associate members, and thousands of ethanol supporters across the country. The recent economic growth of the U.S ethanol industry has been a significant economic development that has created thousands of American jobs, decreased our dependence on foreign oil, and provided significant environmental benefits through the development of a cleaner, renewable fuel. This success has been built, in no small part, on the rails of our nation's reliable, safe, and efficient rail transportation system. Based on PHMSA's estimates, since 2006, the ethanol industry has shipped more than 2 million railcars with only a handful of notable derailments, representing approximately 0.001 percent of all shipments.[2]

Although Growth Energy and its members are committed to the safe transportation of ethanol, we are concerned that the NPRM imposes significant regulatory burdens on the ethanol industry without reliable and firm analysis justifying the costs of compliance. In the comments below, we address the following issues to assist PHMSA in revising the NPRM to provide reasonable and appropriate safety benefits without imposing unnecessary, inefficient, or unintended burdens on industry:

PHMSA Exaggerates the Justification for the Proposed Rules by Focusing on an Isolated Incident. To justify the NPRM, PHMSA relies almost exclusively on the recent crude oil derailment in Lac Megantic, Canada. While we agree that the Lac Megantic derailment was a tragic event, it must be recognized that the potential for such an event to occur in the U.S. is remote. As acknowledged by PHMSA, no such accident has ever occurred in the U.S., and the derailment rate is expected to decline significantly in coming years.[3]

Moreover, the NPRM concedes that the proposed new tank car standards are not designed to address the damage that occurred at Lac Megantic. The proposed tank car regulations are designed to limit punctures up to 19 mph—the Lac Megantic derailment occurred at 65 mph. Thus, "the tank car standards proposed here are not intended to be sufficient to prevent a puncture at this speed and Force."[4] Similarly, all but one of the other derailments cited by PHMSA in support of the new standards involved speeds of 19 mph or greater (an average speed

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[1] 79 Fed. Reg. 45016 (Aug. 1, 2014) [hereinafter NRPM].

[2] PHMSA, U.S. Dept. of Transp., HM-251, Draft Regulatory Impact Analysis 15, app. B at 195–98 (July 2014) [hereinafter DRIA].

[3] *Id.* at 39.

[4] *Id.*

of 32 mph). Given these facts, the proposed additional safety standards will not address PHMSA's underlying concerns about safety, yet will nonetheless cost industry billions of dollars.

PHMSA's Cost-Benefit Analysis Does Not Support the NPRM. The NPRM's cost-benefit analysis does not support PHMSA's proposal to impose costly new tank car standards and retrofit requirements on the ethanol industry. The costs of the proposed regulatory amendments exceed the benefits in all but two of the nine options presented (both under the high range benefit estimate, which as noted below is flawed).[5] Moreover, PHMSA's cost-benefit analysis is based on several flawed assumptions, including an overestimate of the likelihood of a "high-consequence" derailment event in the U.S.; an overestimate of the likely harm caused by such an event; an overestimate of the environmental remediation cost associated with a "lower-consequence" derailment and spill; and a failure to account for the fact that many derailments do not result in a spill.

When more reasonable, fact-based assumptions are incorporated into the cost-benefit analysis, the data shows that PHMSA *overstates* potential benefits associated with "high-consequence" derailments by more than a factor of ten and *overstates* potential benefits associated with "lower-consequence" derailments by approximately 25 percent. Thus, for all of the NPRM's scenarios, costs exceed benefits by approximately a factor of three, or more. *See Pub. Citizen, Inc. v. Mineta*, 340 F.3d 39, 58 (2d Cir. 2003) (vacating a National Highway Traffic Safety Administration ("NHTSA") rule on grounds that NHTSA failed to "rational[ly] connect[]" its cost/benefit analysis with the final rule or "explain why the costs saved were worth the benefits sacrificed").

In other words, PHMSA's various proposals fall billions of dollars short of any potential net benefit. Such an approach is inconsistent with Executive Orders 12866[6] and 13563,[7] both of which require Federal agencies to focus agency attention on solving documented problems in a cost-effective and least burdensome manner.[8] As explained in Executive Order 12866: "Each agency shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." *See also Bus. Roundtable v. SEC*, 647 F.3d 1144, 1149 (D.C. Cir. 2011) (rejecting an agency rulemaking where the agency "inconsistently and opportunistically framed the costs and benefits of the rule; failed adequately to quantify the certain costs or to explain why those costs could not be

[5] *See* NPRM at 45022 tbl.6.

[6] Exec. Order No. 12866, 58 Fed. Reg. 51735 (Oct. 4, 1993).

[7] Exec. Order No. 13563, 76 Fed. Reg. 3821 (Jan. 21, 2011).

[8] Under the Administrative Procedure Act, a court will set aside agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). In this regard, an agency must "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choices made." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotation marks omitted); *see also Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1053 (D.C. Cir. 2001) ("Future growth projections that implicitly assume a baseline of negative growth in the electricity generation over the course of a decade appear arbitrary, and the EPA can point to nothing in the record to dispel this appearance.").

quantified; neglected to support its predictive judgments; contradicted itself; and failed to respond to substantial problems raised by commenters").

Recommendations for Alternative Safety Standards. To address the deficiencies in the cost-benefit analysis, PHMSA should step back from its broad approach and instead focus on crafting targeted, incremental regulations that provide clear safety benefits without causing significant disruption to the ethanol industry. Our members believe that PHMSA's proposed new tank car and retrofit standards should exclude ethanol—ethanol is less volatile than crude oil and safer to transport. *See* DRIA at 20 (explaining that "the crude oil originating in the Bakken oil fields is volatile which increases the risks while it is in transportation.").

If PHMSA moves forward with new tank car standards for ethanol, Growth Energy continues to support the CPC-1232 car with a higher capacity pressure relief device and modification of the bottom outlet valve handle, which offers significant safety benefits over the existing DOT-111 car (47 percent improvement).

Phase-In Timetable Needs to be Extended. If PHMSA moves forward with retrofit requirements, PHMSA should extend the phase-in period from three to ten years to account for the limited capacity of the rail car manufacturing industry to build new cars and retrofit existing ones, and the potential for significant costs for industry, as was previously recommended by the Railway Supply Institution ("RSI") and various other commentators. The schedule set forth in the NPRM is simply not feasible.

