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Position Statement

Physicians for Social Responsibility urges the United States to rapidly transition to 100% clean, safe, renewable electricity by 2035

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Physicians for Social Responsibility (PSR) urges the United States to rapidly transition to 100% renewable electric power generation no later than 2035. PSR also encourages a more aggressive target date of 2030 for those communities with a strong potential for generating renewable energy.

The transition to 100% renewable electricity can be accomplished through the rapid expansion of wind, solar, geothermal, tidal and hydroelectric generation in combination with improved efficiency in energy use.

Responding to an Urgent Need

Transitioning to 100% renewable energy is not only possible but is essential to preventing massive societal disruption and untold human suffering from climate change, global warming and ocean acidification. Human activity is poisoning our atmosphere with excess carbon dioxide, methane, nitrous oxide and other greenhouse gases (1). The resulting trapping of atmospheric heat is altering our planet's temperature, weather patterns, agricultural-production ability, and sea levels. This is already adversely affecting human health and the quality of our lives (2). In addition, climate change is fomenting national and international conflicts and is inducing mass migrations of epic proportions.

Focus of Effort

Most emphasis should be given to developing wind, solar, geothermal and tidal energy because they have a near-zero carbon footprint and minimal environmental impact (3). Less

emphasis should be given to hydroelectric energy generation because of its potential for negative environmental impacts.

PSR National does not support nuclear power as a clean, safe, reliable or low-cost power source. PSR also does not support the use of biomass to generate electricity because of its relatively large carbon footprint and its associated environmental pollution (3).

Feasibility of the Transition

Transitioning to 100% renewable energy generation is entirely feasible and could likely be accomplished with greater ease than is currently anticipated. The reason for this is the continued improvement in the technology behind each source of renewable energy generation and storage. For example, the average price of a solar panel has dropped almost 60 percent since 2011 (4). The cost of generating wind power has dropped more than 80 percent since 1980 (5). In areas of the US with strong wind resources, wind power is currently less expensive than coal or natural gas. The cost of renewable energy will decline even further as markets mature and companies increasingly take advantage of economies of scale.

We have vast and inexhaustible renewable energy supplies. In 2012, the National Renewable Energy Laboratory found that together, renewable energy sources have the technical potential to supply 118 times the amount of electricity our nation was then consuming (6).

A number of cities, states and major businesses have already committed to and are acting to move to 100% renewable energies (7).

Maximizing Energy Efficiency

Energy efficiency needs to go hand in hand with increasing renewable forms of energy generation. Energy efficiency measures can include enhancing building insulation, weatherproofing doors and windows, replacing incandescent lights with LED lights, adding skylights and other sources of natural light to buildings, using task lighting, and improving the efficiency of energy-consuming appliances such as refrigerators, air conditioners and heaters. The International Energy Agency estimates that enhanced energy efficiency combined with increased use of renewables and a decarbonized power sector could reduce CO2 emissions in the building sector to just one-quarter of current levels by 2050 (8).

Public education is necessary so that people are aware of the economic savings associated with energy efficient and its immense potential for reducing greenhouse gases.

Health Benefits of Energy Efficiency and Transitioning to 100% Renewable Energy

Achieving greater energy efficiency and transitioning to 100% renewable energy production would result in significant public health benefits (9, 10). The air and water pollution associated with coal and natural gas plants is linked to numerous adverse health conditions, including lung diseases, neurological damage, heart attacks, cancer and other illnesses. The annual US health costs attributed to burning fossil fuels were recently reported to be over $180 billion. Replacing fossil fuels with renewable energy will reduce early mortality, lost workdays and overall healthcare costs (9). Fossil fuel and nuclear plants, as well as hydraulic fracturing, also use substantial water and cause significant water pollution, thus putting a strain on clean water availability (11, 12, 13).

Jobs and Other Economic Benefits

Renewable energy already supports thousands of jobs in the United States. The number of US jobs attributable to the renewable energy industry has now surpassed the number of jobs in the coal industry. In addition, the number of renewable-energy jobs is growing rapidly while the number of coal industry jobs is shrinking.

In 2016, the solar industry employed approximately 374,000 people on a part-time or full-time basis, including jobs in solar installation, manufacturing, banking, design and sales. In this same year, the wind energy industry directly employed 101,000 people on a part-time or full-time basis. By comparison, coal employed 160,000 people (14).

The transition to 100% renewable energy could mean the loss of thousands of jobs in fossil fuels industries. Meaningful programs and financial assistance will be needed to train and possibly relocate these workers, particularly minority workers in economically deprived areas. Ideally, workers displaced from the fossil fuel industry would be retrained to work in the renewable energy field.

Renewable energy offers other important economic development benefits by generating property and income taxes, and by providing lease payments to landowners of wind farm sites. One analysis found that a national renewable electricity standard requiring just 25% renewable energy by 2025 would stimulate $263.4 billion in new capital investment for renewable energy technologies (15).

Renewable energy also offers predictability in price because it does not have fossil fuel's dramatic price swings over time that add cost and complexity to utility companies (16, 17).

The Need for Continued Research into Renewable Technologies

PSR urges strong public and private investment in research and development of renewable energy technologies. PSR anticipates that new technological advances will be needed in order to achieve the 100% renewable energy goal. These will be particularly important in fields such as solar panel efficiency, electricity storage, electric vehicles, the energy efficiency of machines, electricity grid design, and the harnessing of ocean currents and tides.

An exciting technology to watch is the use of solar energy to create hydrogen which is a clean, potent and renewable fuel for energy storage, in addition to its use in powering vehicles.

Finally, a major investment will be required to build the transmission power lines, switching stations, and grid management systems that will be required for the United States of America to build towards 100% renewable electricity.

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