Untitled

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r Sys.Date()

# Load required packages

{r eval=FALSE} install.packages("ggrepel") install.packages("fBasics") install.packages("ggplot2") install.packages("dplyr") install.packages("vtable")

# Call the libraries

library(ggplot2)  
library(ggrepel)  
library(fBasics)  
library(dplyr)  
library(vtable)

# LOad the Data Set

naeedata1 <- read.csv("~/NAEE\_Data/naee\_data/data/data1.csv",   
 header = TRUE,  
 check.names = FALSE)  
  
naeedata1 <- naeedata1[1:336,1:24]  
  
View(naeedata1)  
names(naeedata1)

# Rename variables

colnames(naeedata1)[2:24] <- c("year",  
 "in\_tre",  
 "in\_hyd",  
 "in\_wind",  
 "in\_solar",  
 "in\_bio",  
 "in\_geo",  
 "exp",  
 "imp",  
 "cons",  
 "tgen",  
 "gen\_foss",  
 "gen\_nuc",  
 "gen\_ren",  
 "gen\_hyd",  
 "gen\_solar",  
 "gen\_bio",  
 "gen\_geo",  
 "access",  
 "acc\_urban",  
 "acc\_rural",  
 "perk\_gen",  
 "perk\_cons")  
   
names(naeedata1)

round(fBasics::basicStats(naeedata1[,-c(1:2)]),2)  
st(naeedata1)

naeedata1 %>%   
 filter(year == "2013") %>%  
 ggplot(aes(x = in\_tre, y = tgen)) +  
 geom\_point()+  
 geom\_text(aes(label = Country), size = 4)+  
 labs(title = "2013",  
 x="Electricity installed capacity in Total renewable energy (MW)",  
 y="Electricity generation, Total (GWh)")

naeedata1 %>%   
 filter(year == "2020") %>%  
 ggplot(aes(x = in\_tre, y = tgen)) +  
 geom\_point()+  
 geom\_text(aes(label = Country), size = 4)+  
 labs(title = "2020",  
 x="Electricity installed capacity in Total renewable energy (MW)",  
 y="Electricity generation, Total (GWh)")

naeedata1 %>%   
 filter(year == "2013") %>%  
 mutate(ln\_intre=log(in\_tre)) %>%   
 mutate(ln\_tgen=log(tgen)) %>%   
 ggplot(aes(x = ln\_intre, y = ln\_tgen)) +  
 geom\_point()+  
 geom\_text(aes(label = Country), size = 4)+  
 labs(title = "2013",  
 x="Electricity installed capacity in Total renewable energy (ln(MW))",  
 y="Electricity generation, Total (ln(GWh)")

naeedata1 %>%   
 filter(year == "2020") %>%  
 mutate(ln\_intre=log(in\_tre)) %>%   
 mutate(ln\_tgen=log(tgen)) %>%   
 ggplot(aes(x = ln\_intre, y = ln\_tgen)) +  
 geom\_point()+  
 geom\_text(aes(label = Country), size = 4)+  
 labs(title = "2020",  
 x="Electricity installed capacity in Total renewable energy (ln(MW))",  
 y="Electricity generation, Total (ln(GWh)")

naeedata1 %>%   
 filter(year == "2013") %>%   
 mutate(ln\_intre=log(in\_tre)) %>%   
 mutate(ln\_tgen=log(tgen)) %>%   
 ggplot(aes(x = ln\_intre, y = ln\_tgen)) +  
 geom\_point()+  
 geom\_label\_repel(aes(label = Country), size = 4)+  
 labs(title = "2013",  
 x="Electricity installed capacity in Total renewable energy (ln(MW))",  
 y="Electricity generation, Total (ln(GWh)")

naeedata1 %>%   
 filter(year == "2020") %>%   
 mutate(ln\_intre=log(in\_tre)) %>%   
 mutate(ln\_tgen=log(tgen)) %>%   
 ggplot(aes(x = ln\_intre, y = ln\_tgen)) +  
 geom\_point()+  
 geom\_label\_repel(aes(label = Country), size = 4)+  
 labs(title = "2020",  
 x="Electricity installed capacity in Total renewable energy (ln(MW))",  
 y="Electricity generation, Total (ln(GWh)")

naeedata1 %>%   
 filter(year == "2013") %>%   
 mutate(ln\_intre=log(in\_tre)) %>%   
 mutate(ln\_tgen=log(tgen)) %>%   
 ggplot(aes(x = ln\_intre, y = ln\_tgen)) +  
 geom\_point() +  
 geom\_text\_repel(aes(label = Country), size = 3)+  
 labs(title = "2013",  
 x="Electricity installed capacity in Total renewable energy (ln(MW))",  
 y="Electricity generation, Total (ln(GWh)")

naeedata1 %>%   
 filter(year == "2020") %>%   
 mutate(ln\_intre=log(in\_tre)) %>%   
 mutate(ln\_tgen=log(tgen)) %>%   
 ggplot(aes(x = ln\_intre, y = ln\_tgen, col = Country)) +  
 geom\_point(aes(color= Country)) +  
 geom\_label\_repel(aes(label = Country), size = 3)+  
 labs(title = "2020",  
 x="Electricity installed capacity in Total renewable energy (ln(MW))",  
 y="Electricity generation, Total (ln(GWh)") +  
 scale\_color\_discrete() +  
 theme(legend.position = "none")