GREENHOUSE GAS PRIMERS
REDUCTION AND REMOVAL

V1.0

The attached nine primers on prominent greenhouse gases (GHG) (or sets of GHG) are intended to give the reader basic information on (i) the relevant gas, (ii) how things have changed since preindustrial times, (iii) whether the gas is susceptible to emissions reduction or removal from the atmosphere and (iv) how that might be done.

The primers are not intended to provide complete information to you…they are intended to give you the ultra-basic information that can start you on your journey of understanding. Good luck, have fun and do good!

Here are some thoughts to get you started:

CARBON DIOXIDE (CO_2)

probably the most fruitful gas to attack in the effort to combat climate change. Lots of good work can be done in both emission reduction and removal from the atmosphere.

METHANE (CH_4)

a very important gas to attack. Much work can be done in emission reduction. Removal technologies are at extremely early stages of development but can be explored.

NITROUS OXIDE (N_2O)

an important gas to attack. Much work can be done in emission reduction (particularly in agriculture). Removal technologies are at extremely early stages of development but can be explored.

WATER VAPOR (H_2O)

an abundant and powerful GHG. Emissions reductions and removal are not practical, but reduction of other GHGs can reduce the multiplier effect water vapor has on climate change.

OZONE (O_3)

although work remains to be done, mankind's focus over the past few decades on ameliorating ozone depletion (including through focus on CFCs and HFCs) shows what productive work can be done through cooperative action.

NF_3, SF_6, CFCS AND HFCS, CF_4 AND C_2F_6

secondary" GHG that are nonetheless still can have long-lasting negative effects on our atmosphere. Reduction efforts need more focus and little work has been done to date on removal technologies.