EUROPEAN
RENTAL
ASSOCIATION

ERA Convention 2019

Workshop Sustainability

In the workshop Sustainability, the participants discussed, amongst others:

- The parameters defining the environmental impact of use of construction equipment:
  - What are inefficient use cases and how can they be defined,
  - The type of parameters: completeness and wishes / tips for additional parameters,
  - The range of figures on normal, efficient use for each parameter,
- The purpose of the calculator and the possible use in practice.

Wishes for the calculator itself

For the diesel powered machines: also show the effect of making the switch to electrically powered and / or H2 fuel cells.

The CO2-calculator, at the moment, does not distinguish truck engine types (for transportation), such as EURO 3, 4, 5 or 6. Although this wish comes up several times, the team explains that the impact on climate change has been the same since 2005. Environmental benefits are mainly on NOx and particulate matter (PM).

Maintenance is not yet included. Especially the impact of oil consumption is found to be a valuable addition.

Efficiency / inefficiency in general

High utilisation rates may be paired with (relatively) high-energy consumption per hour, for instance, due to leaving the engine running while not in operation.

Rental is likely to be beneficial (compared to other business models) when it comes to optimising the transportation distance and higher utilisation rates. Although there is a trade-off between density of location and idle time of equipment.

Inefficient scenarios were sketched, such as not using the right equipment for the job and poor operator skills. These have an effect on energy consumption and utilisation rate. Exact figures for each parameters could not be given, however.

Actual figures on inefficient use might be available at dealers and medium-sized contractors. (The team has interviewed OEMs, large and small contractors.)

The calculator does not take into account the second life of the equipment. Sometimes equipment is owned by rental companies for just a few years. The calculator does not include a function to estimate the impacts of the second and possible third life. Response: the impact of production is now allocated to the first user — as is common in LCA. The use characteristics could be filled in for the second life instead of the first life. But indeed, there is no option to separately show impacts associated with multiple lives.

Some participants provided additional figures for the parameters itself.

Purposes for & possible use of the calculator:

— To compare different user cases, also based on old and new machines (for instance)

— For internal insight

— In tenders, to show clients the impact of equipment or possible impact reduction at certain way of use