Corrigendum to “Potential for the valorization of carbon dioxide from biogas production in Sweden” [J. Clean. Prod. 370 (2022) 133498]

Stephanie S. Cordova*, Marcus Gustafsson, Mats Eklund, Niclas Svensson

Environmental Technology and Management, Department of Management and Engineering, Linköping University, SE-581 83, Linköping, Sweden

1. The authors regret that an error was made in the selection of value of density of carbon dioxide employed for the calculation of its theoretical amount for 2020. Therefore, an underestimation of the theoretical production of CO₂ was reported. On the basis of this mistake, the Abstract was revised as “Results showed that around 160 kt of CO₂ can potentially be captured and utilized from biogas upgrading, which can significantly increase in future scenarios.” In section 2.1., the 8th sentence of the second paragraph is revised as “Furthermore, 1% of impurities was assumed for raw biogas (Schüwer et al., 2015; Andersson et al., 2021) and a CO₂ density of 1.976 kg/Nm³ (Pubchem, 2005)” In section 3.1.1., the 2nd sentence is revised as “The calculation showed that the theoretical production of CO₂ from biogas upgrading facilities reached around 160 kt in 2020”, and the 2nd sentence in the second paragraph as “Regarding scale, the potential production of CO₂ of individual upgrading plants ranges from around 42 t to 18,240 t per year. From the 68 facilities, 8 can theoretically produce between 5 and 18 kt of CO₂, 32 between 1 and 5 kt, and 28 below 1 kt.” The 1st sentence in the second paragraph of the Conclusion section is revised as “The qualitative assessment showed that current biogas production could theoretically provide around 160 kt of CO₂”. The values in Fig. 2, 3 and 4 are revised. In Supplementary material, the value of CO₂ density and example of calculation are revised.

2. The authors regret that a typographical error was made in the 3rd sentence of the last paragraph of section 2.1. without affecting the calculations. The sentence is revised as “The process is based on the Sabatier reaction, where 2.74 kg of CO₂ can produce 1 kg of CH₄.”

The authors would like to apologize for any inconvenience caused.

DOI of original article: https://doi.org/10.1016/j.jclepro.2022.133498.
* Corresponding author.
E-mail address: stephanie.cordova@liu.se (S.S. Cordova).

https://doi.org/10.1016/j.jclepro.2022.134392

Available online 19 October 2022
0959-6526/© 2022 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).
Fig. 1. Theoretical CO$_2$ production by group of provinces.

Fig. 2. Potential CO$_2$ production from biogas in Sweden, divided by the size of biogas upgrading plants and type of feedstock and upgrading technology.
Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jclepro.2022.134392.

References


Fig. 3. Scenarios for future production of CO₂ from biogas in Sweden, assuming either the same share of upgrading to biomethane as in 2020 or 100% upgrading.