Supplementary Materials

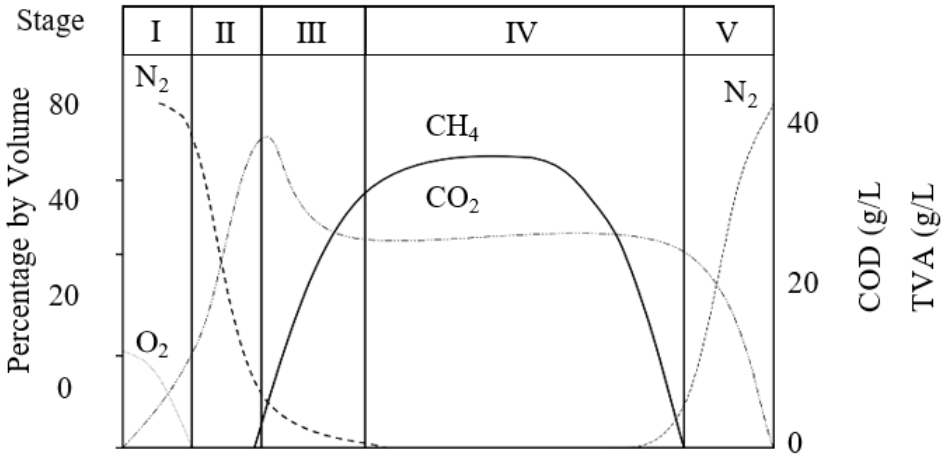

Fig. S1. Composition of LFG during the five phases (source: [1])

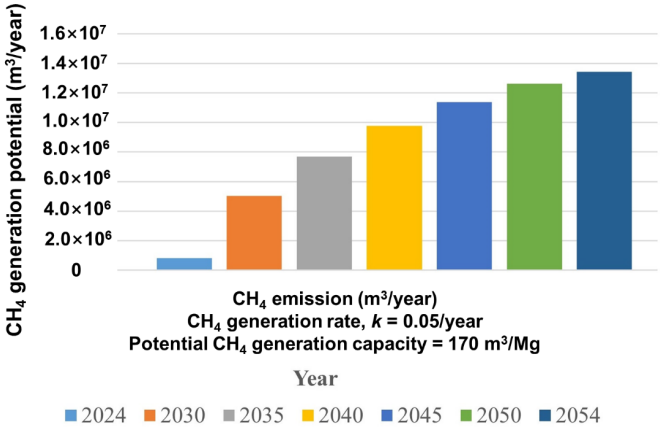

Fig. S2. CH_4 generation potential for Condition I

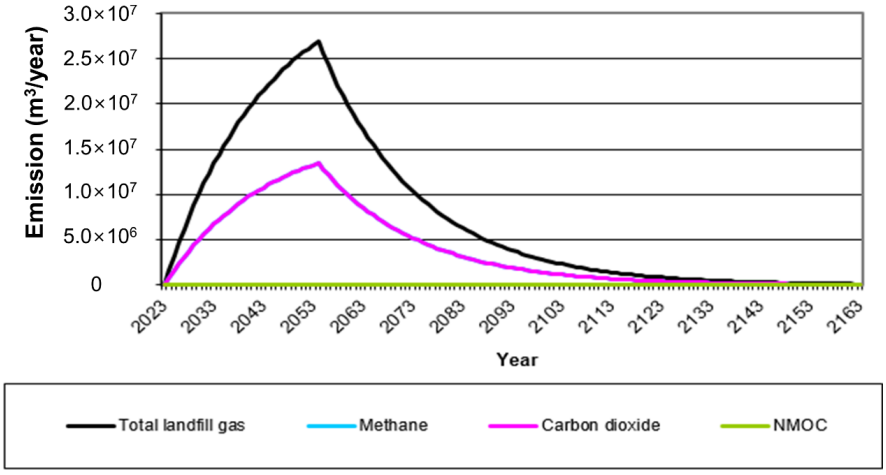

Fig. S3. Comparison of total LFG and CH_4 generation projection comparison for Condition I

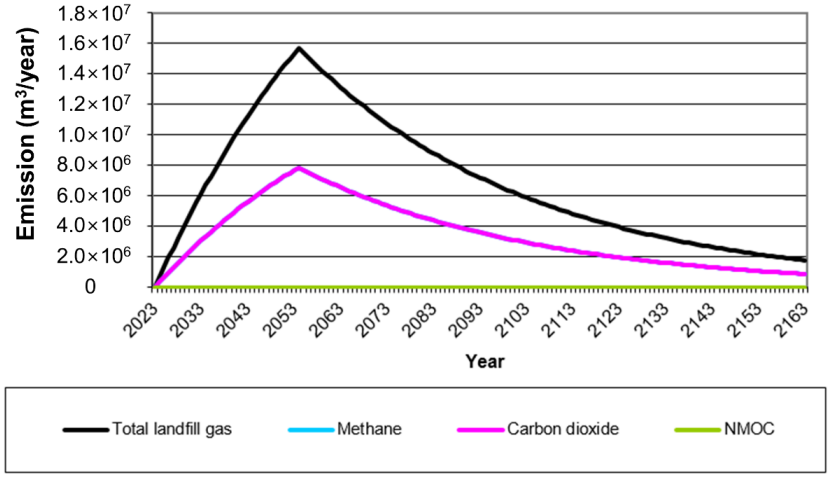

Fig. S4. Comparison of the total LFG and CH_4 generation projection for Condition II

