

Summary of Discussion Items During the April 7, 2004 ERC LCA Teleseminar

As during our first seminar, there was a lively exchange of ideas and information regarding LCA and how to implement it well within the semiconductor industry. Here are some of the key ideas we discussed:

On slide 5 of Nina's presentation, it may be useful to have uncertainties for all LCA indicators as extracted from databases in addition to the few that are listed. However, the ones listed in the presentation are the ones that have the largest magnitudes. It was also decided that weighting factors that would be multiplied by the values in each category could make the values of uncertainty more important for other categories that are currently neglected.

Slide 12 - Valuation factors come from a wide variety of resources and were aggregated by a past student at MIT.

Economic Input-output models (Lave, et al.) do not allow one to individually investigate different individual chemicals. Only aggregates based on the sector.

Nina's model is a hybrid model. She may attempt to link to the overall sector model to better define her upstream processes in the future.

Tree type of presentation for upstream processes versus web/network presentation

PIO-LCA would have a network presentation as opposed to a tree diagram like is commonly used to show manufacturing chains. In the tree diagram, it is difficult to show recycle of materials or feedback loops because the diagrams get very difficult to follow. A network model allows for multiple products/reactants and this in turns allows one to show loops better. There was some discussion of what feedback meant and how to handle this mathematically.

Boustead is a life cycle database and software tool that we could consider looking at for its effectiveness.