**Terms of reference – Appendix 1**

Analysis of the treatment of end-of-life tires regarding environment, market, economy and system

# Task description

## Introduction

The current tire executive order[[1]](#footnote-1) faces a number of challenges. It has become significantly more expensive to process tires into tire granules, due to the market situation for selling tire granules and due to economic uncertainty. The EU Commission has adopted a phasing out of rubber granules[[2]](#footnote-2) as infill in artificial pitches over an 8-year period. This is expected to change the sales market for the Danish companies that refurbish tires, but the time perspective (how long phasing out actually takes) and the possibility of finding alternative markets is unknown. In addition, there are challenges with the processing of special tires, which is a growing challenge, as sales of these types of tires are expected to increase in line with the spread of electric cars. Special tires include NCT tires and foam tires, solid rubber rings, colored tires, etc. These tires currently pay a fee for the scheme, but subsidies are not paid out, as they are not processed for recycling.

Abroad, the dominant system for handling end-of-life tires is an extended producer responsibility (EPR) scheme. It is therefore desired to elucidate, i.a. through a neighborhood check, how EPR can handle the challenges described, and what other challenges it may entail, cf. environmentally correct handling, finances and business burdens for Danish actors.

## Objectives

The objectives is to conduct analysis and describe both the economic and environmental consequences of implementation of extended producer responsibility on tires. The focus of the task, among other things, is to include opportunities and challenges to increase the share of direct recycling and support the most environmentally beneficial recycling and treatment of tires, as well as look at the commercial consequences of extended producer responsibility, both for collectors and processors of tires.

## The content of the assignment

The assignment contains three subtasks and a final report. The tasks are thought to be carried out in parallel. Resource consumption for part task 3 is assessed as limited. The final report collects all notes in a publication-friendly report.

### Task 1 – Review of EPR schemes in neighboring EU countries

Review of EPR schemes in neighboring EU countries is suggested to be carried out based on literature studies and interviews with selected collective schemes and industry organizations for at least three selected countries. Choice of countries must be justified, if convenient, already in the tender process.

The review of neighboring countries aims to identify and describe all relevant strengths and weaknesses of the different countries' schemes for EPR. The description includes how the schemes ensure the most environmentally responsible treatment of all types of end-of-life tires, support recycling and re-treading, combat free-riding , and ensure economic efficiency for all actors in the value chain from waste producer to collector and processor. The work must feed into task 2, where the identification of strengths and weaknesses must be used as a starting point for assessing the consequences for the implementation of EPR compared to the current fee and subsidy scheme on tires in Denmark.

An estimated forecast must be prepared covering the next ten years for the development of the market for recycled tires and end-of-life tires including special tires divided into processing technologies as pyrolysis, granulation and incineration (including co-incineration). The forecast must include estimations for the use of granulate for specified product groups and the geographical location of the end market (domestic market, EU, third country). The work feed into task 3, as input to the task performed by the Danish supplier, DTU Sustain.

**Deliverables:** Note describing at least three countries' EPR schemes, as well as identifying strengths and weaknesses, as input for task 2.

**Deadline:** 1 December 2024

### Task 2 – Economic impact assessment of actors in Denmark

Analysis of business economic impact of Danish actors due to a possible transition to producer responsibility scheme compared to the current level of costs in the existent fee and subsidy scheme. The analysis should be based on a previous study of the cost level in the scheme[[3]](#footnote-3), which is to be renewed. In addition, the cost of new activities under EPR must be identified, cf. task 3. The Danish Environmental Protection Agency expects that estimates for the cost levels are based on data obtained through interviews or questionnaire surveys among different actors within the scheme in Denmark.

**Deliveries:** Note regarding business economic impact of a possible transition to producer responsibility scheme in Denmark

**Deadline:** 1 December 2024

### Task 3 – Contribution to data collection for DTU-task

Contribution to DTU Sustain's work with LCA screening with the aim of comparing and assessing the most environmentally beneficial use of tires and waste treatment methods for tires, cf. the market analysis in task 1. The task may, for example, contain inquiries about the distribution of sales by product groups, reprocessing efficiency including resource consumption, quality and losses in reprocessing using different technologies.

A precise delivery list is agreed upon in collaboration with DTU at the start of the project, according to the agreed budget allocation.

**Delivery** : Raw data for use for LCA screening cf. DTU Sustain's needs. Possibility of holding clarifying meetings with DTU Sustain and MST regarding needs and data quality.

