

YOUNG INNOVATOR AWARD 2021

An Introduction for Teachers

Our energy production, water usage, and its impact on our environment are inseparable. Especially now, in an era of climate change, these factors are more significant than ever. In Qatar's case they are especially critical, given accelerating demands for electricity, water, and agriculture, with our limited natural resources. At the same time, technologies that use solar energy are rapidly becoming a reality and opening new paths for development.

A key point is that energy, water, and the environment are linked. Much of Qatar's electricity and fresh water is co-produced in the same power stations, which in turn are cooled by seawater that affects the coastal environment. Therefore, decisions on industrial and urban development — and our actions in our own homes — have far-reaching impacts that are not always obvious.

Qatar Environment & Energy Research Institute (QEERI), part of Hamad bin Khalifa University, is organizing the International Conference on Sustainable Energy Water and Environment Nexus in Desert Climates (ICSEWEN21) from 22-25 November 2021. To engage Qatar's youth in the conference, QEERI is organizing a competition for school students to contribute their ideas and content about the subject.

To assist teachers with the introduction of this subject to their students, the following resources are suggested:

Energy-Water-Environment Nexus and the Transition Towards a Circular Economy: The Case of Qatar

Abdul-Jalil Ibrahim, Nasim Shah Shirazi, HBKU

<https://link.springer.com/content/pdf/10.1007/s43615-021-00037-w.pdf>

Uniting water energy food NEXUS in Qatar

Ministry of Foreign Affairs, The Netherlands

<https://www.rvo.nl/sites/default/files/2019/07/Uniting-water-energy-food-NEXUS-in-Qatar.pdf>

Position Paper on the Water, Energy, Food and Ecosystems Nexus and the Sustainable Development Goals

European Commission

<https://publications.jrc.ec.europa.eu/repository/handle/JRC114177>

The Energy-Water Nexus – An Energy 20/20 White Paper

Senate Committee on Energy & Natural Resources, USA

<https://www.energy.senate.gov/services/files/9D529812-659B-43A1-A2D1-EF0E67894636>

Addressing the Energy-Water Nexus – A Blueprint for Action and Policy Agenda

Alliance for Water Efficiency, American Council for an Energy-Efficient Economy

<https://www.aceee.org/files/pdf/white-paper/Water-Energy%20Blueprint.pdf>