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Sustainability of State Financial Assurance Funds for the Underground Storage Tank Programs

Acknowledgements

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Purpose

[Forty-one State and Territorial \(State\) underground storage tank \(UST\) programs](#) have a financial assurance fund used to reimburse cleanup costs associated with contamination from UST releases.¹ Since the creation of these funds, States have spent approximately \$25 billion cleaning up petroleum storage tank releases and have provided the required financial assurance mechanism for most of the USTs in the country according to data submitted to ASTSWMO in the [2021 Annual Tanks Update](#).

The ASTSWMO SF-FR Task Force conducted research on current emerging trends that may affect the future sustainability of State financial assurance funds for UST programs. Several factors are in play that have the potential to reduce revenue in the future while cleanup costs increase, and a significant number of new releases are reported. This document summarizes the Task Force's research and provides commentary on policy choices States may consider in the coming years with a focus on three key issues:

- UST program revenue,
- cleanup of UST releases, and
- aging UST system infrastructure.

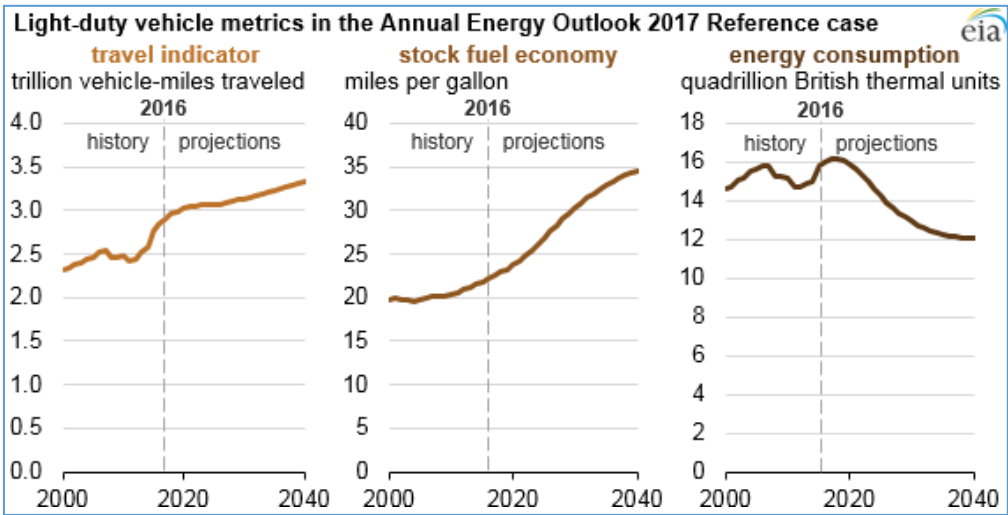
States operate unique programs based on their needs and therefore, it is up to each State to decide what will work best for the future of their UST programs. It is also unclear how EPA will view State funds as viable financial assurance mechanisms if they become underfunded due to declining revenues. Questions States should consider are what is your program doing to safeguard your revenue stream? What is the future volume and cost structure of cleanups? Is your State actively addressing the aging tanks issue?

¹ Thirty-six States have active funds to pay for new and ongoing cleanups and five States have funds that pay for ongoing cleanups where the State previously assumed financial responsibility.

State UST Program Revenue

As previously stated, approximately 65% of State UST programs have an active financial assurance fund used to reimburse cleanup costs associated with contamination from UST releases. Most of the revenue that supports these funds is generated from a [tax or fee imposed on the sale of petroleum fuels](#). If petroleum fuel usage decreases, State fund revenue will see a commensurate decrease as well. Several current and emerging factors will likely drive a decrease in petroleum sales and contribute to a deterioration in fund revenue. These factors include the increasing fuel efficiency standard, the consumer’s adoption of electric vehicles (EVs), and generational behavior changes.

