



**BY EMAIL**

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**RE: AREA AND MOBILE SOURCE CREDITS; EMISSIONS BANKING AND TRADING (EBT)**

**I. INTRODUCTION**

Environmental Defense Fund (EDF) appreciates the opportunity to provide informal comments to the TCEQ on mobile and area source credits generated and used through the TCEQ's EBT program. EDF is a non-profit, non-partisan, non-governmental environmental organization that combines law, policy, science, and economics to find solutions to today's most pressing environmental problems. Our interest in emissions credits and the EBT program stems from our role as a clean air advocate and environmental justice stakeholder, working to help address impacts on overburdened communities and partnering with environmental justice organizations on overlapping issues. The informal feedback presented below offers considerations that EDF believes are needed to ensure that emissions reductions and improvements in air quality actually occur through the EBT program, to be able to provide measurable improvements in the health of communities living in Houston and surrounding areas.

**II. MOBILE SOURCE CREDITS**

**Ensuring Reductions are "Real and Surplus"**

Increase Minimum Source Application Size: EDF recommends that TCEQ increase the minimum source size from 0.1 ton of credit for individual facilities and mobile sources to at least 1.0 ton of credit for each application (and 0.1 ton of credit per facility or mobile source). It is important that TCEQ not be burdened by the large administrative costs of numerous small source (e.g., <0.1 ton) applications. This approach still allows owners of small sources to apply for emission credits, but requires them to package them in one larger application. In addition, by increasing the minimum application size to 1 ton of credit, it increases the likelihood that the application will spend the necessary resources on accurately quantifying the size of the emission credit.

Clarify Definition of “Mostly” for Usage (Validated with Use of GPS/AIS Data): It is important that TCEQ clearly define what it means to operate “mostly” within the nonattainment area. For tug boat companies, in particular, they may need some flexibility to move vessels around the Gulf based on seasonal and annual fluctuations in economic activity. Since GPS and AIS make it possible to accurately measure the location of large diesel engines used in tugs, locomotives, and large construction equipment, there are some recommendations/options for TCEQ to consider when defining “mostly”:

- “Mostly” could be defined as at least 50% of their operational hours must be in the nonattainment area, as measured by a GPS or AIS system. Actual credits generated should be based only on actual usage in the eligible area.
- TCEQ should explore an option for an owner of a fleet of diesel vessels, locomotives, etc., to be allowed to generate emission credits based on their fleet’s operation, and not on an individual vessel or locomotive. TCEQ should develop a robust measurement and monitoring protocol using GPS or AIS technology, thus providing vessel owners some flexibility with their operations, while also substantially increasing participation in the program. One option might be to limit this approach to DERCs.

Clarify Purpose of “Determine the available SIP emissions by reducing the total emissions inventory value included in the applicable SIP revision by...<sup>1</sup>”: While the discussion in this section seems well intentioned, its purpose and operational impact remain unclear. During the Houston meeting, a number of questions were asked about this section, and the answers provided by TCEQ staff did not fully resolve the questions. TCEQ staff should clarify and/or reframe the purpose of this section to be able to better solicit feedback.

Use Two-Year Baseline for Historical Adjusted Emissions for Mobile Sources: We strongly encourage TCEQ to calculate “historical adjusted emissions” based on the previous two years. We believe this timeline would more accurately represent a baseline emissions scenario than a 10-year period, given market fluctuations and other considerations that can cause significant variability in emissions on an annual basis. The TERP guidance requires that baseline emissions be based upon the previous two years of data, so a precedent is already in place for using this timeframe.

Expected Useful Life, Hours of Operation, and Load Factor: EDF recommends that TCEQ review results from TERP, EPA, and CARB programs and work with engine manufacturers to evaluate whether the current expected useful life estimates and load factors are accurate for the purposes of the EBT program. While TERP Guidance and EPA’s NONROAD model provide estimates for engine useful life and load factors, much of the research for which the estimates were developed is out of date and may be of limited applicability to current diesel engines. For example, the most recent EPA publication on useful life and load factors of nonroad engines is

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<sup>1</sup> <https://www.tceq.texas.gov/assets/public/implementation/air/banking/stakeholder/2016-07-08-presentation.pdf>

based on data from 1997 to calculate engine life<sup>2</sup>. This was approximately 8-10 years before diesel engine manufacturers were selling Tier 2 engines, and 18-20 years before they were selling Tier 4 engines.

It is also important to understand that emissions models like NONROAD are primarily designed to estimate emissions from large fleets of equipment for SIP purposes. As such, the useful life and load factors estimates are not designed for individual projects that would be needed in the EBT program. For example, a tug used for docking purposes will have a much different load factor than one used for moving barges. Given the project-specificity needed for EBT estimates, and the substantial changes in diesel engine design over the last 20 years, additional work is needed to determine whether these estimates in the TERP guidance or EPA's reports are sufficiently accurate for use in the EBT program.

