

ICLEI POSITION ON SUSTAINABLE ENERGY

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Limiting the rise in global temperature to well below 2 degrees Celsius (°C), preferably to 1.5°C requires reaching net-zero emissions by mid-century (United Nations, n.d.).

A rapid, effective and well-planned transition from generation to end-use - away from energy sources that release greenhouse gas emissions and short-lived climate pollutants over their entire life cycle (in particular fossil fuels) and wasting energy - towards zero-carbon sources and using enabling technologies across all sectors, starts now. This transition must be carried out efficiently and cost-effectively, enabling key actors to be part of the transition process, while balancing the differentiated needs of equity, energy access and affordability, energy security and sustainable development (Global 100RE Platform, 2015).

Building on the principles of sustainable development, the definition of sustainable energy involves meeting present energy needs without compromising the ability of future generations to meet theirs (United Nations, n.d.). We consider that such an energy system must rest on the foundation of energy sources whose use in the present does not compromise their availability in the future, i.e. renewable energy.

Therefore, the underlying characteristics of renewable energy are that it is energy derived from natural sources or processes, that are replenished faster than they are consumed (Natural Resources Defense Council, 2018; SEforAll, 2013).

Favoring sustainable energy

ICLEI - Local Governments for Sustainability therefore favors energy that is derived from sunlight, wind, geothermal processes, biomass, and water (including hydropower, oceanic/tidal energy) (Energy Information Administration, n.d.; IRENA CfA, 2020). It is important that these renewable energy (RE) sources are applied in context specific, nature-conscious and socially sensitive ways. We recognise that nuclear energy sources (such as uranium, plutonium etc.) have a low carbon emission profile and are naturally-occurring. However, they are not replenishable in the same sense and therefore **are not** considered sustainable; they should be considered as a last resort and should be replaced by sustainable energy sources where possible. Past energy planning may have included these power sources, however ICLEI is committed to transitioning cities to being powered by RE sources.

In order to meet required climate change targets, large-scale fossil fuel power that creates maladaptive lock-ins, should not be pursued. Every decision counts, with each decision leading us closer to or further away from climate resilient development.

(Keeping in mind the freedom of choice for future generations to revisit the concept of sustainable energy, as well as the possibility of future technological advances, as it stands only energy from renewable sources as listed above can be considered sustainable in today's context.)

