



Renewable Electricity

Sustainable Energy Transition in G20 Countries

Data Science - 5



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The Current Problem with Energy



Renewable Energy as a Solution



Condition of Electricity Production



What we can do



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What we can do



November 17th (yesterday)

RANGKING KOTA AQI LANGSUNG

Rangking kota paling berpolusi di
Indonesia
real time

#	CITY	AQI US
1	Kota Denpasar, Provinsi Bali	152
2	Semarang, Provinsi Jawa Tengah	147
3	Cileungsi, Jawa Barat	115
4	Kota Bekasi, Jawa Barat	95
5	Pasarkemis, Jawa Barat	90
6	Ubud, Provinsi Bali	84
7	Sukasada, Provinsi Bali	78
8	Kota Bandung, Jawa Barat	75
9	Jimbaran, Provinsi Bali	69
10	Jakarta, Jakarta	65

Update Kota Paling Berpolusi di Indonesia, Urutan Satu dan Tiga Ada di Jabar, Jakarta Posisi Berapa?

Adi Mirsan - Nasional

Rabu, 20 Juli 2022 09:15 AM

Lagi, Jakarta Duduki Posisi Teratas Kota Paling Berpolusi di Indonesia

Puji Fauziah - 18 Juli 2022, 09:08 WIB

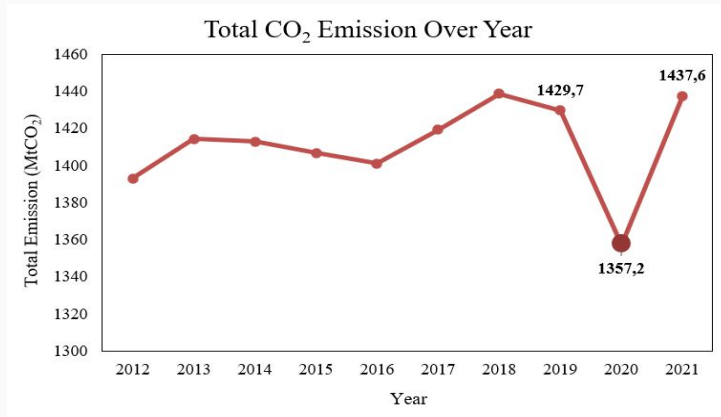
Pagi Ini Jakarta Jadi Kota Paling Berpolusi di Indonesia

Senin, 20 Juni 2022 | 07:47 WIB

Oleh : WM

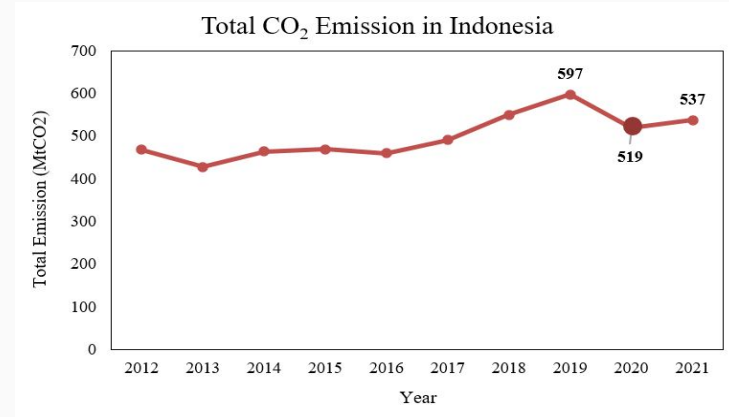
Total CO₂ Emissions of G20 Members & Indonesia

G20



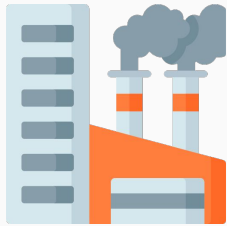
In the last 10 years, **Total CO₂ emissions** from fossil fuel combustion (oil, coal, and gas) in G20 countries **tend to increase**

Indonesia

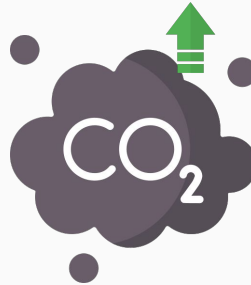


Total CO₂ emissions in Indonesia peaked at 597 MtCO₂ in 2019

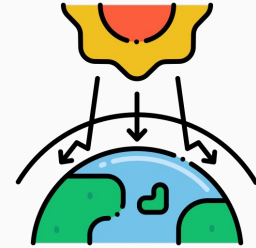
How?



