

BBI-SO2-R6

Le risposte sono indicate in colore azzurro.

Clarification of the expected impacts given in the topic description

1. Environmental impact 1: decrease biomass losses by at least 10%:

1.1. Is the 10% of the biomass losses calculated on a basis of the total lignocellulosic biomass input into biorefinery? For example in case of pulp and paper 100% of biomass would be total feed of woodchip which is made out of: lining, cellulose and hemicellulose.

The 10% of the biomass losses is calculated on a basis of the total lignocellulosic biomass input into biorefinery, with respect to the existing value chain. For example: considering all input and output streams, if the current biomass lost to waste is X tonnes out of Y tonnes of input. The goal is to reduce X by 10% while keeping Y fixed. Please note that the comparison is done on the net biomass content - thus the streams to compared need to be made equivalent. This is particularly relevant in case of comparison between a (relatively) wet and a (relatively) dry waste stream.

1.2. Is the 10% of the biomass losses calculated on a basis of total biomass which is lost in the waste streams?

The 10% decrease in biomass losses refers to the decrease of losses in the input biomass of the process/technology that proposals should intensify. However, the topic text does not specify in which part of the process the biomass losses should be decreased. It is sufficient if the overall reduction is well justified.

2. Environmental impact 2: increase the overall resource efficiency:

2.1. What is considered by resource in this case? Could you provide an example?

Resources can include biomass, chemicals, water, energy, labour and any input to the process. It is up to the applicant to provide credible information.

2.2. By resource can we consider solvents, chemicals, equipment, energy?

Resources can include biomass, chemicals, water, energy, labour and any input to the process. It is up to the applicant to provide credible information.

2.3. Or by resources we consider the biomass feed into biorefinery?

Resources can include biomass, chemicals, water, energy, labour and any input to the process. It is up to the applicant to provide credible information.

3. Economic impact 1: decrease overall costs associated with biorefinery processes by at least 10% compared with current processing solutions identified as benchmarks:

3.1. By overall costs associated with biorefinery do we consider only operating costs or do we consider capital costs or do we consider both operating and capital costs?

Overall costs can be considered either as operating, or capital costs, or both, depending on the actual case. If it is a retrofit of an existing plant, operating costs shall be considered, but if it's substitution of an old plant by a new one, CAPEX can be included.

The scope and impact related to operational safety:

Q1: When the call refers to safer processes, is it enough to recognize process hazards (e.g., such as a “what if” and/or “checklist” assessment, perhaps together with streamline worker exposure analysis or similar)? or is a more detailed Risk assessment (such as Hazard and Operability (HAZOP) assessment, failure mode and effect analysis (FMEA), or fault tree analysis (FTA)) necessary?

*The scope of this RIA topic focuses on the introduction of process intensification to lower capital and operational costs of a biorefinery and still achieve high yields of the desired products, **but not to compromise operational safety**. Therefore, it will suffice to identify potential process hazards and specify how to deal with them. It’s up to the applicants to take up more detailed steps such as HAZOP, FMEA or FTA as they deems necessary for their proposal. These detailed assessments will be required in further upscaling to demo/flag.*

Q2: When the call refers to product safety, does it include the use phase of an end-product (e.g., use of a biochemical in a consumer product or use of a biofuel in a certain transportation sector) or only the production phase of the end product?

Although this specific topic does not refer to product safety (its focus is on processing), proposals must include process and product safety where relevant, but especially when targeting new products. Every single proposal to any topic in the BBI AWP must comply with relevant EU legislations. These include any potential hazard associated with the processes and products (see Table 3 ‘Standard requirements for proposals for the different actions’ in the AWP). Therefore, this requirement covers the full trajectory of production and use of a product.