II. PHMSA EXAGGERATES THE JUSTIFICATION FOR THE PROPOSED RULES BY FOCUSING ON AN ISOLATED INCIDENT

A. The Historical Derailment Record Does Not Support the NPRM

To justify the NPRM, and for purposes of framing its cost-benefit analysis, PHMSA explains that there has been an increase in shipments of large quantities of flammable liquids by rail that has led to an increase in train accidents, and more specifically, that the growth in rail traffic has been accompanied by an increase in the number of accidents involving oil and ethanol.[9] The historical record, however, calls into question PHMSA's conclusions and the underlying justification for the NPRM.

Rail transportation is the safest way to transport hazardous materials.[10] Based on PHMSA's estimates, since 2006, the ethanol industry has shipped more than 2 million railcars with only a handful of notable derailments, representing approximately 0.001 percent of all shipments.[11] Further, PHMSA's data shows a variable and at times declining derailment rate

[9] NPRM at 45017 ("The increase in shipments of large quantities of flammable liquids by rail has led to an increase in the number of train accidents, posing a significant safety and environmental concern.").

[10] *See* Comments of the American Petroleum Institute, Docket ID No. PHMSA-2012-0082, 1 (Dec. 5, 2013) [hereinafter API ANPR Comments]. According to the NPRM, as the total rail shipment volume has increased since 2003, the total number of train accidents across the rail network has declined by 43 percent, and accidents involving a hazardous materials release declined by 16 percent. NPRM at 45019.

[11] DRIA at 15, app. B at 175–78.

even as shipments of ethanol have increased in recent years.[12] PHMSA's data shows that ethanol derailments decreased from 2006–2008, increased from 2008–2009, decreased from 2009–2010, increased from 2010–2011, and then declined through 2013, even as shipments have stayed significantly higher than the historical average.[13] PHMSA's data shows that there has been no significant ethanol derailment since 2012.[14]

Similarly, PHMSA's data shows that the number of crude oil derailments from 2008 to 2012 declined even though carloads were increasing during that period.[15] In 2011 and 2012, for example, there were no major crude oil derailments.[16] Although the last two years have seen an increase, the data is too limited to identify a trend, or to support PHMSA's conclusion that the data justifies billions of dollars in new tank cars and retrofits.

Thus, the historical derailment rates for ethanol and crude oil do not support PHMSA's NPRM. In fact, absent the proposed rule, PHMSA predicts a declining oil and ethanol derailment rate that drops to an estimate of five annual mainline derailments by 2034.[17]

B. The NPRM Concedes that the Standards Would Not Prevent Lac Megantic

The NPRM's proposed new tank car standards are not designed to address the damage caused by the extreme examples of major train accidents cited by PHMSA. The proposed tank regulations are designed to limit punctures up to 19 mph. In reviewing the Lac Megantic derailment, PHMSA acknowledges that the incident involved derailment at 65 mph, and that "the tank car standards proposed here are not intended to be sufficient to prevent a puncture at this speed and force."[18] Similarly, all but one of the thirteen derailments cited by PHMSA in support of the new standards involved a speed of 19 mph or greater (an average speed of 32 mph).[19]

Thus, the proposed additional safety standards are unlikely to address PHMSA's underlying concerns about safety, yet will nonetheless cost industry billions of dollars. *See Advocates for Highway & Auto Safety v. Fed. Motor Carrier Safety Admin.*, 429 F.3d 1136, 1147 (D.C. Cir. 2005) (remanding a rule as arbitrary and capricious where the agency provided no discussion about how the rule would meet the goal identified in the cost-benefit analysis: "In short, the record in this case shows that the agency entirely failed to consider important aspects of the CMV training problems before it; it largely ignored the evidence in the Adequacy Report and abandoned the recommendations of the Model Curriculum without reasonable explanation; and it adopted a final rule whose terms have almost nothing to do with an "adequate" CMV training program").

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[12] *Id.* at 9 fig.ES7.

[13] *Id.*

[14] *Id.* at 19 tbl.1.

[15] *Id.* at 7 fig.ES5.

[16] *Id.* at 19 tbl.1.

[17] NPRM at 45022; DRIA at 4.

[18] DRIA at 39.

[19] NPRM at 45020 tbl.3.

III. PHMSA'S COST-BENEFIT ANALYSIS DOES NOT SUPPORT THE NPRM

As explained in greater detail below, PHMSA's cost-benefit analysis focuses on comparing anticipated costs of various proposed new standards against low and high range estimates of potential benefits from avoiding future derailments of crude oil or ethanol shipments. From the outset, the NPRM concedes that the costs of the proposed changes are likely to exceed potential benefits – and in many scenarios by billions of dollars. *See* NPRM at 45022 tbl.6 – 20 Year Benefits and Costs of Proposal Combinations of Proposed Regulatory Amendments 2015–2034. Under such circumstances, the NPRM does not rest upon a "reasoned determination that the benefits of the intended regulation justify its costs."[20]

Under PHMSA's assumptions, for example, the projected benefits of the proposed rules across nine scenarios range from 12 to 40 percent of the projected costs under the low range estimate, and 47 to 118 percent under the high range estimate. *For the nine scenarios presented by the NPRM, the costs of the proposed regulatory amendments exceed the benefits in all but two cases (both under the high range benefit estimate, which as noted below is flawed).*[21] This fact alone suggests that PHMSA should reconsider the costly reforms proposed in the NPRM.

PHMSA's analysis, moreover, is based on several flawed assumptions, including an overestimate of the likelihood of a "high-consequence" derailment event in the U.S.; an overestimate of the likely harm caused by such an event; an overestimate of the environmental remediation cost associated with a "lower-consequence" derailment and spill; and a failure to account for the fact that many derailments do not result in a spill. Numerous cases have held rules unreasonable where the agency relied on cost-benefit analysis with significant flaws. *See City of Portland v. EPA*, 507 F.3d 706, 713 (D.C. Cir. 2007) (noting that "we will [not] tolerate rules based on arbitrary and capricious cost-benefit analyses"); *Owner-Operator Indep. Drivers Ass'n v. Fed. Motor Carrier Safety Admin.*, 494 F.3d 188, 206 (D.C. Cir. 2007) (vacating regulatory provisions because the cost-benefit analysis supporting them was based on an unexplained methodology).