Fuel efficiency for vehicles produced for the sale in the U.S. is mandated by the Corporate Average Fuel Economy (CAFE) standards first enacted in 1975. While increased fuel efficiency is good for the consumer and for the environment, it translates directly into decreased petroleum usage per mile traveled. CAFE standards are somewhat dependent on the U.S. federal administration at the time, but the overall trend – particularly since the Energy Independence and Security Act of 2007 – is for increased fuel efficiency. The following chart from the U.S. Energy Information Administration’s (EIA) 2017 article, “[Fuel economy improvements are projected to reduce future gasoline use](#),” demonstrates the effect of increased vehicle fuel efficiency on petroleum consumption (even as miles traveled increase). The [2022 EIA Annual Energy Outlook](#) projects that increasing fuel economy standards will result in reduced gasoline consumption through 2038 then begin to rise as vehicle miles traveled out paces increased efficiency. Throughout the 2022 projection, which runs through 2050, gasoline consumption does not return to 2019 (pre-pandemic) levels.



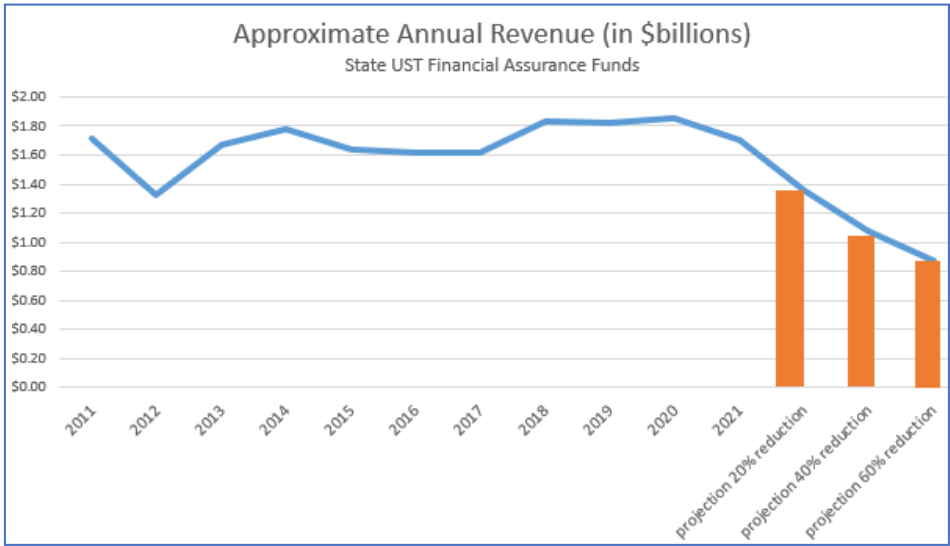
Source: U.S. Energy Information Administration, [Annual Energy Outlook 2017](#)

The transition to EVs may have a dramatic impact on petroleum usage in the transportation sector. Estimates of EV adoption by the US consumer varies widely. In its most recent [Annual Energy Outlook](#) research from 2022, the EIA projects that sales of Internal Combustion Engines (ICE) vehicles will decrease from 92% of vehicle market share to 79% in 2050 due to the growth in EV sales. Other forecasts of future EV sales are much higher than the EIA. For example, a [September 2022 report by BloombergNEF](#) projects that over half of the passenger cars sold in the US will be EVs by 2030. Bloomberg’s projection is based in part on federal tax incentives that were part of the recently passed Inflation Reduction Act. In addition to recent federal government initiatives, [many States also have EV incentives](#) with a handful establishing mandates that limit the future sale of new ICE vehicles. While investments and construction of EV infrastructure needs to be completed before a wholesale change to EVs can be made, both consumers and

governments are embracing EVs and their sales relative to ICE vehicles continue to increase. It will take several years to cycle through the existing ICE vehicles already on the road but this change could dramatically reduce petroleum fuel sales and State UST program revenue.

