**READ\_ME**

This document walks through how to recreate all results in the main text and supplemental materials for Gill-Wiehl et al. *Pervasive over crediting in cookstove offset methodologies*. Nature Sustainability. 2023.

Please run the code in the order provided and ensure that all files from downloaded zip are in the folder you are running the python/R code out of.

**First, we recreate the emission reductions claimed by the projects:**

Gill-Wiehl\_et\_al\_project\_recreation.ipynb

**Then run (in this order) to create the inputs for Figure 3:**

Gill-Wiehl\_et\_al\_Figure3a\_all\_factors.ipynb (This creates Figure S2 as well)

Gill-Wiehl\_et\_al\_Figure3b\_adoption.ipynb

Gill-Wiehl\_et\_al\_Figure3c\_usage.ipynb

Gill-Wiehl\_et\_al\_Figure3d\_stacking.ipynb

Gill-Wiehl\_et\_al\_Figure3e\_fNRB.ipynb

Gill-Wiehl\_et\_al\_Figure3f\_only\_EF.ipynb

Gill-Wiehl\_et\_al\_Figure3g\_EFandCharcoal\_conversion.ipynb

Gill-Wiehl\_et\_al\_Figure3g\_only\_Charcoal\_conversion.ipynb

Gill-Wiehl\_et\_al\_Figure3h\_only\_adjusted\_consumption.ipynb

Gill-Wiehl\_et\_al\_Figure3i\_rebound.ipynb

**To create Figure 3:**

Gill-Wiehl\_et\_al\_Figure3.ipynb

## To create the results for Supplemental Section: Sensitivity Analysis for Category of Methodologies run (Table S13):

*Row Adoption:*

Gill-Wiehl\_et\_al\_sensitivity\_Adopt\_SUM.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_Adopt\_KPT.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_Adopt\_not\_only\_survey.ipynb

*Row Usage:*

Gill-Wiehl\_et\_al\_sensitivity\_Usage\_SUM.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_Usage\_KPT.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_Usage\_not\_only\_survey.ipynb

*Row Stacking:*

Gill-Wiehl\_et\_al\_sensitivity\_Stack\_SUM.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_Stack\_KPT.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_Stack\_not\_only\_survey.ipynb

*Row All:*

Gill-Wiehl\_et\_al\_sensitivity\_all\_SUM.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_all\_KPT.ipynb

Gill-Wiehl\_et\_al\_sensitivity\_all\_more\_than\_surveys.ipynb

**To create the results for Supplemental Monte Carlo Runs, Section B:**

Gill-Wiehl\_et\_al\_All\_except\_adoption\_usage\_stacking.ipynb

**To create Figure 2 and Figure S3, run code above for inputs for Figure 3, then run:**

Gill-Wiehl\_et\_al\_Figure2\_FigureS3.ipynb

**To create Figure S1 code in R:**

gill\_wiehl\_et\_al\_figure1.Rmd

**To create VCM extrapolation:**

9\_29\_23\_df\_v8\_with\_stove\_extrap\_vcm\_final.xlsx