ENERGY NEWS ROUNDUP

Investments in energy transition – glaring disparities

Global investment in energy transition technologies – including energy efficiency – reached 1.3 trillion US dollars (USD) in 2022. This is a new record high, up 19 per cent from 2021 investment levels, and 50 per cent from before the pandemic in 2019. However, these investments are way short of what is needed to achieve the international climate and sustainability goals. This is referred to in the report *Global Landscape of Renewable Energy Finance 2023*, launched by the International Renewable Energy Agency (IRENA) and the Climate Policy Initiative (CPI) on the sidelines of the Spanish International Conference on Renewable Energy in Madrid in February 2023. While investment in renewable energy reached an all-time high, at 0.5 trillion USD, in 2022, this still represented less than 40 per cent of the average investment needed each year between 2021 and 2030, according to IRENA's 1.5°C scenario. Neither are investments on track to achieve the goals set by the 2030 Agenda for Sustainable Development, the report says. As decentralised solutions were key to reach universal energy access, efforts had to be made to scale up investments in the off-grid renewables sector. But although exceeding 0.5 billion USD in 2021, investment in off-grid renewable solutions fell far short of the 2.3 billion USD needed annually in the sector between 2021 and 2030.

Furthermore, the authors criticise the concentration of investments in specific technologies and uses. In 2020, solar/photovoltaic alone attracted 43 per cent of the total investment in renewables, followed by onshore and offshore wind at 35 and 12 per cent shares, respectively. Preliminary figures might suggest that this concentration has continued up to 2022. But to best support the energy transition, more funds needed to flow to less mature technologies as well as to other sectors beyond electricity, such as heating, cooling and system integration.

38 countries plus the EU have roadmaps for hydrogen production

366 billion USD was invested in renewables in 2021

156 countries have renewable power regulatory policies

Renewables 2022 Global Status Report

Disparities have increased

Comparing renewables financing across countries and regions, the report shows that glaring disparities have increased significantly over the last six years. About 70 per cent of the world's population, mostly residing in developing and emerging countries, received only 15 per cent of global investments in 2020. For example, less than 1.5 per cent of the amount invested globally between 2000 and 2020 went to sub-Saharan Africa. In 2021, investment per capita in Europe was 127 times that in sub-Saharan Africa, and 179 times more in North America. Recognising the limited public funds available in the developing world, the report calls for stronger international collaboration, including a substantial increase in financial flows from the Global North to the Global South. "For the energy transition to improve lives and livelihoods, governments and development partners need to ensure a more equitable flow of finance, by recognising the different contexts and needs," IRENA Director-General Francesco La Camera said presenting the report.

Fossil fuels getting more support again

Achieving an energy transition in line with the 1.5°C scenario also required the redirection of 0.7 trillion USD per year from fossil fuels to energy-transition-related technologies. But following a brief decline in 2020 due to Covid-19, fossil fuel investments are now on the rise again. Some large multi-national banks have even increased their investments in fossil fuels at an average of about USD 0.75 trillion dollars a year since the Paris Agreement. In addition, the fossil fuel industry continues to benefit from subsidies, which doubled in 2021 across 51 countries. The phasing out of investments in fossil fuel assets should be coupled with the elimination of subsidies to level the playing field with renewables. However, phasing out subsidies needs to be accompanied by a proper safety net to ensure adequate standards of living for vulnerable populations.

(IRENA/CPI/sri)

Photo: Oliver Knight/ World Bank

Carbon dioxide levels at all-time high

Global energy-related CO_2 emissions grew in 2022 by 0.9 per cent, or 321 million tonnes, reaching a new high of more than 36.8 billion tonnes. This is stated in the report *CO_2 emissions in 2022*, which the International Energy Agency (IEA) presented in Paris early in March. "The impacts of the energy crisis didn't result in the major increase in global emissions that was initially feared – and this is thanks to the outstanding growth of renewables, electric vehicles, heat pumps and energy efficient technologies. Without clean energy, the growth in CO_2 emissions would have been nearly three times as high," said IEA Executive Director Fatih Birol at the presentation of the Report. "However, we still see emissions growing from fossil fuels, hindering efforts to meet the world's climate targets." International and national fossil fuel companies were making record revenues and needed to take their share of responsibility, in line with their public pledges to meet climate goals. "It's critical that they review their strategies to make sure they're aligned with meaningful emissions reductions," Birol demanded.