Overall, PHMSA's cost-benefit analysis overstates potential benefits associated with "high-consequence" derailments by more than a factor of ten and overstates potential benefits associated with "lower-consequence" derailments by approximately 25 percent. *See* Fig. 1, below. Further, when reasonable, fact-based assumptions are incorporated into the calculations (described in more detail, below), the projected "lower-bound" benefits of the proposed rule range from only 9 to 30 percent of the projected cost estimate, and the projected "upper-bound" benefits of the proposed rule are only 12 to 36 percent of the projected cost estimate. *Id.* In other words, for all of the presented scenarios costs exceed benefits by approximately a factor of three, or more.[22]

[20] Exec. Order 12866.

[21] *See* NPRM at 45022 tbl.6.

[22] These calculations do not include any adjustment of PHMSA's assumptions about the projected costs of the proposals. PHMSA has made a number of overly optimistic assumptions on costs that significantly underestimate costs, which further inflate the benefit-cost ratios.

Fig. 1 – 20 Year Costs and Benefits of Proposed Regulatory Amendments (million $)[23]

	PHMSA Cost and Benefit Assumptions					Corrected Benefit Assumptions			
Proposal	Costs	Lower-Bound Benefits	Upper-Bound Benefits	Lower-Bound Benefit-to-Cost Ratio	Upper-Bound Benefit-to-Cost Ratio	Lower-Bound Benefits	Upper-Bound Benefits	Lower-Bound Benefit-to-Cost Ratio	Upper-Bound Benefit-to-Cost Ratio
PHMSA and FRA Design Standard + 40 MPH System Wide	$5,820	$ 1,436	$ 4,386	0.25	0.75	$ 1,076	$ 1,281	0.18	0.22
PHMSA and FRA Design Standard + 40 MPH in 100K	$3,380	$ 1,292	$ 3,836	0.38	1.13	$ 968	$ 1,145	0.29	0.34
PHMSA and FRA Design Standard + 40 MPH in HTUA	$3,163	$ 1,269	$ 3,747	0.40	1.18	$ 951	$ 1,123	0.30	0.36
AAR 2014 Standard + 40 MPH System Wide	$5,272	$ 794	$ 3,034	0.15	0.58	$ 595	$ 751	0.11	0.14
AAR 2014 Standard + 40 MPH in 100K	$2,831	$ 641	$ 2,449	0.23	0.87	$ 480	$ 606	0.17	0.21
AAR 2014 Standard + 40 MPH in HTUA	$2,614	$ 616	$ 2,354	0.24	0.90	$ 462	$ 582	0.18	0.22
CPC 1232 Standard + 40 MPH System Wide	$4,741	$ 584	$ 2,232	0.12	0.47	$ 438	$ 552	0.09	0.12
CPC 1232 Standard + 40 MPH in 100K	$2,300	$ 426	$ 1,626	0.19	0.71	$ 319	$ 403	0.14	0.18
CPC 1232 Standard + 40 MPH in HTUA	$2,083	$ 400	$ 1,527	0.19	0.73	$ 300	$ 378	0.14	0.18

While we recognize that PHMSA may take the position that a proposed rule is justified where the costs are at least close to expected benefits, a gap of 65 percent, at best, is unreasonable. Under these circumstances, long-standing regulatory principles for good governance suggest the need for substantial modification of the NPRM. *See, e.g.*, Exec. Order 13563 (requiring agencies to "propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs . . ."). In *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1227 (9th Cir. 2008), for example, the Ninth Circuit found NHTSA's failure to monetize the value of carbon emissions in its determination of emissions standards arbitrary and capricious. As explained by the Court, "Even if NHTSA may use a cost-benefit analysis to determine the 'maximum feasible' fuel economy standard, it cannot put a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards. NHTSA fails to include in its analysis the benefit of carbon emissions reduction in either quantitative or qualitative form. It did, however, include an analysis of the employment and sales impacts of more stringent standards on manufacturers.")

[23] Figures in red font indicate a negative cost-benefit ratio. PHMSA figures are from DRIA, Table ES3. "Lower-Bound Benefits" refer to PHMSA's calculations based on historic HHFT derailments in the U.S. "Upper-Bound Benefits" refer to PHMSA's calculations which include the "Lower-Bound Benefits" plus additional potential benefits associated with "high-consequence" derailments. Corrected "Lower-Bound Benefits" are equal to PHMSA's values reduced by 25.1 percent, as described below. Corrected "Upper-Bound Benefits" are equal to the corrected "Lower-Bound Benefits" plus PHMSA's values for "high-consequence" derailments reduced by 93.0 percent, as described below.

C. PHMSA's Analysis Significantly Overestimates Benefits

PHMSA calculated its low range estimate by projecting derailment frequency and cost based on experience in the U.S. from 1995 through 2013, combined with projections for the number of carloads and frequency of derailments per carload over the next twenty years.[24] PHMSA then uses an estimate of the cost of property damage and environmental remediation of $300 per gallon spilled, based on reports from a derailment in Lynchburg, Virginia earlier this year.[25] PHMSA assumes this cost would be representative of all potential derailments. Next, PHMSA adds the cost of injuries and fatalities, based on historic data. Finally, PHMSA reduces the expected severity of incidents based on assumptions regarding the evolution of the fleet in the absence of the rule. This approach results in a low range of total projected damages from mainline high-hazard flammable train ("HHFT") derailments of $4.5 billion from 2015 through 2034, representing approximately 207 derailments at a cost of about $22 million per event.[26] *Note that under no scenario presented by the NPRM do the proposed benefits from avoiding derailments under the low range estimate exceed the costs. See* Fig. 1, above.

