

# Review Report of PTA Eco-Profile 2014

## Review Summary

The subject of this critical review is the development of the Eco-profile for the European PTA production commissioned by the Committee of PET manufacturers in Europe (CPME). PTA is an important precursor for PET manufacturing.

The review process included various meetings between the LCA practitioner and the reviewer, which included a model and database review and spot checks of data and calculations. The final Eco-profile report was reviewed by Mike Neal of CPME and the reviewer. All questions and recommendations were discussed with the LCA practitioner, and the report was adapted and revised accordingly.

Primary industry data were collected for the foreground process which is basically the PTA production step itself and partly on-site energy generation, while background process data were sourced from Ecoinvent as well as specific data sources from the LCA practitioner (e.g. updated country-specific electricity grid mixes). Primary industry data was collected from 5 European PTA producers which lead to an overall representativeness of 79% of the installed European PTA production capacity.

A critical aspect of the study is that for most result indicators of the investigated product, main contributions originate from the background system (e.g. refinery, steam cracking, average p-xylene production in Europe) which is based mainly on literature data and not on primary industry data. Since these processes have a high impact on the overall results, a sound LCI analysis based on industry data of the upstream processes of PTA production is desirable for achieving lower uncertainties and higher quality of the results. However, at the moment, the resulting dataset is considered best available data and good quality with respect to the goal and scope.

The LCA practitioner has demonstrated very good competence and experience, with a track record of LCA projects in the chemical and plastics industry. The critical review confirms that this Eco-profile adheres to the rules set forth in the PlasticsEurope's Eco-profiles and Environmental Declarations - LCI Methodology and PCR for Uncompounded Polymer Resins and Reactive Polymer Precursors (PCR version 2.0, April 2011). As a result, this dataset is assessed to be a reliable and high quality representation of PTA production in Europe.

## Reviewers Names and Institution

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