We're still relying on **fossil fuel** to produce energy, including electricity



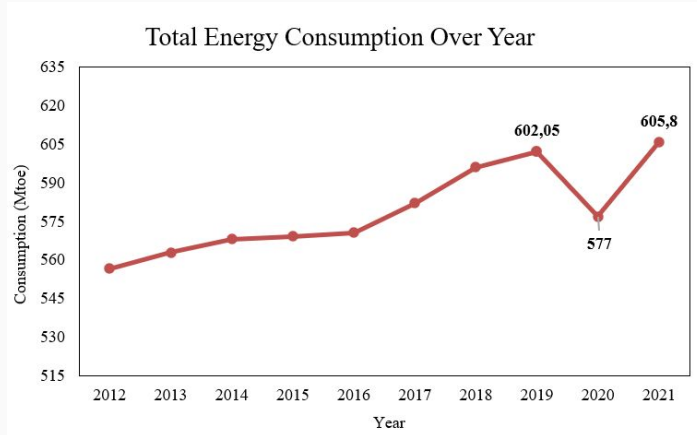
Fossil fuel combustion (oil, coal, and gas) **emits CO₂**



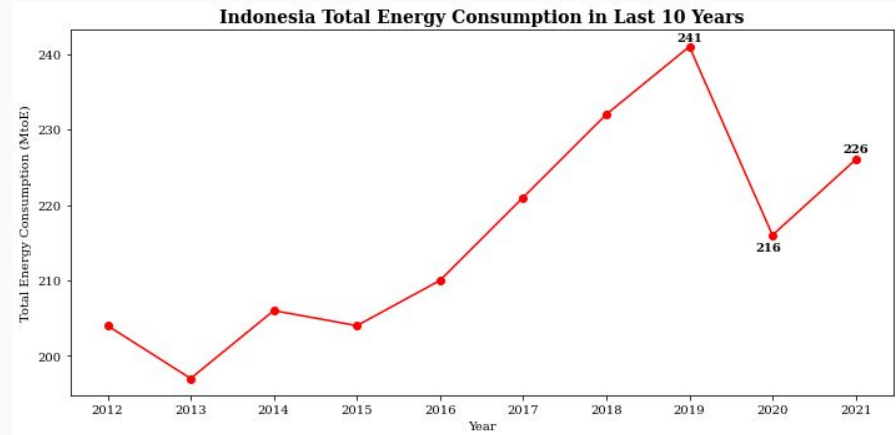
As a **greenhouse gas**, the accumulation of CO₂ in the atmosphere impacts significantly on climate and air quality