PHMSA then estimates a "high range" of potential benefits by adding to the low range an additional 10 safety events of higher consequence, such as the one that occurred at Lac Megantic in 2013.[27] Even though PHMSA notes that no such event has ever occurred in the U.S.,[28] PHMSA calculates the "high range" based on an assumption of nine Lac Megantic-type events occurring in the U.S. through 2034, each causing approximately $1.17 billion in damage. Perhaps sensing that these assumptions were not enough to reach a net benefit under the NPRM, PHSMA adds an additional event—without adequate explanation—which would cause five times the damages at Lac Megantic, or about $5.85 billion.[29] Finally, PHMSA scales up the damages from the Lac Megantic event based on a comparison of the population density around U.S. rail networks (using a 1 km-wide corridor around each line) with the population of the town of Lac Megantic. PHMSA estimates a population density around U.S. rail corridors of 141 per half square km, compared to 136 for the town of Lac Megantic.[30]

All told, PHMSA develops a high range estimate of damages for the nine potential U.S. events of $1.21 billion (141/136 x $1.17 billion), and $6.1 billion for the one "5x" event. Even under the high range estimate, however, only two of the nine scenarios in the NPRM offer a net positive outcome. And, as explained below, the high range estimate (as well as the low range estimate) rest on a series of assumptions that do not withstand scrutiny.

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[24] DRIA at 20–31.

[25] *Id.* at 30–31.

[26] *Id.* at 24 tbl.B3, 36 tbl.B8.

[27] *Id.* at 36–44.

[28] *Id.* at 36.

[29] *Id.* at 40, 42.

[30] *Id.* at 41.

1. Frequency of Lac Megantic-Type Events.

PHMSA's assumption of one Lac Megantic-type catastrophic event in the U.S. every two years has no apparent basis and is inconsistent with the historical record. As noted by PHMSA, there have been no such incidents in the U.S., despite shipment of approximately 4 million carloads of crude and ethanol since 2000. Moreover, PHMSA concedes that accidents are declining even as shipments have increased in recent years. *See supra* note 17 and accompanying text.

Assuming that the potential for such a catastrophe to occur in the U.S., albeit remote, must be taken into consideration, a rational, fact-based approach superior to the arbitrary and capricious one used to support the NPRM would base the projection of "high consequence" events on the ratio of HHFT carloads during the forecast period (2015–2034) to HHFT carloads in the base period (2000–2014), with an adjustment for the general declining rate of derailments. According to PHMSA's projections, there will be approximately 18 million HHFT carloads during the forecast period.[31] This is about 4.4 times more than have been shipped to date since 2000. Offsetting this increase will be the overall decline in derailment frequency, which, according to PHMSA's calculations, will average about 35 percent lower during the forecast period compared to the base period.[32] Based on these two factors, one might reasonably project approximately three Lac Megantic-type events in the U.S. over the next twenty years.[33] PHMSA's wholly unreasonable assumption of ten such events during this period therefore overstates the likely risk by a factor of at least three.

2. Potential Damage Caused by a Lac Megantic-Type Event in the United States

As summarized above, PHMSA calculates the potential damages from a "high-consequence" event in the U.S. based on the costs associated with the catastrophic crude-oil derailment at Lac Megantic. PHMSA assumes that the likely damages associated with such an event in the U.S. would vary based on population density at all potential derailment locations in the U.S. and adjusts the Lac Megantic figure to account for the difference in population density between the areas around U.S. rail networks relative to the population density of the town of Lac Megantic. PHMSA estimates an average population density within 0.5 km of all U.S. rail corridors of 141 people per half square km, compared to 136 people per half square km for the entire town of Lac Megantic. PHMSA therefore scales up the Lac Megantic cost estimate by a factor of 1.037 (141/136) to obtain an expected damages figure for a similar incident in the U.S. of $1.21 billion ($1.17 billion x 1.037).[34]

Essentially, PHMSA's approach results in the conclusion that a "Lac-Megantic-type" derailment (*i.e.*, a complete train of fully-loaded HHFT railcars derailing at high speed) in the

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[31] *Id.* at 36, tbl.B8.

[32] Based on the weighted average of annual derailment frequencies from DRIA. *Id.* at 23–24, fig.B2 and tbl.B3.

[33] Note, this treats the Lac Megantic event as if it had occurred in the Unites States. The actual likelihood of such an event is likely lower, since the single occurrence reflects the risk across all historic shipments in both the U.S. *and* Canada.

[34] DRIA at 40–42.

U.S. would be expected to cause approximately the same amount of harm as the actual event at Lac Megantic, since the average population density surrounding all U.S. rail corridors is approximately the same as the population density of the town of Lac Megantic. PHMSA's calculation, however, overstates the risk of harm due to U.S. shipments because it applies a different method of measuring population density for U.S. railroads compared to the measurement at Lac Megantic.

The derailment at Lac Megantic occurred near the middle of the downtown area.[35] The relatively high population density at that point likely was a major reason for the high number of fatalities and substantial property damage. If the derailment had occurred at the edge of Lac Megantic, where the population density is lower, the harm likely would have been substantially lower. PHMSA, however, uses a population density estimate for the entire town of Lac Megantic as its proxy for the level of risk associated with that event, rather than measuring population density within 0.5 km of the derailment site as it does for its estimate of risk in the U.S. This results in an understatement of the risk of damage from an HHFT derailment at the Lac Megantic site relative to the average risk across the U.S., and therefore an overstatement of the risk of damage in the U.S.

Across the U.S.as a whole, the vast majority of the areas through which railroads run tend to be rural or agricultural. Such areas have lower population densities, and therefore lower damage risk, on average, than the downtown area of a town the size of Lac Megantic. A more reasonable approach to estimate the potential harm from a Lac Megantic-type event in the U.S. would be to compare the population density within 0.5 km of U.S. railroad corridors (141 people per half square km) to the population density in the downtown area within 0.5 km of the Lac Megantic derailment site (554 people per half square km, according to Statistics Canada[36]). Based on PHMSA's methodology of calculating relative risk from population density, the expected damage from such an accident in the U.S. would be $298 million (141/554 x $1.17 billion), less than 25 percent of PHMSA's estimate of $1.21 billion.