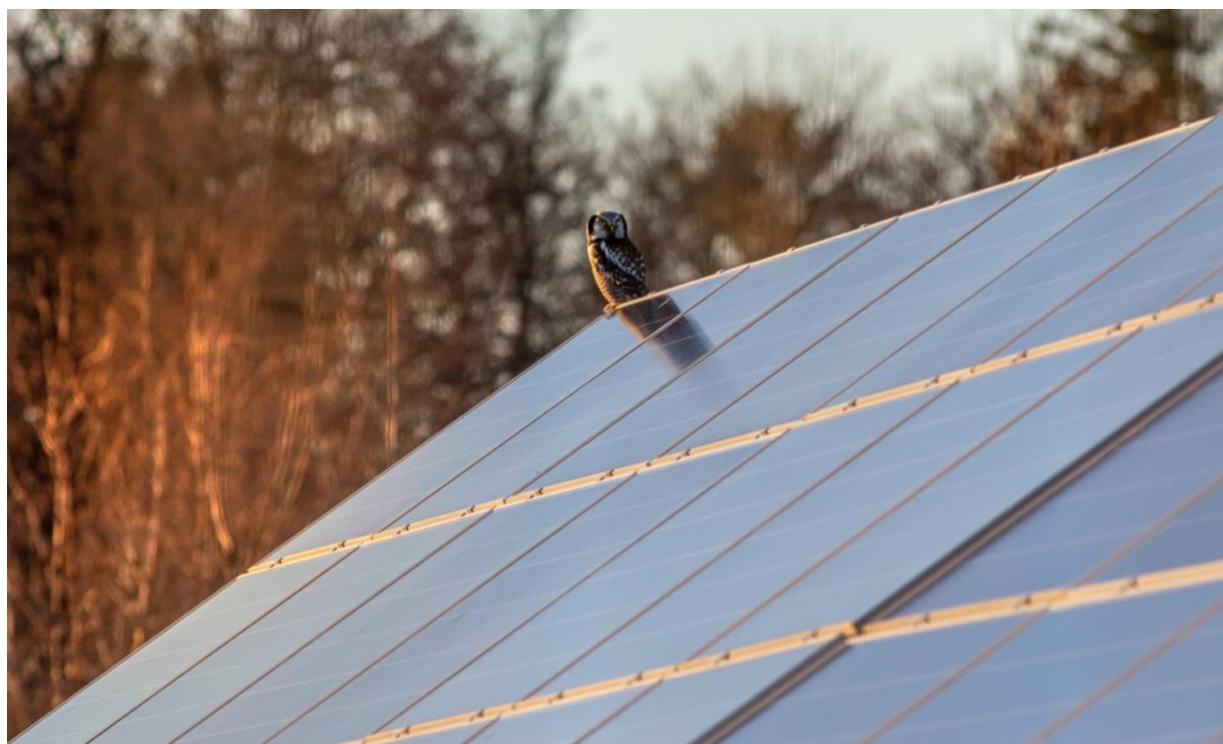
Annex

Sustainable energy for effective climate action

Countries have the freedom to use all low-carbon energy sources and technologies available to them to achieve their broader energy policy objectives. Such sources and technologies can play various roles in their respective transition pathways, and in terms of climate impact, they are preferable to energy from unabated fossil fuel generation technologies (IPCC, 2018).

However, the shift away from fossil fuel generation requires an equally rapid shift towards low-carbon power generation in the next few years. Nuclear energy is the most widely deployed low-carbon, non-renewable energy source, but further investment in nuclear energy projects, as the technology stands today, comes with a number of challenges that could otherwise hamper overall progress, while also contradicting the principles laid out of sustainable energy (Sovacool, 2020). At 2016-levels of uranium consumption, using mainstream conversion technologies, uranium resources were projected to cover 130 years of demand (OECD, 2018). However, the energy transition will also require a huge increase in electrification.

Rather, relying on renewable energy sources, and present-day cost-effective, proven technologies is the more sustainable pathway. Nuclear energy projects are expensive with long project completion times, often leading to cost overruns and delays (they do not seem to show learning curves similar to renewable energy technologies) (Harvey, 2021; Dunning, 2018; Stauffer, 2020). In this crucial time period, they also represent a diversion of resources (financial, material, as well as institutional capacities) away from renewable sources and technologies and enabling infrastructure, as well as climate change adaptation efforts.



Works Cited

Dunning, H., 2018. *Construction delays make new nuclear power plants costlier than ever*. [Online]. Available at: <https://www.imperial.ac.uk/news/186487/construction-delays-make-nuclear-power-plants/>. [Accessed March 2022].

Energy Information Administration, n.d. *Renewable energy explained*. [Online]. Available at: <https://www.eia.gov/energyexplained/renewable-sources/>. [Accessed March 2022].

Global 100RE Platform, 2015. *Criteria for a Sustainable Transformation towards '100% Renewable Energy*. [Online]. Available at: https://www.global100re.org/wp-content/uploads/2015/11/DiscussionPaper_go100re_criteria.pdf

Harvey, D., 2021. Hinkley C: *Hundreds more needed to finish nuclear power station*. [Online]. Available at: <https://www.bbc.com/news/uk-england-somerset-57227918>. [Accessed March 2022].

IPCC, 2018. *Energy Systems*. [Online]. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter7.pdf. [Accessed March 2022].

IRENA Coalition for Action, 2020. *Towards 100% Renewable Energy: Utilities in Transition*. [Online]. Available at: https://coalition.irena.org/-/media/Files/IRENA/Coalition-for-Action/IRENA_Coalition_utilities_2020.pdf

Natural Resources Defense Council, 2018. *Renewable Energy: The Clean Facts*. [Online]. Available at: <https://www.nrdc.org/stories/renewable-energy-clean-facts>. [Accessed March 2022].

OECD, 2018. *Uranium 2018*. [Online]. Available at: https://www.oecd-nea.org/jcms/pl_15080/uranium-2018-resources-production-and-demand?details=true. [Accessed March 2022].

SEforAll, 2013. *Renewable Energy*. [Online]. Available at: https://www.seforall.org/sites/default/files/l/2013/09/9-gtf_ch4.pdf. [Accessed March 2022].

Sovacool, B., 2020. *The sustainability of nuclear power and the critical importance of independent research*. [Online]. Available at: <https://socialsciences.nature.com/posts/the-sustainability-of-nuclear-power-and-the-critical-importance-of-independent-research>. [Accessed March 2022].

Stauffer, N. W., 2020. *Building nuclear power plants*. [Online]. Available at: <https://energy.mit.edu/news/building-nuclear-power-plants/>. [Accessed March 2022].

United Nations, n.d. *For a livable climate: Net-zero commitments must be backed by credible action*. [Online]. Available at: <https://www.un.org/en/climatechange/net-zero-coalition>. [Accessed March 2022].

United Nations, n.d. *The Sustainable Development Agenda*. [Online]. Available at: <https://www.un.org/sustainabledevelopment/development-agenda/>. [Accessed March 2022].