Total Energy Consumption of G20 Members & Indonesia

G20



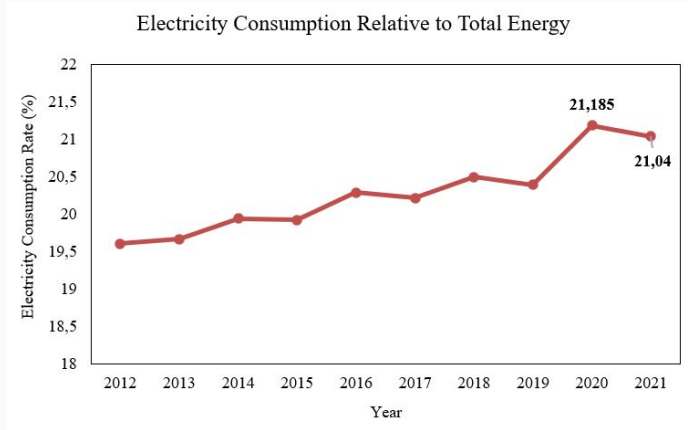
Indonesia



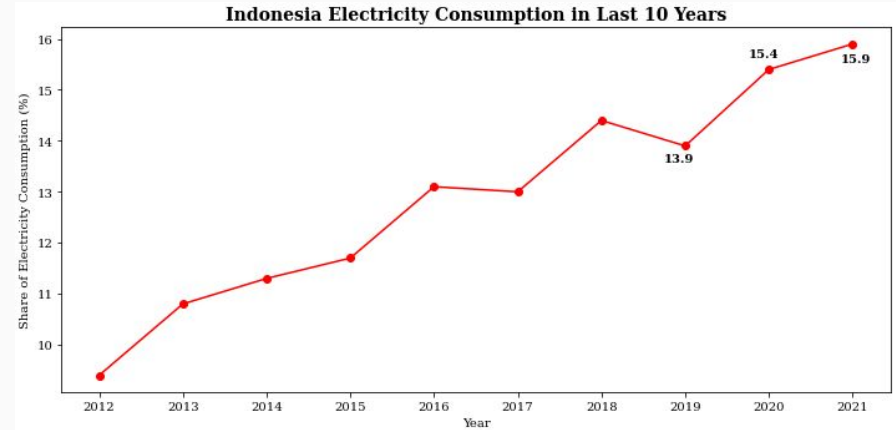
The demand for energy is increasing

Electricity Consumption of G20 Members & Indonesia

G20



Indonesia



Electricity consumption takes up more than 20% of total energy consumption and is expected to continue to rise



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What we can do

Why Renewable Energy?

- 1 Less Global Warming, Good for Humans and The Environment
- 2 Clean, Safe & Efficient
- 3 Reliable power supplies → energy security

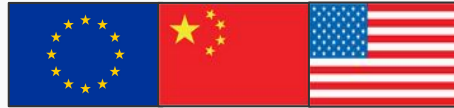
Sources of Renewable Energy



Solar energy



Wind energy



Bioenergy



Hydro energy



Geothermal energy





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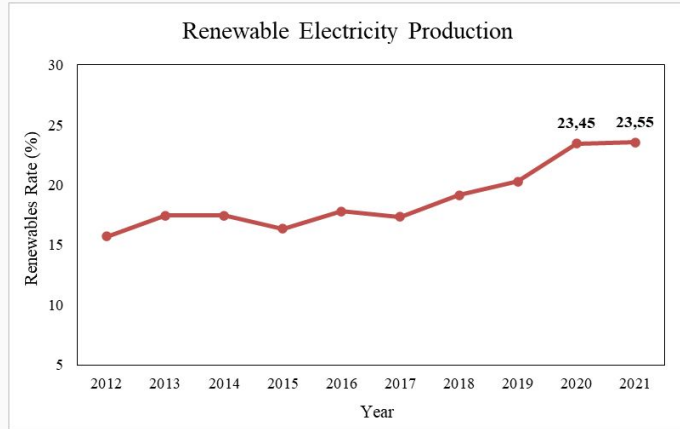
Condition of Electricity Production