The final factor relates to changes in behavior. One of the outcomes of the COVID -19 pandemic is the dramatic increase in telework and its level of acceptance post-pandemic by both the employee and employer. Many workers that used to commute to the office every day now telework several days a week. Another interesting trend in the U.S. is the Generation Z's (Americans born after 2000) disinterest in driving. [A recent report by Lang Marketing](#) found that more than 40 percent of 19-year old's born after 2000 do not have a driver's license and 48 percent of the 16-to-18-year old's do not drive at all. Rising fuel cost may contribute to additional changes in driving behaviors.

The reality of some or all these projections and trends will affect States revenue streams unless legislation modifies the funding mechanisms to account for these changes. The figure below illustrates the approximate annual revenue for all State funds taken from the Annual Tanks Update. Since 2011, revenue has remained around \$1.6 to \$1.8 billion per year but decreased approximately \$200 million from 2020 to 2021. Also included are revenue projections if twenty, forty, and sixty percent reductions in revenue were to occur in the future. With a sixty percent reduction, the total revenue would drop below \$900 million compared to the 2020 revenue of \$1.7 billion.



Data related to how individual states are looking to maintain the sustainability of their financial assurance funds was not readily located. Although available information documents that some states have had the ability to increase fees that are collected on the sale of refined petroleum products, the exact use of this increased revenue requires additional research of associated legislation to understand its intended use. Even though petroleum related fees may have been successfully increased, the additional monies may be divided amongst other needs and ultimately only result in a short-term fix for a state's financial assurance fund.

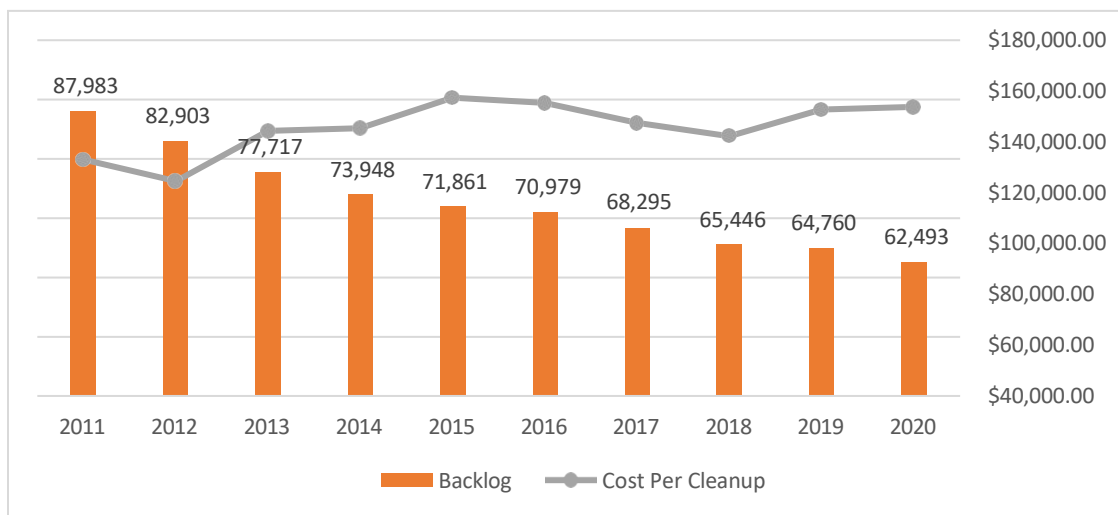
Although increases in fees is one option that helps sustain a state's financial assurance funds it is not the only one. As the petroleum related universe evolves financial assurance funds will need to adapt to ensure their continued existence. Although identifying mechanisms to help continue the solvency of financial assurance funds is beyond the scope of this paper it is a worthwhile project that should be pursued, and

information should be solicited from individual states. Responses provided could be combined and shared as Best Practices.

