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Empowering Communities for Sustainable Energy Transition: A Public Health Education and Awareness Framework

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Abstract

Public Health and Epidemiologist Consultant The rapid expansion of renewable energy across the Middle East demands robust public education strategies to secure long-term sustainability outcomes. In the UAE, national decarbonisation targets—including the UAE Energy Strategy 2050 and the Net Zero 2050 initiative—highlight the need for public engagement to complement infrastructure investment. This abstract proposes an integrated public health education and awareness framework designed to enhance community readiness for sustainable energy transition in healthcare and industrial sectors.

Drawing on epidemiological evidence linking fossil fuel exposure to respiratory and cardiovascular disease, and supported by WHO and IRENA findings, the framework examines how structured awareness programs improve community acceptance of clean-energy technologies. In addition, pharmaceutical supply-chain organisations—particularly those operating under stringent cold-chain and manufacturing conditions—present measurable opportunities to reduce energy demand through training, behavioural optimisation, and digital monitoring. SKY HEALTH Pharma demonstrates how private healthcare entities can act as catalysts for carbon-reduction awareness, workforce training, and green-technology procurement across the UAE.

The framework concludes that renewable-energy literacy, curriculum integration, and community-health messaging significantly improve societal participation in sustainability agendas. This approach positions education as a central mechanism for empowering regional populations to adopt clean energy behaviour and strengthen resilience against climate-related disease burdens.