

Report Deliverables

1. Letter of Transmittal.
2. Cover Page including required title, “Technical & Economic Proposal - Closing Critical Gaps to Enable a Circular Plastics Economy.”
3. Executive Summary.
4. Table of Contents.
5. Table of Figures.
6. Table of Tables.
7. Brief Design Description.
8. Process Details.
 - a. Process flow diagram (PFD) for process and utilities areas.
 - b. Material balance for major streams including mass rate, composition, and key thermal properties.
 - c. Sized equipment list.
9. Economics. See Appendix 1, Part 9.0 Economics.
 - a. Capital cost estimate.
 - b. Variable Cost estimate.
 - c. Fixed Cost estimate
10. Process Safety. See Appendix 1, Part 10.0.
 - a. Minimizing Environmental Impacts.
 - b. P&ID with controls and alarms.
 - c. Pressure relief valve sizing.
 - d. Failure rate analysis.
 - e. Personnel exposure risk.
 - f. Atmospheric detonation of distillation inventory.

- g. Hazard and Operability Study (HAZOP) of the largest distillation column.

11. Recommendations for Improvement of the Bali Sorting Facility.

- a. Recommendations for closing the Quantity Gap.
- b. Recommendations for closing the Quality Gap.
- c. Recommendations for closing the Affordability Gap.

12. Conclusions.

13. Appendices.

a. Adsorption Section Detail.

- i. List design assumptions.
- ii. Explain how adsorbent will be regenerated or replaced without interrupting continuous operation of the facility and supply of raw Pyoil from the Pyrolyzer.
- iii. Explain how the unit can be reliably operated during periods of unusually high levels of chloride or metals contamination, as the qualities of the sorted polymer feedstock can vary outside of the design range.

b. Distillation Section Detail.

- i. Describe the configuration and design considerations for the distillation tower.
- ii. List the modeling assumptions.
- iii. Explain how the tower configuration minimizes overall energy consumption.
- iv. Describe how this tower will be controlled to achieve specifications on all products.
- v. Since there can be traces of water in the tower feed, describe how the design allows for the continuous removal of free

water from the tower, keeping free water out of the products that feed the steam cracking furnaces.

- vi. Specify the tower tray type(s) and explain the rationale for the selection.
- vii. Show the temperature and vapor/liquid traffic profiles in the tower.

14. References.

15. Final submission must be in electronic format (PDF or MS-Word). The full report must be 50 pages or less, including all text, appendices, and graphics. [Added 18 April 2023]

16. Safety Design Checklist. Add as a separate document. Not included in the 50-page limit. [Added 10 May 2023]

17. Completed Deliverables Checklist. Add as a separate document. Not included in the 50-page limit. [Added 10 May 2023]