### **Ensuring Reductions are “Quantifiable”**

“Use of an EPA-approved Protocol”: EPA protocols are appropriate if there are accurate useful life, engine load and hours of operation data. Since the existing data are outdated, TCEQ should work with EPA, CARB, and industry stakeholders to come up with more accurate estimates of useful life, engine load and hours of operation (see comment and recommendations provided in previous section). As better data become available, TCEQ should incorporate this new data into their protocol.

Reduce Credits Based on Measurement Uncertainty: EDF agrees with TCEQ that the amount of credits issued should be adjusted based on the quality of the data used to determine emissions. The current proposal, however, appears to imply that these reductions are based only on the quality of future emission reduction measurements. We recommend that TCEQ also reduce the value of the credits based upon the quality of the historical data the applicant has to establish their emissions baseline, as well as the quality of the data for future emission reductions.

### **Administrative Procedures**

Online Applications: TCEQ should simplify the application process for both applicants and the Agency by using an online web based application process. The web based form should not allow submission of the application to the Agency until all of mandatory data fields have been completed.

Give Administrative Priority to Larger Emission Reduction Projects: EDF encourages TCEQ to give priority to processing emission credit applications that generate larger emission reductions and that are well documented. While all applicants deserve an equitable opportunity to have their credit applications considered, it will be the larger applications that will generate both the largest environmental benefits and opportunity for economic growth.

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<sup>2</sup> [Assessment and Standards Division Office of Transportation and Air Quality U.S. Environmental Protection Agency. Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling. EPA-420-R-10-016 \(NR-005d\). July 2010.](#)

Align EBT Program with PM Advance and Other Health Priorities: TCEQ should consider how to align the EBT program with additional clean air and public health priorities. For example, applicants that put forward projects that also reduce PM<sub>2.5</sub> emissions could receive administrative priority in order to help meet PM Advance goals. If applicants put forward projects that reduce emissions in highly populated areas, especially environmental justice communities, these applications should also receive administrative priority.

Limit Impact of Large ERC Purchases: We recommend that any purchase of ERCs greater than 10 tons include an EJ Screen<sup>3</sup> assessment to identify the potential for air quality impacts from use of emissions credits at a source adjacent to environmental justice communities and other sensitive populations. Consideration should also be given to whether the use of DERCs in large quantities can cause localized impacts.

Avoiding Pollution Hotspots & Mitigation of Accidental and Unauthorized Emissions: TCEQ should ensure that 1) the EBT program does not contribute to pollution hotspots, and 2) that the EBT program does not make it easier for facilities with a track record of accidental and unauthorized emissions events to expand their operations or otherwise benefit operationally from the EBT program. TCEQ should consider excluding these “bad actors” from the program until they have, for example, mitigated their impact through purchase of DERCs, in addition to addressing the underlying reasons for accidents and unauthorized releases.

### **III. AREA SOURCE CREDITS**

EDF has concerns about oil and gas facilities/operations as area source credits. Other stakeholders have put forward area source project examples at meetings with TCEQ and EPA Region 6, and reference to some of these examples are made in the comments below.

1. Since production equipment (e.g., tanks) tends to have declining throughput as the wells that feed them age and production declines, using historical baselines of emissions is likely to overstate the reduction that occurs at the point in time a mitigation activity takes place. In addition, since wells have limited lifetimes, the duration of the emission reduction also needs to be accounted for.
2. It is also important to consider the performance of control systems. In the specific example of a single controlled tank replacing multiple existing tanks (without controls), a 95% reduction only occurs if the controlled system is operating to specifications. Studies show large emissions from controlled tanks connected to flares indicating either a poor design or improperly maintained vent gas control systems (Lyon et al., 2016<sup>4</sup>; EPA, 2015<sup>5</sup>). For the purposes of an area source credit, operators should be required to

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<sup>3</sup> <https://www.epa.gov/ejscreen>

<sup>4</sup> Lyon et al., 2016. Aerial Surveys of Elevated Hydrocarbon Emissions from Oil and Gas Production Sites. *Environ. Sci. Technol.*, 2016, 50 (9), pp 4877–4886. <http://pubs.acs.org/doi/abs/10.1021/acs.est.6b00705>

<sup>5</sup> EPA Compliance Alert, 2015. <https://www.epa.gov/sites/production/files/2015-09/documents/oilgascompliancealert.pdf>

demonstrate oversight practices that ensure a 95% performance or an additional discount needs to be applied for expected underperformance and/or system malfunction.

EDF encourages TCEQ to solicit feedback on other specific area source project examples.

#### **IV. IMPORTANCE OF ENGAGING LOCAL COMMUNITIES FOR FEEDBACK**

EDF strongly recommends that TCEQ contact local organizations and communities to identify possible concerns from local residents who may be affected by changes in the program, or if there might be other ways to improve the EBT program.

#### **V. CONCLUSION**

EDF appreciates the opportunity to provide informal feedback to TCEQ and encourages TCEQ to put forward specific proposals that EDF can review in greater technical detail. Our comments provided herein in no way endorse any specific idea or proposal at this time. If you have any questions, please contact Christina Wolfe at 512.691.3416 or [christina.wolfe@edf.org](mailto:christina.wolfe@edf.org).

Sincerely,

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