The report covers CO_2 emissions from all energy combustion and industrial processes – and also includes information on methane and nitrous oxide emissions, providing a complete picture of energy-related greenhouse gas emissions in 2022. Some of the main findings:

> We still see emissions growing from fossil fuels

- Of the 321 Mt (million tons) CO_2 increase, 60 Mt CO_2 can be attributed to cooling and heating demand in extreme weather and another 55 Mt CO_2 to nuclear power plants being offline.
- Emissions from coal grew by 1.6 per cent or 243 Mt as the global energy crisis continued to spur a wave of gas-to-coal switching in Asia and, to a lesser degree, in Europe. While the increase in coal emissions was only around a quarter of 2021's rise, it still far exceeded the last decade's average growth rate. The increase in emissions from coal more than offset the 1.6 per cent decline in emissions from natural gas as supply continued to tighten following Russia's invasion of Ukraine and as European businesses and citizens responded with efforts to cut their gas use.
- Emissions from oil grew by 2.5 per cent, but are still remaining below pre-pandemic levels. Around half of the year-on-year increase in oil's emissions came from aviation as air travel continued to rebound from pandemic lows.
- The biggest sectoral increase in emissions in 2022 came from electricity and heat generation, whose emissions were up by 1.8 per cent or 261 Mt. In particular, global emissions from coal-fired electricity and heat generation grew by 224 Mt or 2.1 per cent, led by emerging economies in Asia.

> Without clean energy, the growth in CO_2 emissions would have been nearly three times as high

- CO_2 growth in 2022 was well below global GDP growth of 3.2 per cent, reverting to a decade-long trend of decoupling emissions and economic growth that had been broken by 2021's sharp rebound in emissions.
- China's emissions were broadly flat in 2022 as strict Covid-19 measures and declining construction activity led to weaker economic growth and reductions in industrial and transport emissions.
- Excluding China, emissions from Asia's emerging and developing economies increased by 4.2 per cent, reflecting their rapid economic and energy demand growth.
- The European Union's emissions fell by 2.5 per cent, thanks to record deployment of renewables helping ensure the use of coal was not as high as some observers had anticipated. A mild start to the European winter and energy savings measures in response to Russia's invasion of Ukraine also contributed.
- In the United States, emissions grew by 0.8 per cent as buildings increased their energy consumption to cope with extreme temperatures.

(IEA / sri)

ENERGY NEWS ROUNDUP – A look at Africa

Germany intends to intensify the climate and energy partnership with SASSCAL and WASCAL

