indirect emissions

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######### read IEA data and clean empty country rows  
  
iea <- read.csv(file="../../Data/IEA/2021 update/iea\_scope2\_2021.csv",sep = ";")  
#iea <- read.csv(file="../../Data/IEA/2020 update/iea\_scope2.csv",sep = ";")  
names <- c("country","flow","var",1990:2019)  
names(iea) <- names  
iea <- iea %>%   
 filter(country!="COUNTRY") %>%   
 filter(row\_number()!=20631:20738)  
 #filter(row\_number()!=19553:19656) # 2020 data  
   
  
######### tidy up variables, convert to long format, change units to Gt CO2  
  
iea <- gather(iea,year,value,`1990`:`2019`)  
iea <- iea %>%   
 mutate(value=ifelse(grepl("x",value),NA,value)) %>%   
 mutate(value=as.numeric(value)) %>%   
 mutate(var=as.character(var)) %>%   
 mutate(year=as.numeric(year))

## Warning in mask$eval\_all\_mutate(quo): NAs durch Umwandlung erzeugt

iea <- iea %>%   
 mutate(var=ifelse(grepl("Emissions by sector",var),"CO2",var)) %>%   
 mutate(var=ifelse(grepl("Emissions with electricity and heat",var),"CO2\_plus\_elec\_heat",var)) %>%   
 filter(var=="CO2" | var=="CO2\_plus\_elec\_heat") %>%   
 mutate(value=value\*1000) %>%  
 mutate(value=value/1e9)  
  
######### save world totals for ELECHEAT sector  
  
world\_totals <- iea %>%   
 filter(country=="World") %>%   
 filter(flow=="ELECHEAT") %>%   
 filter(var=="CO2") %>%   
 select(year,world\_elec\_heat=value)

## `summarise()` has grouped output by 'country'. You can override using the `.groups` argument.  
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## `summarise()` has grouped output by 'year', 'chapter', 'sector\_code', 'description', 'subsector'. You can override using the `.groups` argument.

## `summarise()` has grouped output by 'year'. You can override using the `.groups` argument.

Note that the echo = FALSE parameter was added to the code chunk to prevent printing of the R code that generated the plot.