

# SolarAid case

- Claim: SolarAid can reduce atmospheric CO<sub>2</sub> by one tonne for less than £10
  - SolarAid's own calculations imply they can at times reduce atmospheric CO<sub>2</sub> by one tonne for £6.90
    - A SolarAid representative claims that £1 potentially equals a reduction of 145kg of CO<sub>2</sub> in the Tanzania program
      - Counterargument: their environmental report says "That's potentially 115kg CO<sub>2</sub> emissions reduced per household per year". This is talking about overall reductions, not just in the Tanzania program. But since the Tanzania program had below average replacement of kerosene lamps, this seems inconsistent.
    - $1 \text{ tonne} * £1/145\text{kg} = £6.90$
  - Rough estimates of cost of solar light delivery and CO<sub>2</sub> reduced by solar light delivery imply this method buys CO<sub>2</sub> reductions for less than £10
    - Donating £6 to SolarAid will produce the delivery of one solar light in expectation
      - A solar light presently costs around £6 to deliver. [or 5 - varying figures]
        - [is this figure including everything?]
      - Marginal funds given to SolarAid will be spent on the basket of items that produces solar light delivery for £6
    - A solar light being sold reduces CO<sub>2</sub> emissions by at least around 0.6 tonnes
      - A solar light can be anticipated to replace regular use of at least one kerosene lamp in expectation
        - In each of the programs run so far, the average number of kerosene lamps replaced by a solar lamp has been at least one
          - A solar light replaced regular use of one kerosene lamp on average in programs in Tanzania and Malawi
          - A solar light replaced regular use of two kerosene lamps on average in the program in Kenya
          - Tanzania, Malawi and Kenya are the only programs that have been run so far
        - The number of kerosene lamps replaced by each solar lamp will be similar in the future to the past
      - One kerosene lamp produces 200kg of CO<sub>2</sub> emissions per year
        - Counterargument: there is conflicting data on this to add

- A solar light lasts for approximately 3-5 years
  - Counterargument: evidence?