Cleanup of UST Releases

The cost of cleaning up UST releases is on the rise whether it be the expense of exploring a new technology or simply on-going monitoring. There are currently about [60,000 active UST cleanups](#) with most being located at sites that [prove to be a challenge, exhibiting free product and requiring remedial action](#). Newer cleanups are similarly carrying a high price tag with the encouragement to use site characterization technology that reduces the duration to achieve No Further Action. According to the [Annual Tanks Update](#) and illustrated below the average cost to cleanup a site has increased about \$20,000 since 2018.

From 2012 to 2020 the inflation rate was essentially flat year to year. Today, [the annual inflation rate is nearly 6 times that of 2020](#) and has led to increased costs for equipment, material, shipping, and personnel associated with UST cleanups. [Many States establish reimbursement rates for cost controls](#) with most having a \$1 million cap allowed for reimbursement of corrective actions. The acknowledgment that cleanup costs are increasing has led States with reimbursement caps for cleanup to consider and implement fund cap increases. Some States have quickly addressed inflation by approving personnel rate increases while others have adjusted fuel rates and allowed for an inflation percentage increase. With the continued rise in cleanup costs releases may exceed the cap for reimbursement.

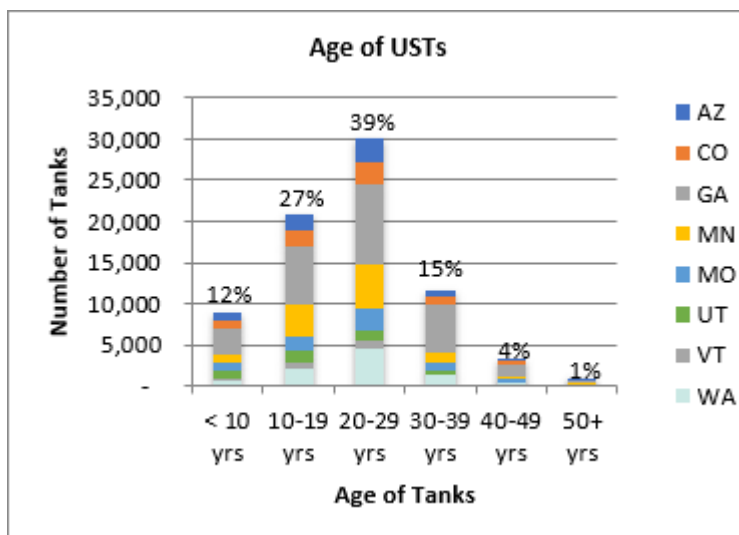


Aging UST Systems

Another issue of concern is the universe of aging UST systems in the U.S. The December 22, 1998, EPA deadline for UST systems to meet new tank requirements had a significant impact on the composition of the nation’s UST infrastructure. As a result, UST systems across the nation that did not meet new requirements were upgraded, replaced, or permanently closed. Since that time, there have been no additional nationwide requirements for upgrading or closure, and UST replacement and upgrade policies have been State-specific and diverse across the nation.

Unfortunately, if a State fund sunsets or is underfunded due to declining revenues, the regulated community may need to rely on private insurance to become their financial responsibility mechanism. Per the EPA, as the age of UST systems near or exceeds 30 years “Some owners of aging USTs report having trouble renewing and finding insurance, with smaller UST owners struggling the most.” ([Insurance for USTs | US EPA](#)). Those facilities that are unable to secure insurance coverage may end up ultimately closing or

being abandoned creating additional stress on state fund programs if releases are discovered.



The figure above is taken from the [2015 ASTSWMO Analysis of UST System Infrastructure in Select States report](#). The report conducted a detailed analysis on USTs in these eight states and documents that 59% of the USTs at this time (~8 years ago) had been in the ground for more than 20 years. Without incentives promoting removals or upgrades it is anticipated that many of these tanks remain in place today.

