

Table 17. GHG and Energy Emission Performance

[OJK F.6, F.11] [GRI 102-5, 102-6, 102-7, 102-8, 302-1, 302-3, 302-4, 305-1, 305-2, 305-3, 305-4]

Metric	Telkom			Telkomsel			Mitratel		
	2025	2024	2023	2025	2024	2023	2025	2024	2023
Emission Management									
Total GHG emissions (tCO ₂ e) (Location-based)	1,142,673.9	430,926.9*	430,750.9*	2,708,748.7	1,696,947.8*	1,628,935.2*	37,630.5	53,706.3	62,742.8
Total GHG emissions (tCO ₂ e) (Market-based)	1,112,914.8	430,926.9*	430,750.9*	2,708,748.7	1,696,947.8*	1,628,935.2*	37,630.5	53,706.3	62,742.8
Scope 1 and 2 (Location-based)	304,190.7	367,945.5*	372,391.0*	1,736,327.9	1,561,941.6*	1,486,664.6*	13,136.7	37,896.0	38,587.7
Scope 1 and 2 (Market-based)	274,431.6	367,945.5*	372,391.0*	1,736,327.9	1,561,941.6*	1,486,664.6*	13,136.7	37,896.0	38,587.7
Scope 1	5,044.4	25,087.0	25,429.1	14,360.2	19,337.3	19,866.5	1,059.4	3,445.9	3,847.9
Fuel combustion – stationary	709.9	8,035.4	8,509.7	6,391.6	8,179.1	8,240.3	725.1	1,261.8	1,535.3
Fuel combustion – mobile	2,011.3	4,126.4	4,126.4	4,369.7	4,324.7	4,324.7	315.6	2,134.9	2,264.8
Fugitive emission – refrigerant & fire suppression	2,323.2	12,925.1	12,792.8	3,596.1	6,833.4	7,301.4	18.8	49.1	47.7
Fugitive emission – waste water	0.0	0.1	0.1	2.9	0.03	0.03	0.0	N/A	N/A
Scope 2 (location-based)	299,146.3	342,858.4*	346,961.9*	1,721,967.7	1,542,604.3*	1,466,798.1*	12,077.3	34,450.2	34,739.8
Scope 2 (Market-based)	269,387.2	342,858.4*	346,961.9*	1,721,967.7	1,542,604.3*	1,466,798.1*	12,077.3	34,450.2	34,739.8
Scope 3	838,483.2	62,981.4	58,359.9	972,420.8	135,006.1	142,270.6	24,493.8	15,810.3	24,155.1
Category 1	9,693.6	31,982.9	5,117.3	30,322.9	4,176.5	10,490.7	0.0	440.1	399.5
Category 2	75,242.4	16,664.7	37,982.9	132,506.2	22,366.2	20,623.6	22,904.7	15,251.5	22,784.7
Category 3	29,429.6	0.0	0.0	164,001.4	0.0	0.0	1,414.1	0.0	0.0
Category 4	51.1	N/A	N/A	0.0	N/A	N/A	0.0	N/A	N/A

