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Volvo Cars position on chain of custody models

Purpose of the document

This position paper presents Volvo Cars position on using chain of custody models to reach our sustainability targets. Chain of custody models are today being used at an increased rate by material producers. Some chain of custody models allow companies to sell sustainable materials without needing separate manufacturing lines. The sustainable feedstock[1] can then be mixed with their regular feedstock. The EU commission is now setting the definition for mass balance, a chain of custody model, which is why our viewpoint on the topic is important.

Background and challenge

- Chain of custody is the process of following materials through every step of the supply chain. It is done through a series of procedures, technologies and documents that track materials from its source to the final product. It matches output flows with input flows for a given system under a set period of time. It can be seen as an accounting system for material flows.
- There are four main chain of custody models: identity preservation, segregation, mass balance and book & claims.
- Identity preservation and segregation models both ensures that certified material flows are kept separate from non-certified material sources. The main difference is that the segregation model allows materials certified by different schemes to be mixed.
- Mass balance and book & claims both allow for certified material flows and non-certified material flows to be mixed during processing. The main difference is that book & claims can be seen as a certificate trading model, where there is no need for a physical link between the inflow and outflow of the certified material.
- Mass balance can be carried out on different levels: batch, site and group level.
- Mass balance is today used for certified metals and minerals, bio-based and chemically recycled content in plastics, as well as CO_2 reductions and recycled content in steel and aluminium. Book & claims is used for biobased content in aviation and marine fuel, biogas and climate neutral electricity.
- Blockchain technology can be used as a digital ledger collecting and sharing data among the participants in any of the chain of custody model.

1 Sustainable feedstock can be: ESG certified materials (like cobalt, FSC wood, …), recycled or bio-based raw materials.

Future challenges

- It is important for our improved sustainability performance that our suppliers can reduce their greenhouse gas emissions by increasing for example the use of renewable or recycled feedstock. Using chain of custody models like mass balance can help companies initiate their transformation. For us, it is important to support our suppliers in their transition towards making more sustainable solutions, and we therefore accept the use of chain of custody models.
- Balancing investments into more sustainable materials, and at the same time being credible towards our customers, can be a fine line. It is difficult to explain to our customers that we support our suppliers' investments into more sustainable materials, but that the sustainable atoms or molecules are not guaranteed to be present in our vehicles or used in the actual vessels that transport our cargo.

Volvo Cars position

- Today we accept the use of chain of custody models to reach our sustainability targets.
- However, we would like to see the following requirements with regards to chain of custody models:
    - There should be a physical and chemical connection between the input and output materials.
    - Over-allocation of credits should not be allowed. There needs to be technical proof that the manufacturing site can produce the sustainable product being sold or that the transport vessel has the ability to use renewable fuel [2].
    - It should not be allowed to transfer credits between different technologies, be it materials, products, or logistic solutions[3].
    - The credit system must take operational yield into account[4].
    - The bookkeeping period should be 1 year (calendar or fiscal) or less.
    - All chain of custody models needs to be certified by an independent third-party, to ensure reliability and to verify the claims.
- Volvo Cars advocate for a stricter definition for mass balance than what is currently allowed by some material certification schemes.

Volvo Cars actions

- The first priority for Volvo Cars will be to have the sustainable atoms or molecules in our vehicles and transport solutions.
- We prefer to use the following chain of custody models: identity preservation, segregation and mass balance on batch level.
- However, we do make exceptions today, due to market practice:

2 Examples: Airplanes are allowed to maximum use 50% biofuel. A carrier should not sell more credits (biofuel) than their airplanes can use. A steel manufacturer cannot sell steel with a lower carbon footprint than their production route allows (BF/BOF vs EAF vs DRI/EAF).
3 Examples: Transfer of credits between different steel grades that can be produced with different degree of recycled content or between different logistics solutions container freight and bulk vessels.
4 Operational yield: most production processes create waste or by-products. These losses need to be considered.

- Solids: We can accept mass balance on site level for continuous production processes.
- Liquids: We accept book & claims for biobased fuel for aviation and marine logistics. However, our purchased fuel is only allowed to be used on transport solutions operated by our logistic partners and no more fuel than the amount of energy that is needed to transport an object (container, car or person) can be allocated.
- Gas: When biogas is delivered using a gas pipeline, we accept book & claims.
- Electricity: We accept book & claims for electricity since it is a controlled market and is in line with standards such as the Greenhouse Gas Protocol. See Volvo Cars position on energy attribute certificates

Volvo Cars proposed suggestions to strengthen the credibility of chain of custody models

1. Policymakers

- We acknowledge the need for regulatory frameworks for chain of custody models, especially mass balance, that includes information on credit transfer, and use of product claims and labelling.
- We recommend that standards on mass balance should be available with and without group level credit transfer[5], to make it easier to identify when group level credit transfer is being used.
- We need to see clarifications with regards to using mass balance for reaching the mandatory levels of recycled plastics in the new draft of the End-of-Life-Vehicle (ELV) directive, with regards to chemically recycled materials.
- We also would like it to be clarified that near-zero emission materials cannot be claimed using mass balance or book & claim to reduce CO_2 emissions.

2. Sustainability certificate schemes

- We would like to see increased transparency with regards to which type of chain of custody scheme is being certified. It should be easy to identify if a mass balance scheme is batch, site, or group level certified.
- To support a real transition in the way materials are produced it needs to be very clear in which certifications there is a theoretical possibility of finding recycled or renewable molecules or atoms in the product.

3. Material producers using chain of custody models

- Volvo Cars has high sustainability ambitions for 2040, reaching net zero greenhouse gas emissions and being a circular business. In order for us to achieve our ambitions targets we need access to sustainable materials. We therefore want to see a complete transition towards production of more sustainable materials, not stopping at using mass balance on group level. We find it critical for the material producing industry using mass balance today to speed up investments to ensure increased availability of sustainable materials in the future.

4. Logistics suppliers using sustainable fuel

5 When credits are transferred between manufacturing sites of a company, which leads to lack of physical or chemical traceability

- Calculations of energy for transportation needs to be further harmonized based on the standard ISO14083, to ensure correct allocations of biofuels. Reporting should to the largest extent be based on primary data.
- The ambition shall be to enable the use of 100% biofuel in transport equipment. Limitations in equipment to use a higher share of biofuels as drop-in fuel in fossil conventional fossil fuels needs to be overcome.