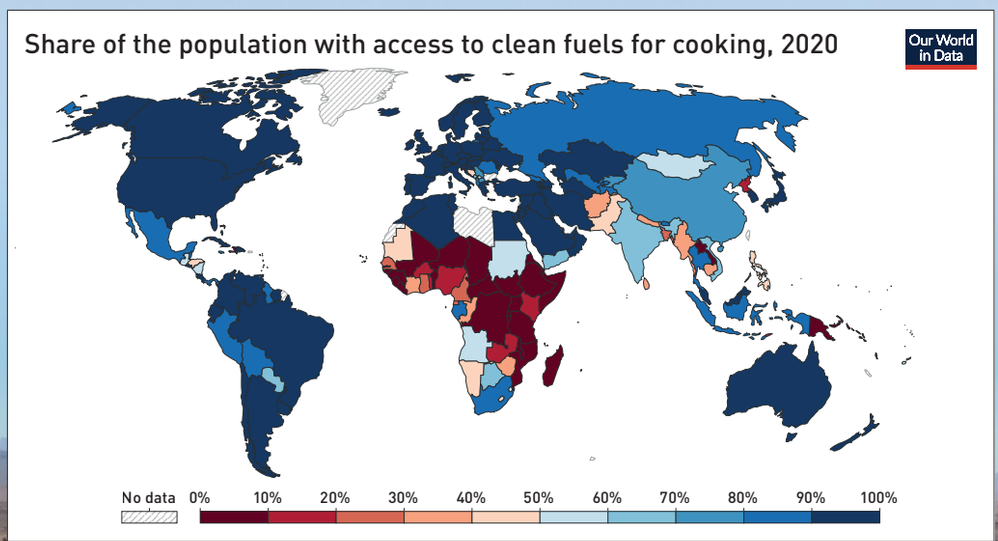
Southern and West African Climate Change Ministers have signed a "Joint Declaration" with Germany's Federal Government to further strengthen the climate and energy partnership of the Southern African Science Service Centre for Climate Change Adaptive Land Management (SASSCAL), the West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) and the Federal Ministry of Education and Research, Germany (BMBF). In addition to expanding the centres, the Declaration stipulates establishing green hydrogen and renewable energy as a new strategic focus. "SASSCAL and WASCAL are door-openers in creating a global supply chain for Green Hydrogen. Africa is especially suitable for this," said Germany's Federal Research Minister Bettina Stark-Watzinger, signing the "Strategic Climate and Energy Partnership SASSCAL, WASCAL, BMBF" in Berlin in mid-February. A total of 68 million euros had already been provided to develop this cooperation scheme. SASSCAL and WASCAL, which are now international organisations, were initiated by the BMBF together with partner countries in West and South Africa in 2012. With these centres, regional research on adapting to the impacts of climate change is to be promoted. In addition, cross-country programmes on capacity development and the setting up of a common data and research infrastructure are on the agenda. *(BMBF/sri)*

AU seeks to raise efforts to achieve universal energy access by 2030

On the side-lines of the 36th Ordinary Session of the Assembly of the African Union in mid-February, a presidential roundtable called for the acceleration of financing for energy access in Africa with clear targets and steps for ensuring the achievement of universal energy access by 2030. Here, the Chairperson of the African Union for 2023, the President of the Union of the Comoros Azali Assoumani, shed light on the irony of energy poverty on a continent that is richly endowed with vast energy resources which remain untapped. Assoumani also highlighted the energy situation in most African island nations and noted that continental approaches could complement national initiatives to boost energy access. He referred to the example of the Geothermal Risk Mitigation Facility (GRMF), a fund that was established in 2012 to finance, facilitate and accelerate geothermal development in Eastern Africa.

The African Single Electricity Market (AfSEM) was noted to be a key strategic element of facilitating energy access and enhancing energy security in Africa and, therefore, the AU Member States, regional economic communities and their specialised institutions were urged to play their part in facilitating its operationalisation. Launched in June 2021, this continent-wide energy trading programme is meant to interconnect all 55 African Union Member States through an efficient, affordable and sustainable electricity market. The President of the Republic of Madagascar Andry Rajoelina emphasised the need to invest in clean sources to fast-track universal energy access in Africa. "Addressing energy access is not negotiable for any leader, and we need now to move from words to action," he said, adding that Madagascar aspired to achieve 100 per cent energy access in the shortest possible time, mainly by harnessing renewables.

African Union Commissioner for Infrastructure and Energy Amani Abou-Zeid stressed that Africa's key priorities and initiatives including industrialisation, the African Continent Free Trade Area (AfCTA), agricultural development, food security, poverty alleviation, job creation and regional integration, as well as the achievement of the SDGs, were all dependent on modern and universal energy access and services. According to the AU, Africa needed 25 billion US dollars in investment annually to meet its energy targets. Partnerships in the area of finance, knowledge and technology transfer were required to help speed up existing and new initiatives to overcome constraints that African countries were facing in their quest for energy development. *(AU/sri)*



Source: WHO, Global Health Observatory, 2022.