Although the graph only provides dated age information related to a small portion of the national UST population, more recent data collected by the EPA from the States and reported through its [UST Finder](#) (UST facility and LUST site data is from 2018-2019 for states and 2020-2021 for tribal lands and U.S. territories; [about_ust_finder - fact sheet final 9-24-2020 508.pdf \(epa.gov\)](#)) supports the fact that nationally USTs are getting old with the average age of tanks in the country at almost 30 years. Based on this information it is anticipated that soon owners/operators of USTs will have a difficult time finding reliable and affordable 3rd party insurance for their aging infrastructure thus reinforcing the need for healthy and sustained State funds.

A major concern with aging tanks systems is an increased rate of deterioration of UST systems and components due to compatibility with emerging fuels (EF). ([Emerging Fuels and Underground Storage Tanks \(USTs\) | US EPA.](#)) Many older UST systems need modifications to safely store and dispense petroleum product, as the original tank system and components may not have been warranted for the EF. The incompatibility of the tank system and components and the fuel may cause the tank system to fail, resulting in releases to the environment.

To better understand the potential impacts aging tanks and fuel storage incompatibility issues will have on the sustainability of State funds, an updated, comprehensive analysis on a nationwide level of the UST infrastructure would help Fund Administrators and the EPA better understand our exposure risks to the maturing UST population.

Closure of motor fueling facilities

The bottom line is that these trends will likely combine to cause many existing fueling facilities to close in the coming years. It is expected that the smaller, older facilities that have low fuel sales will close first. These older facilities also tend to have a longer history of releases and they are expected to require a

greater level of investigation and cleanup when they close. A significant fraction of them will have releases that require investigation, and some fraction of those sites will require remediation. Combined with these newly discovered releases, States may still have a large number of older recalcitrant releases which will also need funding for cleanup. This will occur at the same time the traditional sources of revenue – taxes and fees on the sale of motor fuel – are expected to decline. This could lead to an inability of the state funds and insurance companies to keep up with the activities necessary to protect human health and the environment.

Closing remarks

Considering the complexity of these issues and the potential for significant impact on state UST programs, most particularly state financial assurance funds, the ASTSWMO Tanks Subcommittee and the Financial Responsibility Task Force request that the EPA Office of Underground Storage Tanks provide a more detailed analysis of the trends identified above by addressing the below:

Financial Responsibility

There is the potential that insurance companies will no longer provide coverage that meets federally regulated financial responsibilities making owner/operators not be able to afford insurance coverage on their USTs. With declining revenues, States will be at risk of no longer having sufficient funding to provide FR or meet their cleanup obligations. As any changes to the FR requirements will directly impact all stake holders, is the EPA aware of any legislation that is being drafted or introduced that will impact UST insurance coverage to support UST owner/operators? With UST compatibility issues and UST infrastructure nearing or exceeding typical UST warranty periods of 30 years, is the EPA planning on conducting a national comprehensive study to better understand the current condition of USTs in use?

Cleanup Costs

With the anticipation of a decreased or loss of funding for UST cleanups should states shift corrective action strategies before the shortfall occurs? Does the EPA recommend focusing on paying for prevention efforts such as upgrading systems and leak detection technologies? States would benefit from a study on programs that provide such reimbursements or loans. This study should include what benefits have resulted in prevention funding that details less reported releases and lower cost of cleanup. Aggressive site investigation approaches such as high-resolution site characterization and prompt remedial efforts may be necessary to beat the clock on some of the state's legacy sites. While these efforts may prove to be more expensive it may be necessary to implement while funding is still available. Should the EPA's high resolution site characterization study, currently underway, be extended to incorporate other site investigation and corrective action strategies to support our concern of state fund sustainability?

EPA Guide

States would benefit from an EPA produced guide on funding cleanups in their state as revenues decline due to reduced petroleum use. The guide should be a result of actuary analysis and in-depth research into the issues presented above, along with recommended practices for states to follow to ensure funds are available for cleanup and remediation.