Based on these two corrections related to PHMSA's calculation of potential damages from "higher-consequence" events in the U.S. (related to the risk of a "Lac-Megantic-type" event in the U.S. and the potential damages from such an event), the damages associated with "higher-consequence" events in the U.S. over the next twenty years would be $984 million (undiscounted), which is 93.0 percent less than the figure computed by PHMSA.[37]

3. Environmental Remediation Cost

PHMSA uses an estimate of the cost of property damages and environmental remediation

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[35] *Id.* at 41 n.44.

[36] Statistics Canada, GeoSearch 2011 - Provinces / Territories (PR/T), http://geodepot.statcan.gc.ca/GeoSearch2011-GeoRecherche2011/GeoSearch2011-GeoRecherche2011.jsp?lang=E&otherLang=F (last modified Feb. 1, 2013).

[37] This calculation is based on PHMSA's original figure of $14.133 billion (DRIA, at 54 tbl.B15) corrected for the overstatement of environmental remediation costs and then further corrected to account for the lower damages associated with non-spill derailments, as described above.

for the Lynchburg derailment as its proxy for damages at all derailment sites (not including the "high-consequence" events). For the Lynchburg derailment, CSX reported $8.9 million in costs associated with about 30,000 gallons of spilled crude oil, for an average of $300 per gallon.[38] Of that amount, about 56 percent ($167 per gallon) related to environmental damage. PHMSA evaluated many other incident reports, which showed costs that were generally less than $20 per gallon, but concluded that they were all incomplete.[39] Nonetheless, reliance on a single cost estimate for a single event is not a reliable method for assessing damages, especially given the large discrepancy in the data, and the fact that PHMSA makes no effort to determine whether the Lynchburg incident resulted in typical damages for a spill of that magnitude.

We note that in its Regulatory Assessment for the "wetlines" regulation, issued in January 2011, PHMSA used a figure of $117 per gallon for cleanup of gasoline spills, based on an average reported by the Spill Center of Hudson, MA.[40] If PHMSA had used that value, rather than the $167 per gallon value from the Lynchburg incident, that would reduce total damages per derailment from $300 per gallon to $250 per gallon. We calculate that adjustment would reduce projected damages from mainline derailments by about $740 million over the twenty-year forecast period, or about 16 percent. Making this adjustment alone—*i.e.*, basing remediation costs on the same source as used in the analysis of the "wetlines" regulation—would result in none of the proposed scenarios having a net benefit.

4. Non-Spill Derailments

As noted above, PHMSA calculates the average amount of product spilled and the average risk of injury/fatality from an HHFT derailment based on historic data—specifically, records of forty HHFT derailments recorded by PHMSA from 2006 through 2013.[41] PHMSA, however, only tracks derailments if they resulted in product release. For this reason, PHMSA does not use its own records to project the frequency of future derailments, since its records do not include derailments if no spill occurred.[42] Instead, PHMSA projects derailments based on the frequency across all commodity shipments and assumes that HHFTs derail at the same rate.

However, despite acknowledging that some HHFT derailments do not result in a spill, PHMSA projects the damages for all HHFT derailments based only on historic incidents in which there was a spill. This results in an overstatement of damages from all derailments, since, in a non-spill derailment, there would be no cost associated with environmental remediation. Based on PHMSA's assumptions, we calculate that 54.5 percent of PHMSA's projected cost per derailment—$13.9 million per incident out of a total cost of $25.6 million—relates to

[38] DRIA at 28–29.

[39] *Id.* at 29–30.

[40] PHMSA, Regulatory Assessment and Regulatory Flexibility Analysis for Hazardous Materials: Safety Requirements for External Product Piping on Cargo Tanks Transporting Flammable Liquids (HM-213D), January 2011, p. 35.

[41] DRIA at 25, 32.

[42] *Id.* at 25.

environmental cleanup.[43] PHMSA's calculations include these costs for every projected derailment, even though they would be avoided when a derailment did not result in a spill.

To calculate the impact of this error in PHMSA's approach, we use PHMSA's model of HHFT derailment frequency to estimate total HHFT derailments from 2006 through 2013. We calculate that figure to be approximately fifty-one.[44] Based on PHMSA's records of forty incidents with product release during the same period, we calculate that the likelihood of no product release in an HHFT derailment to be approximately 21.6 percent (1 - 40/51). Based on this problem alone, PHMSA has overstated damages from HHFT derailments by approximately 12.0 percent, or $538 million over twenty years.[45]

Based on these two corrections related to PHMSA's calculation of potential damages from "lower-consequence" events in the U.S. (the environmental remediation cost associated with a spill and the failure to account for the fact that some derailments do not result in a spill), the damages associated with "lower-consequence" events in the U.S. over the next twenty years would be $3.349 billion (undiscounted), which is 25.1 percent less than the figure computed by PHMSA.[46]

D. PHMSA's Analysis Significantly Underestimates Costs

As discussed, PHMSA's NPRM *overestimates* the expected benefits of the proposed rules under the high range estimate by more than a factor of ten, and under the low range estimate by about 25 percent. We also are concerned that the NPRM *underestimates* the significant costs that the proposed changes would impose on the ethanol industry, among others.

Although we disagree with many of PHMSA's cost estimates under the various options, we focus our discussion below on selected areas where the NPRM has either significantly underestimated or overlooked costs associated with the new tank car and retrofit requirements.[47] We estimate that PHMSA has understated compliance costs over the twenty-year period by approximately $500 million to $1 billion, based only the factors discussed below. Thus, using more realistic cost assumptions shifts the NPRM's cost-benefit ratios so that none of the proposed scenarios offer a net benefit (even before taking into account PHMSA's benefit overestimates).

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[43] *Id.* at 34, tbl. B7, 28–29 tbl.B4. Note, this figure for total cost includes additional injury/fatality costs that were not incurred at the Lynchburg incident, since there were no injuries or fatalities cause by that derailment.

[44] Based on application of PHMSA's projection for mainline derailments per million carloads (*Id.* at 23 fig.B2) multiplied by historic ethanol/crude carloads (*Id.* at 16).

[45] Based on PHMSA's calculation of total damages from "lower-consequence" derailments of $4.47 billion over 20 years. *Id.* at 54 tbl.B15. This calculation subtracts from PHMSA's total costs the cost of remediation of $167 per gallon for the 21.6 percent of derailments which did not result in a spill.