**Deadline:** 1 November 2024

### Final report

Collection of notes with method description, references and annexes in the Danish Environmental Protection Agency template for reporting, which is ready for publication.

**Deliverables:** Final report

**Deadline:** 15 December 2024

## General requirements

The supplier must comply with the requirements and descriptions in this requirement specification.

* The supplier must send the Danish Environmental Protection Agency a draft timetable for contracting, with activities and deliveries.
* The supplier must, upon contracting, send a plan of expected time consumption divided by participants and sub-tasks.
* The delivery must meet the requirements of the Danish Environmental Protection Agency as best as possible within the set time frame and budget.

## Requirements for quality assurance

This is a project which must be carried out through close cooperation between the supplier and the Danish Environmental Protection Agency under limited time conditions , the Danish Environmental Protection Agency is kept continuously informed about the progress of the project. It is a requirement that all deliveries in connection with this project go through qualified quality assurance. All factual information in the report must have clearly indicated source references, and it must also be clearly stated which parts of the text are the supplier's assessment and interpretation, or which express the views and wishes of various stakeholders. The report must be reported in the Danish Environmental Protection Agency's report template. The report must contain the supplier's significant results in relation to the points that appear in point "1.4 Content of the task", including significant results from the possible conducted interviews. Collected data is handed over to the Danish Environmental Protection Agency as part of the final report. For notes, there is no requirement to use a report template, but must also undergo quality assurance.

# Organization

## Place(s) of performance of the task

It is expected that the supplier participates in a start-up meeting with the Danish Environmental Protection Agency, which is either held in physical presence or virtually. The location of this start-up meeting can be agreed with the Danish Environmental Protection Agency. There are no additional requirements for places of execution.

## The task's organizational framework

The Danish Environmental Protection Agency is the project owner and thus makes the final decisions on prioritization regarding quality, resources, time and any changes in the content of the task. The supplier is the project manager and shows ownership and commitment. The project can be carried out using a subcontractor. All decisions in connection with the project's set-up must be approved by the Danish Environmental Protection Agency. The Danish Environmental Protection Agency has the direct dialogue with the supplier, while the supplier has the direct contact with any sub-suppliers, stakeholders and others relevant to the project.

## Reporting and communication

Project meetings are held between the supplier and the Danish Environmental Protection Agency regarding the status of the task and progress. At least 2-3 status meetings are held via Skype between the supplier and the Danish Environmental Protection Agency regarding the status of the task. Results and data must be submitted prior to these meetings where the Danish Environmental Protection Agency has the opportunity to change the direction of the project. The date of the status meetings is agreed between the parties during the contract period. It is the supplier who acts as secretary at status meetings.

The completed report must be submitted for comment to the Danish Environmental Protection Agency two weeks before the final submission date. The Danish Environmental Protection Agency can involve the Ministry of the Environment's department in commenting.

## Budget and payment plan

A budget of a maximum of DKK 500,000 has been set aside for the task. The remuneration covers all costs relating to the execution of the project, excluding VAT. This also includes transport costs and all other costs associated with the project solution. The supplier is billed retroactively when the delivery has been approved by the Danish Environmental Protection Agency.

## Timeline

When contracting, the supplier must send the Danish Environmental Protection Agency a detailed schedule, and the deliveries must be carried out at the delivery times set at the conclusion of the contract. The contract itself only expires when the report has been submitted and approved.

* Task 1, Neighboring counties review of EPR schemes in EU is delivered **on 15 November 2024** in the first edition, **final edition on 1 December 2024.**
* Task 2, Economic impact assessment of actors in Denmark is delivered **on 15 November 2024** in the first edition, **final edition on 1 December 2024.**
* Task 3, Contribution to data collection to DTU-task is delivered **on 1 November 2024**, or by agreement
* Final report, first edition delivered **1 December 2024** and final edition **15 December 2024**

## Contact the Danish Environmental Protection Agency

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1. BEK no 1660 of 13/11/2020 (https://www.retsinformation.dk/eli/lta/2020/1660) [↑](#footnote-ref-1)
2. https://echa.europa.eu/hot-topics/granules-mulches-on-pitches-playgrounds [↑](#footnote-ref-2)
3. Technological Institute, Environmental, market and economic analysis for the Danish tire scheme, 2016 (https://www.teknologisk.dk/\_/media/66181\_D%E6kanalyse.pdf) [↑](#footnote-ref-3)