	Telin			TDE			Other Subsidiary			TelkomGroup		
	2025	2024	2023	2025	2024	2023	2025	2024	2023	2025	2024	2023
	12,339.9	65,355.8	111,116.6	130,099.8	105,844.3	89,397.7	170,057.0	114,442.6	120,165.9	4,196,087.0	2,467,223.7*	2,443,109.1*
	12,339.9	65,355.8	111,116.6	117,433.2	105,844.3	89,397.7	170,057.0	114,442.6	120,165.9	4,153,661.3	2,467,223.7*	2,443,109.1*
	7,213.2	12,119.5	60,054.1	114,780.0	105,232.8	76,080.9	52,912.9	75,071.0	75,354.5	2,228,561.3	2,160,206.4*	2,109,132.9*
	7,213.2	12,119.5	60,054.1	102,113.3	105,232.8	76,080.9	52,912.9	75,071.0	75,354.5	2,186,135.6	2,160,206.4*	2,109,132.9*
	251.3	832.9	3,272.9	2,475.8	3,310.5	360.0	22,876.9	30,071.8	30,953.7	46,068.1	82,085.4	83,730.0
	13.8	400.5	504.0	196.1	143.2	54.1	4,251.9	9,361.4	9,201.2	12,288.3	27,381.5	28,044.6
	184.6	280.4	236.6	0.0	38.7	25.8	14,992.9	16,276.8	17,726.5	21,874.0	27,182.0	28,704.9
	49.2	151.9	2,532.4	2,165.7	3,125.5	279.4	2,249.2	4,406.1	3,993.7	10,402.1	27,491.1	26,947.5
	3.8	N/A	N/A	114.1	3.1	0.7	1,382.9	27.5	32.3	1,503.6	30.8	33.1
	6,961.9	11,286.6	56,781.2	112,304.2	101,922.2	75,721.0	30,036.0	44,999.3	44,400.8	2,182,493.3	2,078,121.1*	2,025,402.9*
	6,961.9	11,286.6	56,781.2	99,637.5	101,922.2	75,721.0	30,036.0	44,999.3	44,400.8	2,140,067.5	2,078,121.1*	2,025,402.9*
	5,126.6	53,236.3	51,062.5	15,319.8	611.6	13,316.8	117,144.1	39,371.6	44,811.3	1,967,525.7	307,017.3	333,976.2
	0.0	45,803.8	44,454.1	0.0	0.0	0.0	24,780.0	4,814.8	12,265.4	64,796.5	87,218.1	72,727.0
	4,027.0	4,575.9	6,109.9	448.6	183.7	13,172.5	4,552.6	11,635.1	1,999.0	239,681.5	70,677.0	102,672.6
	650.6	0.0	0.0	7,825.0	0.0	0.0	8,429.7	0.3	0.1	211,750.4	0.3	0.1
	0.0	N/A	N/A	0.0	N/A	N/A	0.0	0.0	0.0	51.1	N/A	N/A

Metric	Telkom			Telkomsel			Mitratel		
	2025	2024	2023	2025	2024	2023	2025	2024	2023
Category 5	240.4	0.0	0.0	7.4	0.5	72.7	0.0	0.0	0.0
Category 6	833.7	14,232.5	15,102.4	472.1	8,873.2	3,927.4	160.2	106.4	963.4
Category 7	99.2	N/A	N/A	42.0	N/A	N/A	14.8	N/A	N/A
Category 8	8.2	0.0	0.0	0.0	N/A	N/A	0.0	12.2	7.5
Category 9	0.0	N/A	N/A	0.0	N/A	N/A	0.0	N/A	N/A
Category 11	722,750.7	0.0	0.0	644,986.2	99,559.4	99,421.1	0.0	0.0	0.0
Category 12	1.9	N/A	N/A	56.8	N/A	N/A	0.0	N/A	N/A
Category 13	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0
Category 15	132.5	101.3	157.2	26.0	30.3	7,735.0	0.0	0.0	0.0
Biogenic emission from biodiesel user	244.3	N/A	N/A	2,553.0	N/A	N/A	241.7	N/A	N/A
Emission intensity (tons of CO ₂ /billion Rp) revenue) (Location-based)	7.1	8.0*	7.3*	15.9	13.8*	14.5*	1.4	4.1	4.5
Emission intensity (tons of CO ₂ /billion Rp) revenue) (Market-based)	6.4	8.0*	7.3*	15.9	13.8*	14.5*	1.4	4.1	4.5
Energy Management									
Total energy usage (GJ)	1,223,410.5	1,501,475.8*	1,524,992.2*	6,984,695.3	6,510,919.2*	6,195,137.4*	62,393.5	175,481.0	183,466.5
Electricity consumption (GJ)***	1,182,032.5	1,334,295.0*	1,351,378.3*	6,787,504.4	6,329,140.9*	6,022,516.8*	46,434.3	128,226.0	130,680.1
Electricity consumption purchased from total energy consumption (%)	96.6%	88.9%*	88.6%*	97.2%	97.2%*	97.2%*	74.4%	73.1%	71.2%
Electricity consumption from renewable sources (PLTS and PLTMH) (GJ)	0.0	0.0	0.0	13,926.0	9,995.0	7.3	0.0	0.0	0.0
Electricity consumption from renewable sources compared to total energy consumption (%)	0.0	0.0	0.0	0.2%	0.2%*	0.0	0.0	0.0	0.0
Fuel consumption (GJ)	41,378.1	167,180.8	173,613.9	183,265.0	171,783.3	172,613.3	15,959.2	47,255.0	52,786.4
Non-renewable fuel consumption (GJ)	37,927.8	167,180.8	173,613.9	147,205.2	171,783.3	172,613.3	12,545.5	47,255.0	52,786.4
Renewable fuel consumption (GJ)	3,450.3	N/A	N/A	36,059.7	N/A	N/A	3,413.7	N/A	N/A
Biodiesel fuel consumption -B40 (GJ)	3,450.3	N/A	N/A	36,059.7	N/A	N/A	3,413.7	N/A	N/A
Biodiesel fuel consumption -B30 (GJ)	0.0	N/A	N/A	0.0	N/A	N/A	0.0	N/A	N/A
Biodiesel fuel consumption -{B20- Singapore Biodiesel}(GJ)	0.0	N/A	N/A	0.0	N/A	N/A	0.0	N/A	N/A