[46] This calculation is based on PHMSA's original figure of $4.47 billion (*Id.* at 54 tbl.B15) corrected for the overstatement of environmental remediation costs and then further corrected to account for the lower damages associated with non-spill derailments, as described above.

[47] We expect other commentators (such as RSI) are in a better position to comment on some of the specific cost estimates associated with the various options.

1. Jacketed Tank Car Standards

PHMSA assumes for purposes of calculating costs that all new tank cars will have jackets in the absence of the NPRM.[48] We disagree with this assumption. Absent the proposed rule, the unjacketed CPC-1232 would be the industry standard moving forward—as of the Announced Notice of Proposed Rulemaking ("ANPRM"), all commenters agreed on the CPC-1232 standard without a jacket. Note that the jacketed CPC-1232 is not in ethanol service today, and many of the newly built CPC-1232s do not have jackets (including some scheduled to be manufactured in 2015). PHMSA has acknowledged that the jacket will cost $23,000 per car, and we believe this cost should be included in the cost-benefit estimates.[49] According to AAR data, there were 27,301 non-jacketed DOT-111 and CPC-1232 tank cars in ethanol service on May 9, 2014. If this fleet must be replaced with jacketed cars, installation costs alone would cost roughly $628,000,000.

2. Shell Thickness Requirements

We also disagree with PHMSA's estimates for adding additional thickness to shells. In its discussion of the implementation of "Requirement Area 2 – Tank Car," PHMSA estimates a $2,000 cost to add a $1/8^{th}$ inch shell thickness—one of the three additional requirements of Option 1 over Option 3 for new tank cars.[50] The authors of the DRIA state that they based the extra cost of increased thickness on the amount of steel required to be added to the shell/jacket and a cost of steel of $0.40 per pound, implying that they expect the additional weight to be about 5,000 pounds.[51] There are several problems with this assumption.

First, the calculation of additional steel costs is not provided explicitly in the DRIA. When we perform the calculation using the assumptions that appear to be incorporated in the DRIA, we obtain a much larger cost estimate. The DOT Specification 111-tank car (capacity of about 30,000 gallons) is a steel cylinder with an outside diameter of about 120 inches and a length of about 648 inches.[52] The volume of additional steel required to add $1/8^{th}$ inch of thickness to a cylinder with these dimensions equals 33,407 cubic inches or about 19.3 cubic feet.[53] Given a density of steel of about 500 pounds per cubic foot,[54] the addition of $1/8^{th}$ inch of

[48] "PHMSA expects all new tank cars to have jacket in the absence of this rule, so we do not expect any benefits or costs from this change." NPRM at 45054.

[49] We also note that PHMSA assumes no additional labor cost, markup, or any other factor associated with the increased jacket size. We expect that rail car suppliers will provide PHMSA with comments addressing this oversight.

[50] DRIA at 82.

[51] *Id.* at 82 n.69.

[52] See, for example, The Greenbrier Companies, *30,000 Gallon Tank Car*, Technical Bull.: Tank Cars, *available at* https://www.gbrx.com/files/files/NAR/Tank_Cars/Tank30000.pdf.

[53] Volume of a cylinder $\pi r^2 h$ and volume of additional $1/8^{th}$ inch of thickness is $\pi(r+1/8)^2(h+1/8) - \pi r^2 h$, where $r = 60$ inches, and $h = 648$ inches.

[54] *Steel*, Wikipedia.com, http://en.wikipedia.org/wiki/Steel (last modified Sept. 23, 2014).

thickness requires about 9,700 pounds of steel. Multiplying by the cost of steel at $0.40 per pound gives an increased metal cost of $3,880. This is almost double the costs assumed in the DRIA.

Using the more accurate figure of $3,880 per jacket adds approximately $205 million (discounted over twenty years) to the overall cost of the proposals. Finally, for retrofit costs, the DRIA assumes that the cost of retrofitting CPC-1232 tank cars would be only $1,500 because those cars have "better puncture resistance."[55] It is unclear how this would obviate the need for the same additional jacket thickness, according to the requirements in the proposal.

3. *Costs from New Tank Car and Retrofit Weight Increases*

PHMSA assumes that the additional weight required by the proposals will not reduce the cargo capacity of any HHFT tank cars. This is not a reasonable assumption. Adding 5,000 pounds of additional weight to existing tank cars will have a tremendous impact on the weight and capacity of the rail car fleet. Given PHMSA's weight limits for tank cars,[56] any additional weight will reduce the amount of additional ethanol that can be loaded – one of Growth Energy's members, for example, reports that over 12 percent of its shipments fall under these railroad weight restrictions.[57]

By way of example, the current non-jacketed CPC-1232 tank car has a shell capacity of approximately 31,800 gallons. The new designs proposed by PHMSA have shell capacities ranging from 28,400 to 30,300 gallons, depending on the final design and the builder. Based on shell capacity alone, the new designs will hold only 90 to 95 percent of what the non-jacketed CPC-1232 railcar built since 2011is able to hold. Given that many shipping lanes are restricted to a 263,000 lbs. gross weight limit, the new designs proposed by PHMSA will hold no more than 90 to 93 percent of what the legacy DOT-111 car in these lanes is able to hold. Regardless of the base comparison, the NPRM proposal will result in higher freight costs per gallon shipped in a higher number of more expensive tank cars.

Some of our members use shipping routes with a 263,000 pound maximum gross weight limit. (The Fort Dodge, Iowa bridge, for example, is limited to 263,000 lbs). If we assume a ratio of 12 percent weight limited shipments exists across the entire ethanol fleet, we will see more than 1,300 to 3,000 railcars (depending on the builder's final design) added to the ethanol system solely due to reduced railcar capacity, which equates to between thirteen to thirty additional 100-tank car unit trains on the rails. Adding this many cars to shipments cuts against PHMSA's stated safety goals. In the NPRM, PHMSA states the growing use of HHFTs "represent[s] a growing risk."[58]

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[55] DRIA at 85 tbl.TC 8.

