**Reflections on CARB workshop**

**Environmental Product Declaration (EPD) usage**

- comparability of EPDs is key, EPDs are designed to be descriptive by nature. They aren’t intended to infer changes of environmental impacts that result from changes in demand which can occur from systematic or widespread changes of material demand

- EPDs report impacts using single-point deterministic values and do not convey uncertainty clearly nor consistently. There are a few methods for assigning uncertainty to EPDs based on the information that they include (Waldman et al., 2020) and a recent project at the University of Bath focused specifically on incorporating uncertainty into LCA (link to project page with associated publications and research outputs: <https://researchportal.bath.ac.uk/en/projects/towards-net-zero-carbon-buildings-tackling-uncertainty-when-predi>; (Marsh et al., 2023)

- the presented dataset is similar to the Inventory of Carbon and Energy (ICE) database that was developed at the University of Bath in the UK. The database is now managed by Circular Ecology (<https://circularecology.com/embodied-carbon-footprint-database.html>) who recently had a webinar on the status of the ICE database.

-What is the intended use and purpose of this database of Californian EPDs that is being developed?

**Baseline Development**

A bottom-up baseline would be more contextually appropriate and granular, but the time and effort needed to gather, validate, and analyze the quantity and quality of data required for a state-wide baseline would be impractical due to the time constraints needed for reducing carbon emissions. A hybrid approach would enable us to use a top-down approach in a more time sensitive manner while the data infrastructure, reporting practices and data confidentiality are established and adopted to enable a bottom-up approach to be adopted over time. As sufficient data (in terms of quality and quantity) is gathered and analyzed for statistical significance, it can essentially override parts of the top-down approach with bottom-up data to form a hybrid baseline.

-top-down versus bottom-up (Frischknecht et al., 2019; Hollberg et al., 2019)

-a bottom-up approach for developing a baseline will also be data heavy and therefore will have missing scope as the baseline is developed

-a baseline can be developed using a hybrid approach to capture the benefits of both top-down and bottom-up methods

-a hybrid approach can start off with a top-down approach that looks at the economy/industry scale in California to capture everything within the desired scope

-a few other publications that could be relevant are: (Mastrucci et al., 2017; Stephan and Athanassiadis, 2017; Tozan et al., 2024; Wiebe et al., 2016)

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