

Enel SLBs: FY 2023 generation figures released

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Enel reported its 2023 results on 21 Mar 2024, alongside details of its electricity generation mix.¹ The key figure for Sustainability-Linked Bond (SLB) investors is the Scope 1 emissions intensity for power generation; ten bonds will pay a 25bp step-up if this is above 148gCO₂/kWh for 2023.²

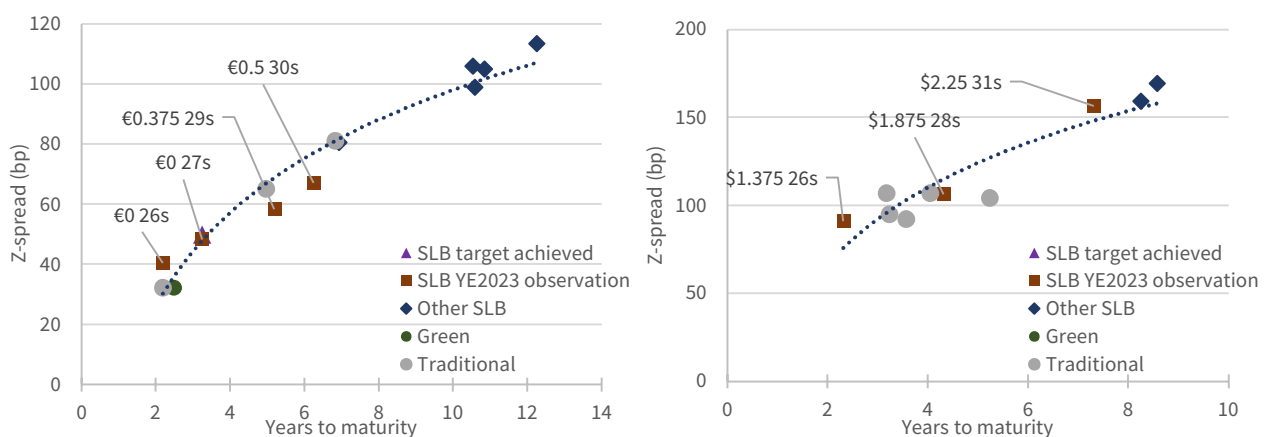
Our earlier analysis concluded it was likely this target would be missed, primarily due to extended coal generation as a response to the Ukraine invasion. Market pricing on the bonds also showed little differentiation between bonds that would receive an increased coupon if the target was missed, and those with targets that had already been achieved.

Full year figures show a reduction in coal generation of -45% year-on-year and continued growth in renewables generation of +13% YoY.³ This is against a backdrop of overall lower total generation (possibly driven by a mild winter), which supports lower conventional usage, as gas is typically the power used for marginal demand as it can be turned on and off quickly.⁴

This data suggests a higher probability of the target being met, but that would still require significant efficiency savings within 2023, which gives uncertainty (see full analysis overleaf). We expect the final number to be reported in Enel's 2023 sustainability report, which hopefully will be released in advance of its AGM in May.

Two EUR bonds referencing this Sustainability Performance Target (SPT) are trading below the Enel curve (see Figure 1), which implies a meaningful probability of the target being missed (~25%). Others are still pricing inline, suggesting the market expects the target to be met. This inconsistency should correct when the final number is reported.

Figure 1. Enel bond spreads between 2y and 14y. LHS EUR, RHS USD. Source: Bloomberg, accessed 21 Mar 2024.



¹ "FY 2023 Presentation", Enel, 21 Mar 2024.

² For more details please see "Enel SLBs: update on 2023 observation date", AFII, 20 Oct 2023.

³ We note the Greek utility PPC also announced strong coal decommissioning results in 2023 earlier in the year, as analysed in "PPC: Coal decommissioning success impacts SLBs", AFII, 19 Feb 2024.

⁴ "Natural Gas", IEA, accessed 21 Mar 2024.

