ATRA Policy Position Paper: Tyre Derived Fuels (TDF)

Introduction

The Australian Tyre Recyclers Association (ATRA) represents the interests of Australia's leading, legitimate and sustainable used tyre recycling sector.

With a majority of the country's used tyre recycling activity managed by ATRA members, the association is committed to promoting environmentally responsible, high order and economically viable end-of-life tyre (ELT) solutions. An important pathway for ELT recovery is Tyre Derived Fuel (TDF), which offers significant environmental and economic benefits and can act is a bridging product as we move to higher order outcomes.

Policy Context

Australia generates approximately 466,000 tonnes of ELTs annually. Historically, a significant portion of these tyres were exported as unsustainable whole baled tyres (ATRA and its members opposed this export). The 2020 Recycling and Waste Reduction Act (RAWR Act) and the 2021 ban on the export of whole baled tyres have necessitated the development of further processing of ELT-derived products, including into TDF.

In 2022, the National Greenhouse and Energy Reporting (NGER) Scheme was amended to include specific emission and energy content factors for TDF, recognising its value as a lower-emissions alternative to fossil fuels.

Environmental and Economic Benefits of TDF

- **Greenhouse Gas Reduction**: TDF combustion can reduce greenhouse gas emissions by up to 30% compared to coal for the same energy output.
- **High Calorific Value**: TDF has a higher energy content than coal, making it an efficient alternative fuel.
- **Resource Recovery**: TDF diverts ELTs from landfill and illegal dumping, reducing environmental and health risks.
- **Circular Economy**: TDF supports circular economy principles by recovering energy from waste and reducing reliance on virgin fossil fuels.
- **Heavy industry use**: TDF offers heavy industry (such as cement kilns and paper mills) alternative energy sources, especially as they progress their net-zero emission journeys.

Industry Applications

TDF is widely used in:

- **Cement Kilns**: Replacing coal in high-temperature processes and is incorporated into the final product (clinker) with no ash.
- **Industrial Boilers**: Providing process heat in manufacturing.
- **Power Generation**: Supplementing energy production in controlled environments.

Over 80% of Australia's recycled tyres are currently exported as TDF to markets including Japan and South Korea. This production of TDF and its export mirrors that of equivalent jurisdictions including the EU, Canada and the US where TDF is a dominant offtake for used tyres.

While domestic uptake remains' limited progress is being made with several Australian cement kilns now utilising or re-tooling to use TDF in their processes.

ATRA's Policy Position

ATRA supports, and its members are pursuing, high order outcomes for ELT's including the production of materials for use in new tyre production. Meanwhile, the responsible use of TDF is likely to remain a key component of Australian and global ELT management strategies. ATRA advocates for:

1. **Recognition of TDF as a Sustainable Fuel**:
    - Continued support for TDF in national greenhouse accounting frameworks (NGER's).
    - Inclusion of TDF in renewable energy and emissions reduction strategies.
2. **Development of Domestic Markets**:
    - Incentives and support for Australian industries (e.g., cement, steel, energy) to adopt TDF.
3. **Regulatory Certainty and Support**:
    - Streamlined licensing and permitting for TDF production and use.
    - Clear national standards for TDF quality and emissions.
    - Industry compliance with export controls and specifications.
4. **Investment in Infrastructure**:
    - Support for domestic processing facilities to meet TDF specifications.
    - Funding for research and development into advanced TDF technologies
5. **International Best Practice**:
    - Alignment with global standards and practices, including those of the EU and US EPA.
    - Avoidance of unsustainable exports and promotion of processed, high-quality TDF.