



Tire Derived Fuel: Still a Solid Fuel? Regulatory Challenges and Opportunities

December 2019

What We Will Review

- **Overview of TDF market**
- **USTMA TDF survey findings**
- **Regulatory issues shaping TDF market**

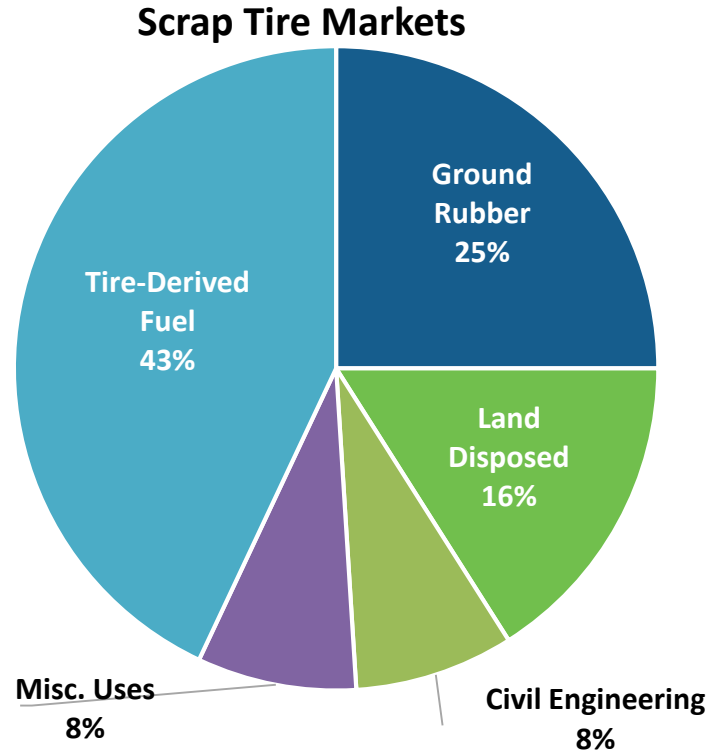
If you don't remember anything, remember these few points...

- 1. Tire derived fuel is a sustainable and partially circular market**
- 2. USTMA is collaborating with partners to reduce burdens and increase incentives for TDF**
- 3. Regulatory challenges on the horizon**

USTMA 2017 DATA: TIRE DERIVED FUEL MARKET

USTMA Data on TDF Market (2017)

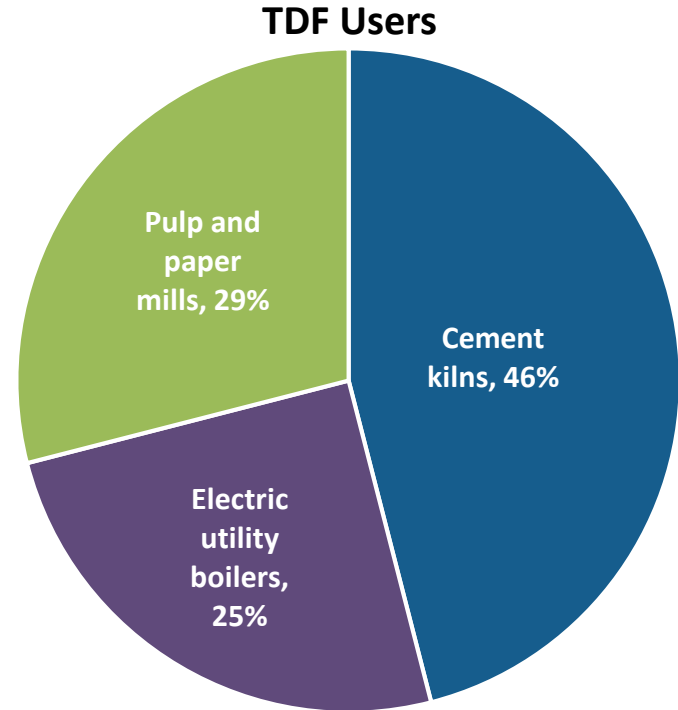
- The TDF market represents over 40% of all beneficial uses for scrap tires.



Source: USTMA Scrap Tire Market Report

USTMA Data on TDF Market (2017)