	Telin			TDE			Other Subsidiary			TelkomGroup		
	2025	2024	2023	2025	2024	2023	2025	2024	2023	2025	2024	2023
	0.0	0.0	0.0	0.0	0.0	0.0	23.0	0.2	7.9	270.7	N/A	N/A
	440.5	2,856.6	498.5	38.4	427.9	144.3	1,630.0	5,622.8	9,603.7	3,574.7	N/A	N/A
	8.6	N/A	N/A	3.9	N/A	N/A	221.2	N/A	N/A	389.8	N/A	N/A
	0.0	0.0	0.0	7,004.0	0.0	0.0	70,929.2	7,973.7	7,742.0	77,941.4	7,985.9	7,749.5
	0.0	N/A	N/A	0.0	N/A	N/A	172.6	N/A	N/A	172.6	N/A	N/A
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,367,736.8	N/A	N/A
	0.0	N/A	N/A	0.0	N/A	N/A	0.0	N/A	N/A	58.6	N/A	N/A
	0.0	0.0	0.0	0.0	0.0	0.0	6,296.1	148.0	107.3	833.4	148.0	107.3
	0.0	0.0	0.0	0.0	0.0	0.0	109.7	9,176.6	13,085.8	268.1	9,308.3	20,978.0
	49.4	N/A	N/A	23.2	N/A	N/A	1,704.4	N/A	N/A	4,816.0	N/A	N/A
	0.6	1.0	5.3	72.0	89.5	140.3	1.0	1.4	1.5	15.2	14.4	14.1
	0.6	1.0	5.3	64.1	89.5	140.3	1.0	1.4	1.5	14.9	14.4*	14.1*
	38,788.2	85,460.4	488,100.1	642,432.3	546,293.2	314,424.8	416,149.4	541,534.6	557,107.1	9,367,869.3	9,361,163.8*	9,270,561.5*
	35,409.3	76,226.4	478,090.5	639,460.8	543,813.2	313,328.2	124,092.4	185,629.3	183,083.7	8,814,933.6	8,597,330.8*	8,479,077.5*
	91.3%	89.2%	97.9%	99.5%	99.5%	99.7%	29.8%	34.3%	32.9%	94.1%	91.8%*	91.5%*
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13,926.0	9,995.0	7,341.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1%	0.1%*	0.1%*
	3,378.9	9,234.0	10,009.6	2,971.6	2,480.0	1,096.6	292,057.0	355,905.2	374,023.4	539,009.7	753,838.0	784,143.0
	2,681.0	9,234.0	10,009.6	2,644.0	2,480.0	1,096.6	268,004.7	355,905.2	374,023.4	471,008.2	753,838.0	784,143.0
	697.9	N/A	N/A	327.6	N/A	N/A	24,052.3	N/A	N/A	68,001.5	N/A	N/A
	697.9	N/A	N/A	0.0	N/A	N/A	24,050.5	N/A	N/A	67,672.0	N/A	N/A
	0.0	N/A	N/A	174.1	N/A	N/A	1.4	N/A	N/A	175.5	N/A	N/A
	0.0	N/A	N/A	153.5	N/A	N/A	0.0	N/A	N/A	153.5	N/A	N/A