[56] Historically, the HMR, at 49 C.F.R. § 179.13, limited rail tank cars transporting hazardous materials to a GRL of 263,000 lbs. DOT 111 tank cars that meet the minimum standards provided in FRA's Federal Register Notice of January 25, 2011 are permitted to operate at a GRL of up to 286,000 lbs.

[57] In general, every seven lbs. of added steel reduces capacity by one gallon of ethanol.

[58] NPRM at 45019.

Similarly, the 2013 AAR Annual Rail Report states that there were 290,709 Alcohols, N.O.S. Loaded Tank Car Originations in the U.S. in 2013. Assuming that 12 percent of the routes are limited to 263,000 GWL, the railcars proposed in this NPRM would create an additional 14,000 to 32,000 Alcohols, N.O.S. shipments each year compared to the non-jacketed CPC-1232.

Alternatively, RSI has noted the potential for shipments to switch to other, less safe modes of transportation (particularly during the retrofit phase-in when tank car availability is likely to be seriously curtailed).[59] According to a recent RSI analysis, a retrofit requirement could result in lost rail capacity in 2017 that "would require over 35,000 trucks carrying over one million truckloads on North American highways."[60]

Finally, we believe that PHMSA has underestimated the costs of additional fuel and maintenance associated with the increased weight of the proposed cars.[61] Based on PHMSA's underestimate of the weight of a thicker jacket (underestimate by 4,700 pounds, as described in the previous section), we calculate an additional cost of $239 million (discounted over twenty years) for PHMSA's proposals. PHMSA also does not address the potential for higher freight costs from heavier cars. For example, some grain tariffs demonstrate a 10 percent higher freight cost for a 286,000 GWL railcar versus a 263,000 GWL railcar. If this applies to ethanol shipments, then the increase weight of the rail cars will result in higher freight costs.

4. New Definition of High-Hazard Flammable Train

The proposed rule creates regulatory rules for the newly defined "high-hazard flammable train." An HHFT would be defined as a "train comprised of 20 or more carloads of Class 3 flammable liquid."[62] PHMSA believes this would only impact crude oil and ethanol shipments.[63]

We are concerned that the proposed definition of an HHFT is unwieldy and that PHMSA has not considered the ramifications on shipping efficiency due to railroad manifest shipping practices. For example, the NPRM does not address the possibility that the railroads will combine shipments of less than twenty Flammable Liquid cars with other cars carrying non-flammable commodities. It is typical for railroads to seek to optimize trains by combining shipments from various suppliers in manifest trains between origin and destination. As a result, an ethanol shipper would have no way of knowing whether its shipment was subject to the HHFT's requirements until it was too late. Railroads may also delay product shipments by setting aside railcars when trains exceed HHFT parameters until a non-HHFT train is available to accommodate the railcars. This results in cars spending more time in rail yards and along the

[59] *See* Comments of the Railway Supply Institute Committee on Tank Cars, Docket ID PHMSA-2012-0082, 12 (Dec. 5, 2013) [hereinafter RSI ANPR Comments].

[60] Comments of Railway Supply Institute to Canadian Dept. of Transp., 12 (Sept. 1, 2014) [hereinafter RSI Canada Comments].

[61] DRIA at 88–89 tbl.TC 11.

[62] NPRM at 45017.

[63] *Id.* at 45040.

routes, extending shipment times, increasing tank car numbers and potentially increasing the risk of stationary hazardous material containers.

5. Retrofit-Specific Costs

PHMSA acknowledges that it will be expensive to retrofit cars, but discounts this cost on the assumption that 22,800 older tank cars will be transferred to the Alberta tar sands service. PHMSA has greatly exaggerated the degree to which these cars will be shifted to the Alberta services, which raises significant implications for PHMSA's cost estimates. All told, RIA has estimated that the many barriers to a retrofit requirement will result in 28 percent of the legacy DOT-111 fleet being retired.[64]

As a starting point, PHMSA does not address the fact that Canada is currently adopting its own regulations for tank cars, which has the potential to impact the shifting of older cars to Canada. The NPRM does not appear to calculate the potential costs of moving what it purports to be less safe rail cars to the Canadian service. In substance, PHMSA's proposal seeks to simply shift risk from one market to another.

PHMSA also underestimates retrofit costs for shifting tank cars to the Canadian oil sands service, given that the raw bitumen will require the addition of heating coils to the tank cars.[65] PHMSA does not appear to consider this cost. Moreover, if oil sands producers move diluted bitumen, which the Obama Administration envisions in the Environmental Impact Statement for the Keystone Pipeline, then the oldest DOT-111 will no longer be usable as soon as 2018.[66]

Moreover, PHMSA does not appear to consider the cost of moving cars to Canada, or potential costs associated with modifying leases. Similarly, if the retrofit options prove too costly or time-consuming, then many tank-car owners are likely to purchase new cars instead, leaving a glut of DOT-111s that "would depress lease rates and undermine values for tank cars that don't carry flammable cargo."[67]

Finally, according to RSI, it will take sixteen weeks to complete the modifications proposed by the retrofit requirements (contrary to PHMSA's view of only one month out of service). As explained by the Renewable Fuels Associations, out of service time for retrofit cars could result in additional costs of $56.8 million, with an additional $58 million for the cost to move cars to shops for modifications.[68]

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[64] RSI Canada Comments at 11.

[65] *See* Elana Schor, *Canadian Oil Sands Crude is the X Factor in Crude-by-Rail Rule,* EnergyWire (August 13, 2014), *available at* http://www.eenews.net/stories/1060004416.

[66] *See id.*

[67] Bob Tita, *Proposal Threatens to Aggravate Shortage of Railcars to Move Oil,* Wall St. J. (Aug. 12, 204 5:18 P.M.), http://online.wsj.com/articles/thousands-of-tank-cars-likely-to-be-scrapped-under-new-rules-1407859765.

[68] *See* Comments of the Renewable Fuels Association, Docket ID PHMSA-2012-0082, 6 (Nov. 5, 2013).

IV. RECOMMENDATIONS FOR ALTERNATIVE SAFETY STANDARDS

PHMSA proposes a new railroad tank car standard, DOT 117, and then offers three options based on various combinations of safety features. As discussed above, PHMSA has greatly overestimated potential benefits from the proposed rules while underestimating costs of compliance. All told, none of the proposed standards provide a net benefit.