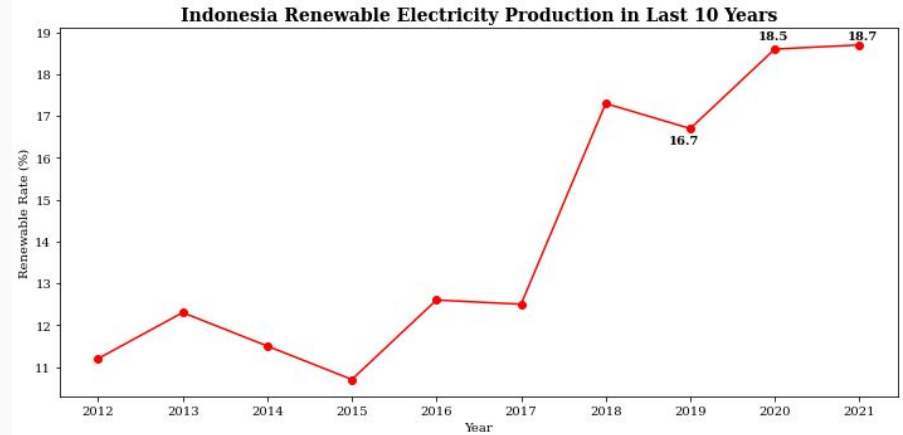
What we can do

Renewable Electricity Production G20 Members & Indonesia

G20

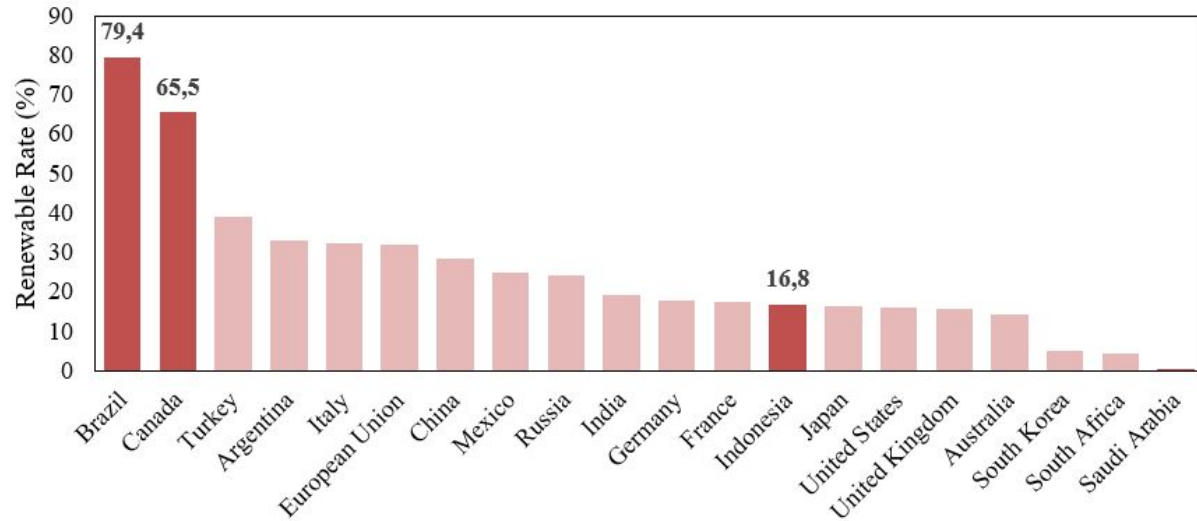


Indonesia



Over the years, the average shares of renewable electricity production is growing in G20 countries, including Indonesia.

Comparison of Renewable Electricity Production in G20 Countries



- Brazil and Canada's production of renewable electricity capacity are higher than average
- Both rely on **hydroelectricity** to supply their electricity
- Most of other countries have low shares of renewable electricity production (< 40%)



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What we can do

First things first...



Recognize and admit that this is a shared environmental issue



Find and implement the best solution together

Next...

Be aware of our energy use, *how it's produced*, and do:



Invest and switch to more sustainable and efficient power plant alternatives



Save energy



Implement tradable allowances

In conclusion...

- 1 Renewable energy is an an alternative to fossil fuels that emit way less CO2 emissions
- 2 It's necessary to develop and promote renewable energy supply and technologies

**We won't have a society,
if we destroy the environment.**
— Margaret Mead





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About the data

Energy Consumption

CO2 Emissions

Shares of Electricity Consumption

Shares of Renewable Electricity
Production

Scope:

- Last 10 years (2012 – 2021)
- G20 Countries

Source:

[enerdata.net](https://www.enerdata.net)





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Take a further look





Thank You

**Recover Together
Recover Stronger**