

# Environmental Cost Accounting

The environmental cost in 2023 has decreased by THB 33,456.71 million from 2022 or 17.71%. This was mainly from the decrease in crude oil price from the previous year by 15%, reflecting the reduction in material costs of product outputs by THB 33,437.69 million. In 2023, the Company has run the refinery unit totaling 119.11 thousand barrels per day, decreasing from the previous year in 2022. This caused a reduction in material costs of non-product outputs by THB 24.60 million, relating to the reduction of excessive chemical costs by THB 18.91 million. Moreover, the Company has a lower prevention and other environmental management costs by

THB 1.93 million and reduction of costs in monitoring and measurements by THB 0.77 million. Nonetheless, the Company spent THB 7.52 million more in pollution control equipment due to an increase in waste management fee of THB 6.35 million as the conditions in the production process changed and the JET oil production increase, generating more waste.

The benefit from by-product and waste recycling decreased by THB 23.93 million or 73.94% as a result of less ability to sell liquid sulfur by THB 30.50 million and The THB 1.87 million increase from selling iron and aluminum scraps.

(Unit: Million THB)

| Environmental Cost Accounting (EN 31)    | 2021      | 2022       | 2023              |
|--|-----------|------------|-------------------|
| <b>Material costs of product outputs</b> |           |            |                   |
| Crude Feed                               | 81,445.69 | 169,495.13 | <b>138,435.05</b> |
| Ethanol                                  | 5,980.37  | 7,263.95   | <b>6,213.60</b>   |
| Bio-Diesel (B100)                        | 0.00      | 0.00       | <b>0.00</b>       |
| Bio-Diesel (B100)-Premium                | 0.00      | 0.00       | <b>0.00</b>       |
| Bio-Diesel (B100) HI PURE TYPE2          | 8,371.91  | 8,049.93   | <b>7,347.12</b>   |
| Used cooking oil                         | 0.01      | 31.18      | <b>101.25</b>     |
| Chemicals                                | 160.35    | 173.75     | <b>180.50</b>     |
| Process water                            | 27.65     | 24.24      | <b>28.34</b>      |
| Process energy                           | 1,618.08  | 3,062.46   | <b>2,357.10</b>   |

| Environmental Cost Accounting (EN 31)                      | 2021    | 2022    | 2023   |
|--|---------|---------|--------|
| <b>Material costs of non-product outputs</b>               |         |         |        |
| SLOP OIL   | 58.07   | 27.30   | 21.51  |
| Effluent   | 11.61   | 12.24   | 12.34  |
| Excess chemicals from neutralizing pond                    | 0.20    | 20.68   | 1.77   |
| <b>Waste and emission control costs</b>                    |         |         |        |
| Environmental equipment maintenance                        | 23.03   | 0.93    | 1.48   |
| Depreciation of pollution control equipment                | 500.07  | 686.69  | 686.47 |
| Effluent treatment   | 6.12    | 5.69    | 6.52   |
| Waste disposal   | 5.46    | 4.95    | 11.30  |
| <b>Prevention and other environmental management costs</b> |         |         |        |
| Monitoring and measurement                                 | 7.70    | 9.32    | 8.56   |
| Depreciation of waste storage area                         | 0.05    | 0.02    | 0.02   |
| Management system operation                                | 1.58    | 1.39    | 0.22   |
| Environmental equipment maintenance                        | -       | -       | -      |
| <b>Benefits of by-products and recycling</b>               |         |         |        |
| Liquid sulfur  | (17.16) | (30.50) | (5.14) |
| Iron and aluminum scrap                                    | (3.12)  | (1.87)  | (3.29) |