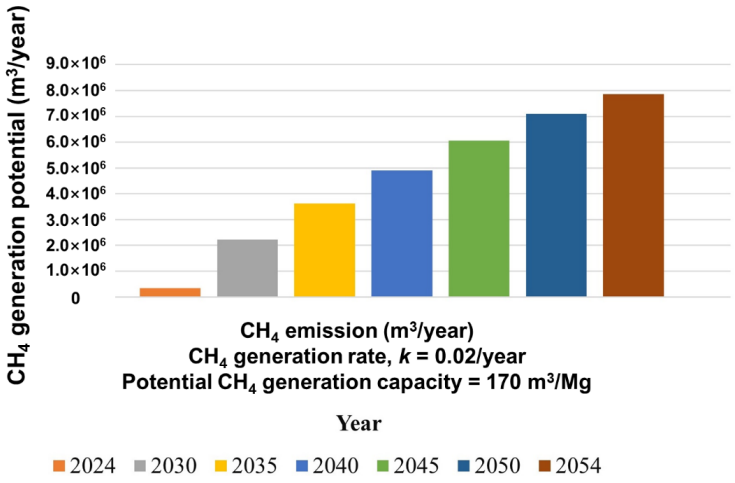

Fig. S5. CH_4 generation potential for Condition II

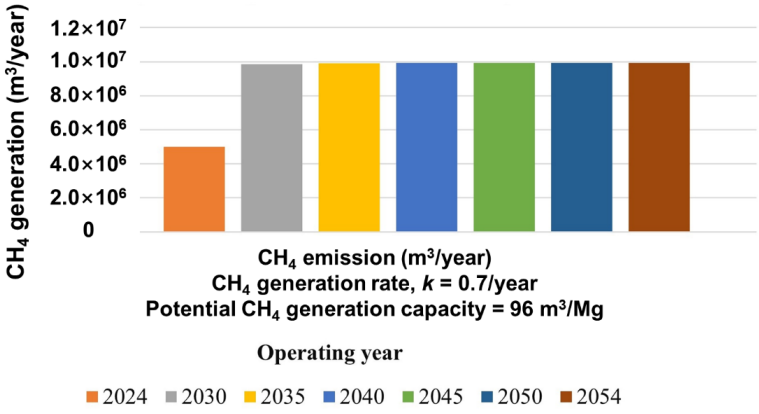

Fig. S6. CH_4 generation potential for Condition III

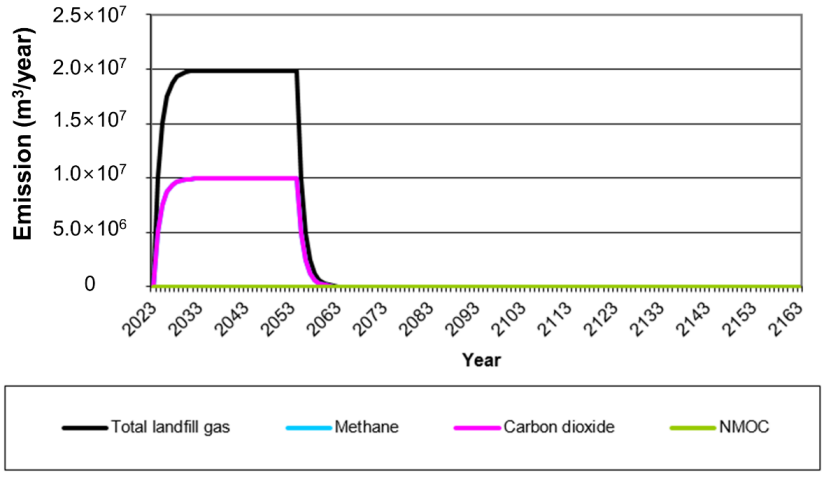

Fig. S7. Comparison of the total LFG and CH_4 generation projections for Condition III

Table S1. Values for the potential CH_4 generation capacity (L_0) and CH_4 generation rate (k) associated with the landfill type (source: [2])

Landfill type	L_0 (m^3/Mg)	k (/year)
Arid area	170	0.02
Conventional	170	0.04
Wet area	96	0.7

Table S2. CH_4 generation potential (L_0) associated with MSW category (source: [3])

MSW category	L_0 (m^3/t)
Inert (relatively)	20
Semi decomposable	120
Decomposable	170

References

1. Bove R, Lunghi P. Electric power generation from landfill gas using traditional and innovative technologies. *Energy Convers. Manage.* 2006;47:1391-1401. https://doi.org/10.1016/j.enconman.2005.08.017.
2. LFG energy project development handbook. Washington, DC, USA: United States Environmental Protection Agency; 2021.
3. Sun W, Wang X, DeCarolis JF, Barlaz MA. Evaluation of optimal model parameters for prediction of methane generation from selected U.S. landfills. *Waste Manage.* 2019;91:120-127. https://doi.org/10.1016/j.wasman.2019.05.004.