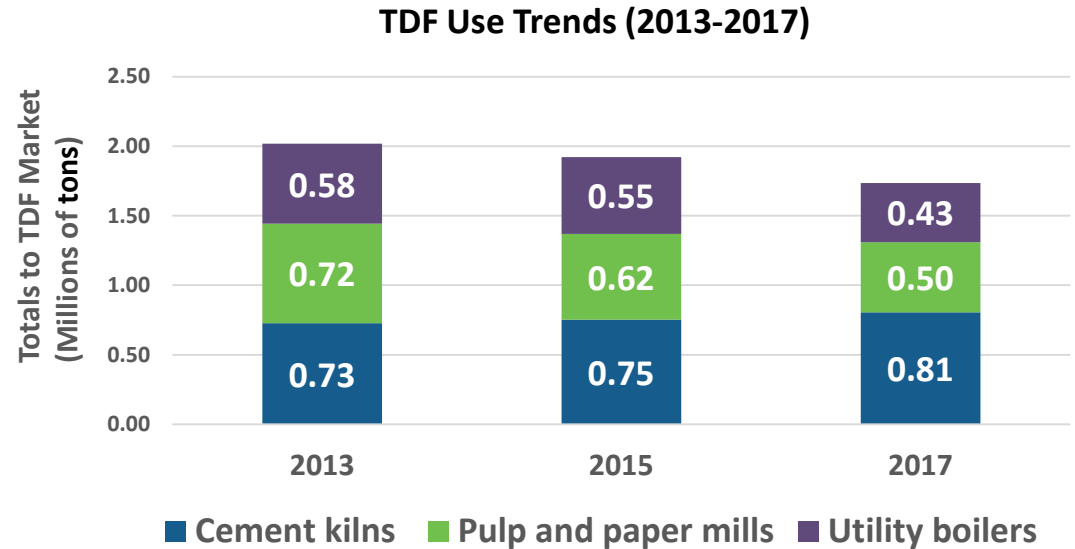
- The TDF market is made up of cement kilns, electric utilities, and pulp and paper mills.
- Cement kilns make up nearly half of the TDF market.



Source: USTMA Scrap Tire Market Report

USTMA Data on TDF Market (2013-2017)

- TDF Use Trends:
 - Total TDF market ↓
 - Cement kilns ↑
 - Pulp and paper mills ↓
 - Utility boilers ↓



Source: USTMA Scrap Tire Market Report

USTMA 2019 TDF SURVEY: KEY TAKEAWAYS

Overview of USTMA TDF Survey

- Collaboration with three trade associations whose members use tire-derived fuel



- Survey provided insights on



- Trends,
- Challenges,
- Opportunities, and
- Policies to encourage TDF use

Key Takeaways from USTMA TDF Survey

- Challenges and obstacles for increasing TDF use
 - Low cost of natural gas
 - Future regulation of greenhouse gas emissions
 - Permit caps on TDF use
 - Boiler heat input limits



Key Takeaways from USTMA TDF Survey

- Opportunities to increase TDF use
 - Permitting education
 - Financial assistance for equipment or fuel
 - Increased biomass content in tires



REGULATORY ISSUES SHAPING TDF MARKET

FEDERAL AIR REGULATIONS: BOILER MACT

Boiler MACT – Background & Why this Matters

- Background:
 - Clean Air Act Requirements: EPA must set Maximum Achievable Control Technology (MACT) standards to control hazardous air pollutants (HAPs) from existing and new major sources.
 - The Boiler MACT standard applies to nearly 2000 facilities' boilers across a wide range of industries, including pulp and paper mills.
- Why this matters: if the Boiler MACT standard is tightened too far, pulp and paper mills may stop using TDF.

Boiler MACT – Litigation Overview

- The Boiler MACT rule has been issued and remanded (sent back) by the courts several times over the past decade.
- The court’s latest decision in 2016 held that EPA’s emission limit for HCl was established based on an incomplete data set and that EPA needed to expand the data set in a “remand rule.”
- EPA’s initial analysis for the “remand rule” indicated that the agency needed to reduce the HCl standard for solid fuels by 30%.

Boiler MACT – Ongoing Advocacy & Next Steps

- In 2018, USTMA joined a coalition with the American Forest and Paper Association to provide EPA with the best available data.
- At least in part due to the coalition’s data development and advocacy, it appears that EPA plans to reduce the HCl standard by under 10%.
- A final “remand rule” is expected to be issued in late 2020.

GREENHOUSE GAS REPORTING RULE

Recommended Reforms to GHG Reporting Rule

- Issues with the greenhouse gas reporting rule, which all TDF users are subject to, include:
 - The greenhouse gas reporting rule cites to an outdated default factor for the amount of carbon neutral biomass in TDF (factor should be 24%, not 20% as cited in regulation).
 - The rule also imposes a burdensome requirement for TDF users, in which TDF makes up more than 10% of a unit's generated energy, to conduct air emission tests to determine the natural rubber fraction in the TDF.



Recommended Reforms to GHG Reporting Rule

- **USTMA recommendations echoed by PCA and AF&PA:**
 1. Remove the requirement that TDF users conduct air emission testing to determine biogenic CO₂ emissions (allow air testing as a compliance option);
 2. Update the biogenic default factor for TDF to 24% to reflect the natural rubber fraction in the scrap tire stream and allow all TDF users to rely on it.
- A final rule addressing USTMA's recommendations is expected in early 2021.



REVIEW OF STATE INCENTIVES FOR BIOMASS

What Is a Renewable Portfolio Standard?

- Targets set to reduce greenhouse gas emissions
- Renewable energy producers receive and sell credits
- Users of fossil fuels purchase credits to comply with the law



Types of State Incentives for Biomass

Renewable energy credits

- E.g., North Carolina utilities certified as renewable energy facilities for TDF receive and sell credits for the power generated from the natural rubber fraction in tires.





Tax credits for renewable energy


- E.g., Georgia pulp & paper mills that buy scrap tires for TDF could receive a sales tax credit for the natural rubber fraction in tires.