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Full year 2023 Power Generation

Table 1 shows the H2 2023 power generation figures compared to prior periods. Renewables generation has met all additional demand from H1 to H2, and replaced 3GWh of coal generation.

Table 1. Enel generation and emissions intensity figures. Source: Enel, AFII.

Date	Renewables (GWh)	Nuclear (GWh)	Coal (GWh)	Oil & Gas	CCGT	Total power generated (GWh)	Scope 1 Intensity (gCO ₂ e/kWh)
H1 2021	54,748	12,815	5,803	9,654	22,799	105,819	207
H2 2021	54,070	12,689	8,055	13,055	28,919	116,788	241*
H1 2022	54,741	13,447	9,937	13,026	24,355	115,506	237
H2 2022	57,708	13,061	9,785	1,626	30,081	112,261	221*
H1 2023	60,460	12,441	6,881	4,184	18,033	101,999	173
H2 2023	66,525	12,424	3,874	3,837	18,672	105,332	

*Calculated using H1 and FY figures.

The full year target is 148gCO₂/kWh, which requires a H2 2023 figure of 124gCO₂/kWh over these total production figures to be achieved.

Enel has not yet reported the emissions intensity associated with 2023 generation, and does not seem to have ever reported intensity for each generation method. For previous analyses we have inferred emission intensities for different methods from this reporting, which may help to estimate a potential range for the overall intensity for 2023. Possible scenarios are shown in Table 2.

Table 2. Scenario analysis for Enel's emissions intensity. Source: AFII.

Scenario	Renewables + Nuclear	Oil & Gas & CCGT	Coal	TOTAL
H2 2023 Generation (GWh)	78,949	22,509	3,874	105,332
Emissions intensity estimations (gCO₂e/kWh)				
Flat conventionals production implied from H1 2023	0	606	606	152
Coal = 2x other conventionals	0	490	980	141
Coal = 3x other conventionals	0	412	1,235	133
11% efficiency saving for oil & gas & CCGT	0	371	1,235	124

Using H1 2023 figures to estimate a flat emissions intensity for all non-nuclear conventional methods gives 606gCO₂/kWh. Applying this to H2 2023 suggests an overall intensity of 152gCO₂/kWh, which falls short of the target. This however does not give Enel the benefit of its reduced coal generation.

It is estimated that coal-to-gas reduces emissions 50% when producing electricity.⁵ Using this ratio implies coal generates 980gCO₂/kWh and other conventionals 490gCO₂/kWh, which suggests a total figure of 141gCO₂/kWh. Being more generous and using a saving of two-thirds only reduces the total to 133gCO₂/kWh.

⁵ “[The role of gas in today’s energy transition](#)”, IEA, Jul 2019.

To achieve the target further efficiency savings are needed, of around 11% across oil & gas & CCGT, as shown in the final row of the table.

Conclusions

Enel has announced a strong improvement in its generation mix for full year 2023, which will lead to reduced emissions intensities. Full details of the KPI that is referenced by its SLBs has not yet been reported.

Our estimates suggest the target is not guaranteed to have been achieved; that would require both significant emissions savings in switching from coal to gas, and efficiency savings within existing gas units to reach the required target.

Nevertheless the increased renewable generation is a success for Enel, and the presence of such a significant SLB target may have played a role in motivating that improvement.

Pricing on the bonds in question does not give a comprehensive answer as to whether the market expects the target to be missed or achieved. Some EUR bonds (e.g. ENELIM €0.375% 29s and ENELIM €0.5% 30s) appear tight to the curve, implying a probability of the target being missed of around 25%.⁶ Others (e.g. ENELIM \$2.25% 31s) appear to be trading wide. There may be volatility as the final results are released, and that information is digested by the market.

⁶ ENELIM €0.375% 29s is 6bp tighter than ENELIM €3.875% 29s. Then value of the step-up is 24.1bp, so $6/24.1 = 24.9\%$ probability of receiving the step-up.

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