Keyword: global-warming

Headline: Global warming = more energy use = more warming

Byline: By THE MANILA TIMES

Published Date: June 25, 2019

Section: latest-stories

Word Count: 556

Content:

PARIS: Even modest climate change will increase global energy demand by up to a quarter before mid-century, and by nearly 60 percent if humanity fails to curb greenhouse gas emissions, researchers said on Monday.

To the extent this energy comes from fossil fuels, the extra power needed to cool industries, homes and retail outlets in the coming decades will itself contribute to more warming, they reported in the journal Nature Communication.

In 2018, oil and gas accounted for two thirds of global electricity generation, while solar and wind contributed less than 10 percent, according to the International Energy Agency (IEA).

Even under optimistic scenarios, renewables cannot be scaled up quickly enough to replace fossil fuels by 2050, even if higher energy needs due to climate change are left out of the picture.

Hydro and nuclear energy — which do not emit CO2 — power a quarter of global electricity, but also have limited potential to scale up quickly.

"If energy use rises and leads to additional emissions of heat-trapping greenhouse gases, increased energy consumption for air conditioning could make it more difficult and costly to mitigate future warming," said co-author Ian Sue Wing, a researcher at Boston University.

Energy needs will rise most quickly in southern Europe, China, the United States, and especially poorer countries in the tropics, she said.

The market for single-unit air conditioners in India, for example, is expected to explode from 30 million to a billion units by 2050, according to earlier research.

Globally, AC units are set to gobble up three times more energy by 2050, and would require additional electricity equivalent to the combined 2018 capacity of the US, the European Union and Japan, the IEA has calculated.

Earlier estimates of new energy needs under different climate change scenarios have been limited to a few countries, a specific sector or one or two climate models.

The new study matches global temperature projections from 21 climate models against five different projections for economic and population growth.

By mid-century, climate change increases the global demand for energy by 11 to 27 percent with modest warming, and by 25 to 58 percent with "vigorous" warming, the researchers found.

Under the 2015 Paris climate treaty, 195 nations committed to capping global warming at well below two degrees Celsius (3.6 Fahrenheit) compared to mid-19th century levels.

With only 1C of warming so far, the world has seen a crescendo of heatwaves, erratic weather, and massive storms made more destructive by rising seas.

On current trends, Earth's average surface temperature is on track to heat up 4C by 2100, a sure recipe for widespread human misery, scientists say.

At either extreme, poor countries in Africa, Asia and the Middle East will struggle to adapt, according to senior author Bas van Ruijven, a researcher with the International Institute for Applied Systems Analysis (IIASA)

"Temperature increases by 2050 could expose half a billion people in the lowest-income countries to increases in energy demand of 25 percent or higher," he said.

"In areas that have unreliable electricity supplies, or lack grid connections altogether, increased exposure to hot days increases the risk of heat-related illnesses and mortality."

Some 850 million people in the world still do not have access to electricity, according to a recent report jointly released by the IEA, the United Nations and the World Bank. AFP

AFP/CC