Given that PHMSA has not justified the cost of the options presented, PHMSA should explore less ambitious new tank car standards that would achieve additional safety benefits without imposing unreasonable costs on industry. *See* Office of Mgmt. & Budget, Office of Info. & Regulatory Affairs, Circular A-4, *Regulatory Analysis* 10 (September 17, 2003) ("By measuring incremental benefits and costs of successively more stringent regulatory alternatives, you can identify the alternative that maximizes net benefits."). We recommend that PHMSA take a closer look at which of these safety standards offer the best value, particularly when combined with some of the other new standards proposed in the NPRM, such as the 40 mph speed limit and route routing requirements.

As a starting point, PHMSA's proposed new tank car and retrofit standards should exclude ethanol—ethanol is less volatile than crude oil and safer to transport. *See* DRIA at 20 (explaining that "the crude oil originating in the Bakken oil fields is volatile which increases the risks while it is in transportation."). We agree with previous statements of the Renewable Fuels Association that "[e]thanol is a low volatility, consistent commercial product with a 99.997 percent rail safety record. Unlike oil from fracking, ethanol is not a highly volatile feedstock of unknown and differing quality and characteristics being shipped to a refinery for commercial use."[69]

If PHMSA moves forward with new tank car standards for ethanol, Growth Energy continues to support the CPC-1232 car with a higher capacity pressure relief device and modification of the bottom outlet valve handle as submitted under petition P-1577. Although the ethanol industry invested significantly in DOT-111 cars over the past decade with the expectation of being able to use the cars over a thirty-year timeframe, we agreed in the ANPRM process to support the CPC 1232 moving forward.

We believe that the CPC-1232 car will provide benefits to help mitigate potential future derailments. According to RSI in their comments on the ANPRM, the unjacketed CPC-1232 car offers a 47 percent reduction in the probability of release when compared to a DOT-111 car.[70] Further, adoption of the non-jacketed CPC-1232 car would likely result in the use of fewer tank cars and shipments given the CPC's higher capacity than the options in the NPRM. One of our members, for example estimates that the non-jacketed CPC-1232 could remove between 1,200 and 3,000 railcars from the ethanol fleet compared to PHMSA's option 1.

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[69] Press Release, RFA Stresses Difference Between Ethanol and Crude Oil (July 23, 2014), *available at* http://www.ethanolrfa.org/news/entry/rfa-stresses-difference-between-ethanol-and-crude-oil/

[70] RSI ANPR Comments at 7–8.

V. PHASE-IN TIMETABLE NEEDS TO BE EXTENDED

If PHMSA adopts a retrofit requirement, Growth Energy strongly urges PHMSA to extend the phase-in period from three to ten years to account for the limited capacity of the railcar manufacturing industry to build new cars and retrofit existing ones. We strongly discourage PHMSA from imposing a deadline that is simply not feasible under current market conditions.

First, as previously noted in RSI's comments to the ANPRM, without the ten year timeline, PHMSA's proposed "modifications will exacerbate the already existing repair backlog and is likely to exceed the current capacity of repair and supply shops."[71] There is already a significant backlog of shop capacity for current work and making these extensive modifications to the fleet will take cars out of service and put a significant burden on already busy shops and added expense on builders, shippers, and ultimately consumers. We also understand that the bulk of the proposed retrofit work would fall on small, regional shops that may not have the ability to ramp up operations to address the significant work that will be required.[72]

Second, in the ethanol industry there are approximately 27,000 DOT-111 cars and only 400 are built to the TP11577/ CPC-1232 standard. PHMSA's current schedule would require these cars to be retrofitted by January 1, 2018. Critically, there are currently no jacketed CPC-1232 cars in the ethanol industry compared to the 4,850 that are already in use in the oil industry.[73] And there are only eleven DOT-111 jacketed tank cars in the ethanol industry compared to 5,500 in the oil industry. Thus, the proposed time table will impose a significant and disproportionate impact on the ethanol industry.

Third, Growth Energy is concerned with the proposed timing of the retrofits when combined with existing constrained shop capacity and the overwhelming requirements for tank car requalifications. The dramatic expansion of the ethanol industry from 2004 to 2008 has created an unprecedented demand for shop space due to HM216B requalification requirements. *See* 49 C.F.R. §180.509 (requiring tank car owners to ensure a tank car's service equipment is qualified at least once every ten years). Even without retrofits, we estimate 74 percent of the ethanol fleet will require requalification over the phase out time period, overloading the shops with over 20,000 tank cars, before retrofits can even be considered.[74] Thus, our members are concerned that the coming wave of requalifications will collide with PHMSA's retrofit requirements, as well as the backlog for newly built tank

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[71] RSI is the association that represents the companies that manufacture more than 95 percent of all new railroad tank cars in the U.S.

[72] Tita, *supra* note 65.

[73] NPRM at 45025 tbl. 8.

[74] According to the AAR Annual Report of Hazardous Materials Transported by Rail in 2008 the U.S. originated 218,902 Alcohols, N.O.S. shipments versus 56,525 Alcohols, N.O.S. and Flammable Liquids, N.O.S. shipments in 2003. 74 percent represents the assumption that the growth in shipments would match the growth in the ethanol rail fleet.

cars (50,000 to 60,000 on average over past several years).[75]

Sixth, PHMSA's assumption that the cars in backlog scheduled for 2015 would be built to whatever standard is decided in this rule does not take into account lead time for material orders or time to stamp 7/16 versus 9/16 tank heads. Our members have been told by manufacturers that they will need six to eight months to define railcar build specifications in advance of production.

VI. CONCLUSION

Growth Energy appreciates the opportunity to comment on PHMSA's NPRM. We look forward to working with PHMSA to develop appropriate and reasonable safety measures for rail transportation, a matter of central importance to our industry. Should you have any further questions or wish to discuss any aspect of these comments further, please contact Chris Bliley, Growth Energy's Director of Regulatory Affairs at 202-545-4000.

Respectfully submitted,

Tom Buis,
CEO

September 30, 2014

[75] Tita, *supra* note 65. PHMSA's backlog figure of 20,300 tank cars appears low and without basis.