RENEWABLE ENERGY

GEOTHERMAL ENERGY

Energy generated from the heat of the earth.





SOLAR ENERGY

Energy acquired from the sunlight. There are solar power devices that are used to generate electricity .

HYDROPOWER ENERGY

Acquired from flowing water. This flow is mostly maintained in the shape of dams.





WIND ENERGY

This type of energy originates from windmills and wind corridors.

BIOFUELS

This energy is generated from the fuels of living organisms.





TIDAL ENERGY

a form of hydropower but it is acquired from tides and water waves.

B REASONS TO **TRANSITION TO RENEWABLE ENERGY**

Greenhouse Gas

Scientists around the world have agreed greenhouse gas emissions from the burning of fossil fuels is the primary cause of climate change (United Nations, 2023). This is pushing up temperatures at different rates in different places around the globe. Those closer to the north and south poles are increasing in temperatures faster than those at the equator. The arctic has increase in temperature 4 times faster than the the global average (Tandon, 2022).

2 IPCC Greenhouse Targets

The United Nation's body for assessing climate change has set two main targets to reduce greenhouse gases (United Nations, 2022). They are emissions need to be reduced by 45% by 2030 and reach net zero by <u>2050</u>.

Warmer Conditions, Changing weather

The warmer conditions in the Arctic and Antarctic cause sea ice to melt. This causes less heat reflection, more heat absorption (NOAA, 2011), more melting, and warmer ocean temperatures. This affects currents, air movement, and the water cycle. These things cause changes to weather, increases in drought, flooding, storms and heatwaves, and rising sea levels. (UCAR, 2021)

CLimate Discrimination

Changing weather affects everyone. However, it affects different places in different ways, and therefore it discriminates because of the geographical and social inequities that exist (Islam, 2017). Those in low income households, those with minority socio-economic, cultural, and gender status', with less access to services and who are underrepresented are more susceptible to the impacts of climate change.

Jobs and Fair Access

Renewable energy is safe, inexhaustible, and available everywhere. It means there is more opportunity to create the energy locally, and there is less dependence on 'another country' that has the fossil fuel on their land. Consequently, renewable energy generation can create more equitable opportunities for people to access local jobs, and more fair access to the energy created. (Ten Reasons to Support Renewable Energy, 2021)

🔓 Its Real and It Works

Many countries are seeing the economic, health and social benefits of transitioning to renewable energy already. Its is not without challenges, however, the technology and models for implementation are improving at a rapid rate. Good examples exist in many countries. Eg. Spain (Ten Reasons to Support Renewable Energy 2021), Denmark, Sweden, and Chile (Jansen, 2023), France, Luxemburg, Holland, Portugal (Navarre), Morocco, Norway, UK (The Climate Change Performance Index 2022)

How could my community be **TRANSITIONING TO RENEWABLE ENERGY?**

Use the guiding questions below to consider how your community might be able to transition to use of renewable energy, and what their challenges might be?

Community Needs or Issues

What are the issues that relate to transitioning to renewable fuels in your community. Does everyone feel the same way? Why? Why not?



Opposition To Transition

What groups of people are likely to have concerns or oppose transitioning to renewables? Why? Would could make that different? What opportunities do these people have to speak and share there concerns constructively?



Opportunities And Strengths

What characteristics does the community have that would help it transition? What opportunities could transitioning to renewables provide for members of your community? How could it help?







If transitioning as a whole has opposition in your community, would a partial transition work? What would this look like? How would you decide the 'part' that transitions?

How could it work

If you were in an ideal world, how could you make transitioning to renewables work? If you had no choice, how could you make transitioning to renewables work?





🔓 Borrow an idea

Search how other countries, cities or communities are transitioning to renewable energies. What successes are they having? Are there any ideas you could 'modify' to work in your community?

BIBLIOGRAPHY

- 1. Islam, S. Nazrul, and John Winkel. Climate Change and Social Inequality . Oct. 2017.
- 2. Jansen, Christiana. "3 Leading Countries in Climate Policy." Earth.org, 1 Mar. 2023, earth.org/countries-climate-

policy/#:~:text=Denmark%2C%20Sweden%2C%20and%20Chile%20are.

- 3. Navarre, Brianna. "The 10 Countries Leading the Way in Climate Policy." US News & World Report, 22 Apr. 2022, www.usnews.com/news/bestcountries/slideshows/these-countries-are-leading-the-way-in-climate-policy.
- 4.NOAA. "How Does Sea Ice Affect Global Climate?" Noaa.gov, 2011, oceanservice.noaa.gov/facts/sea-ice-climate.html.
- 5. Tandon, Ayesha. "The Arctic Has Warmed "Nearly Four Times Faster" than the Global Average." Carbon Brief, 11 Aug. 2022, www.carbonbrief.org/the-arctic-has-warmed-nearly-four-times-faster-than-the-global-average/.
- 6. Ten Reasons to Support Renewable Energy." Www.activesustainability.com, www.activesustainability.com/renewable-energy/ten-reasons-to-supportrenewable-energy/?gad_source=1&gclid=CjwKCAiAvOsBhAAEiwAIWR0TX0xfJ7xs_wsl9Cb4DyiqJoN7K9_oB8YSLXrmFHAVFBDTR6n8_4kwhoC sLUQAvD_BwE&_adin=02021864894. Accessed 9 Jan. 2024.
- 7. "The Climate Change Performance Index 2022." NewClimate, newclimate.org/resources/publications/the-climate-change-performance-index-2022.
- 8.UCAR. "The Water Cycle and Climate Change | UCAR Center for Science Education." Scied.ucar.edu, 2021, scied.ucar.edu/learning-zone/climate-change-impacts/watercycle-climate-change.
- 9. United Nations. "Causes and Effects of Climate Change." United Nations, United Nations, 2023, www.un.org/en/climatechange/science/causes-effects-climate-change.

10.United Nations. "Net Zero Coalition." United Nations, 2022, www.un.org/en/climatechange/net-zerocoalition#:~:text=To%20keep%20global%20warming%20to.