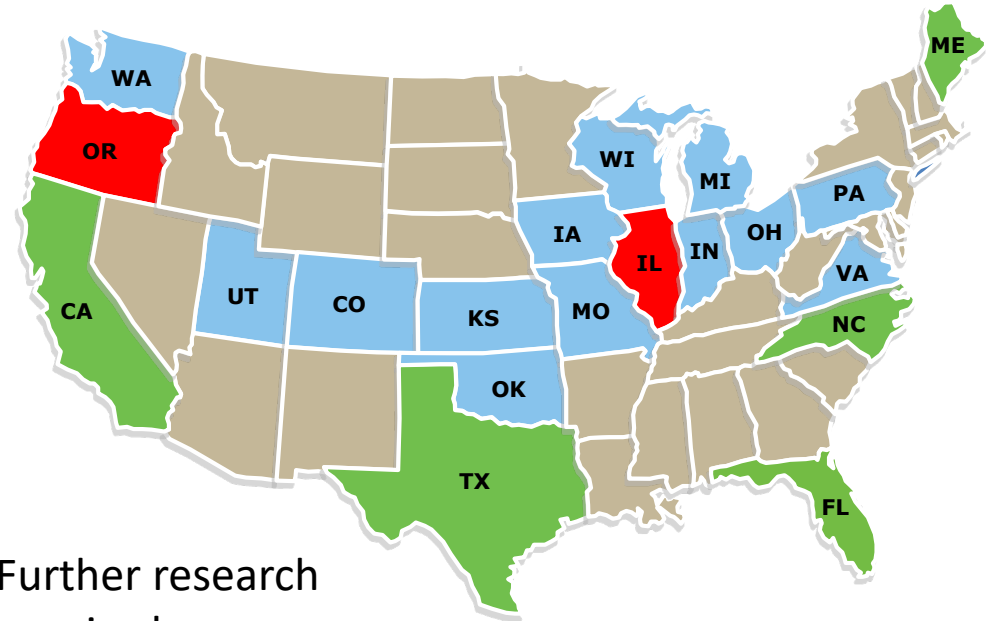
For States with Renewable Energy Credits, Definitions Matter

 States with broad definitions of the term “biomass” (all organic sources included).




 States with narrow definitions of the term “biomass” (e.g., limited to agriculture or forestry industries).

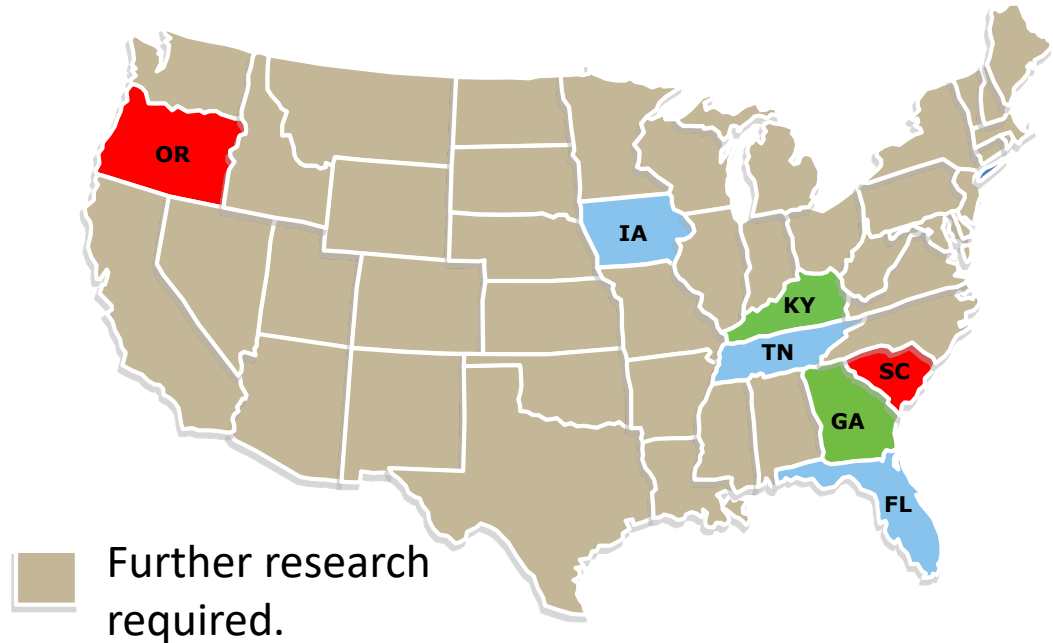
 States where clarification is needed (e.g., whole tires excluded, but law silent on natural rubber fraction).

 Further research required.



For States with Tax Credits for Renewable Energy, Definitions Matter

-  States with broad definitions of the term “biomass” (all organic sources included).
-  States with narrow definitions of the term “biomass” (e.g., fuel must be 90% biogenic).
-  States where clarification is needed (e.g., sources listed are not applicable, but definition extends beyond examples).



REGULATORY ISSUES ON THE HORIZON

Issues on the Horizon

- Future regulation of greenhouse gas emissions
- Collaborations with AF&PA, PCA, CIBO, and Biomass Power Association
- Growing focus on circular economy

THANK YOU

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