Metric	Telkom			Telkomsel			Mitratel		
	2025	2024	2023	2025	2024	2023	2025	2024	2023
Biodiesel fuel consumption -(B10-Malaysia Biodiesel) (GJ)	0.0	N/A	N/A	0.0	N/A	N/A	0.0	N/A	N/A
Consumption of renewable fuels 'purchased from total energy consumption (Share of renewable energy)(%)	0.3%	N/A	N/A	0.5%	N/A	N/A	5.5%	N/A	N/A
Reduction in energy usage (GJ)****	-278,065.3	-23,516.4*	90,683.2*	473,776.1	315,781.8*	313,132.4*	-113,087.5	-7,985.6	-20,116.0
Reduction in energy use (%)****	-18.5%	-1.5%*	6.3%*	7.3%	5.1%*	5.3%*	-64.4%	-4.4%	-9.9%
Energy intensity (GJ/billion Rp revenue)	28.4	32.6*	29.7*	63.9	57.4*	60.5*	6.5	19.0	21.3
Total electricity usage (kWh)	328,342,348.6	370,637,495.6*	375,382,868.2*	1,885,417,875.2	1,758,094,691.2*	1,672,921,324.3*	12,898,426.5	35,618,327.0	36,300,030.0

* Restatement of information based on adjustments to electricity data collection methodology

** N/A (Not applicable)

*** There is a unit conversion from kilowatt-hour (kWh) to Giga Joule (GJ) with a conversion factor of 0.0036

**** A minus sign (-) indicates a decrease in energy usage compared to the previous year. [SASB TC-SI-130a.1, TC-TL-130a.1, TC-IM-130a.1]

***** The consolidated data of TelkomGroup and the data per Subsidiary entity, may show different values. At the consolidation level, leased assets are recorded as a single unit and thus counted once, whereas at the level of each entity, the same asset can be recorded in more than one entity according to each entity's share or involvement, resulting in a higher total.

Explanation of energy management performance in 2025:

- In general, the decline in fuel use is primarily driven by the transition to biodiesel use, in line with the biodiesel implementation biodiesel mandate in Indonesia, Singapore, and Malaysia.
- Telkom recorded a decrease in energy usage driven by a decline in operational vehicle fuel consumption, which fell from 1,654,870 liters in 2024 to 688,648 liters in 2025.
- Telkomsel recorded an increase in energy use in 2025, influenced by an increase in motor vehicle fuel consumption (RON 90, 92, and 98) from 1,770,828 liters in 2024 to 1,865,891 liters in 2025. Furthermore, electricity consumption also increased with the addition of base transceiver stations (BTS) throughout 2025.
- Mitratel recorded a decrease in energy use in 2025, primarily as a result of the outsourcing of tower operations to third parties. The number of towers managed by Mitratel will decrease from 1,682 units in 2024 to 429 units in 2025.
- Telin recorded a decrease trend in energy use in 2025, influenced by reduced consumption of motor vehicle fuel (RON 90, 92, and 98), as well as decreased electricity use in its operational areas of Singapore, Malaysia, and Hong Kong.
- TDE recorded an increase in energy use in 2025, in line with the expansion of its data center business on Java Island.

	Telin			TDE			Other Subsidiary			TelkomGroup		
	2025	2024	2023	2025	2024	2023	2025	2024	2023	2025	2024	2023
	0.0	N/A	N/A	0.0	N/A	N/A	0.4	N/A	N/A	0.4	N/A	N/A
	1.8%	N/A	N/A	0.1%	N/A	N/A	5.8%	N/A	N/A	0.7%	N/A	N/A
	-46,672.2	-402,639.7	-22,453.0	96,139.1	231,868.4	220,681.0	-125,385.2	-15,572.5	-297,889.0	6,705.5	90,602.3*	291,371.5*
	-54.6%	-82.5%	-4.4%	17.6%	73.7%	235.4%	-23.2%	-2.8%	10.3%	0.1%	1.0%*	3.2%*
	3.2	7.1	42.8	403.1	464.5	579.6	8.2	10.4	10.8	63.8	62.4*	62.1*
	9,835,920.3	21,174,012.0	132,802,909.0	177,627,989.5	151,059,230.0	87,035,600.0	34,470,108.2	51,563,700.0	50,856,577.0	2,448,592,668.3	2,388,147,456.2*	2,355,299,308.5*