

AMERICAN MEDICAL ASSOCIATION RESIDENT AND FELLOW SECTION

Resolution: 4  
(I-22)

Introduced by: Dayna Isaacs, MD, MPH; Ian Motie, MD; Oluwasegun Emenogu, MD; Faith Crittenden, MD, MPH; Anna Heffron, MD, PhD

Subject: Supporting the Use of Renewable Energy in Healthcare

Referred to: Reference Committee

---

- 1 Whereas, In 2007, healthcare entities accounted for approximately 8% of all U.S. greenhouse  
2 gas emissions, and healthcare emissions are growing rapidly, increasing by 28% from 2003 to  
3 2013<sup>1,2</sup>; and  
4  
5 Whereas, If the U.S. healthcare sector were considered a country, it would rank 13th highest in  
6 the world for its quantity of greenhouse gas emissions<sup>3</sup>; and  
7  
8 Whereas, Hospital care represents the largest proportion of healthcare emissions, representing  
9 36% in 2013<sup>2-4</sup>; and  
10  
11 Whereas, According to the Environmental Protection Agency (EPA), renewable energy is  
12 defined as resources and technologies that provide the highest environmental benefit by  
13 reducing the emissions associated with traditional electricity sources<sup>5</sup>; and  
14  
15 Whereas, Transitioning to renewable energy, which includes wind, solar, geothermal  
16 technology, biomass, and hydropower energy, is a solution for healthcare; and  
17  
18 Whereas, In 2014, Gundersen Health System, a group of hospitals based in Wisconsin, became  
19 the first energy-independent U.S. health system, utilizing solar, wind, and biomass energy<sup>2,6</sup>;  
20 and  
21  
22 Whereas, Since 2008, Gundersen Health System has saved \$11 million in energy costs through  
23 these energy-efficient upgrades<sup>2,7</sup>; and  
24  
25 Whereas, CentraState Health, a healthcare system in New Jersey, installed solar carports and a  
26 solar farm in 2019, which has allowed the healthcare system to cut its energy consumption in  
27 half and save half a million dollars in energy costs annually<sup>8</sup>; and  
28  
29 Whereas, Kaiser Permanente, an integrated healthcare delivery system, received the 2019  
30 Green Power Leadership Award from the EPA for 95 solar projects across the country, resulting  
31 in 109 million kilowatt hours per year<sup>9</sup>; and  
32  
33 Whereas, There are federal and state policies as well as incentives to alleviate the transition to  
34 renewable energy, including rebate programs, grants, loan programs, tax credits, and tax  
35 exemptions, available via the U.S. Database of State Incentives for Renewables &  
36 Efficiency<sup>10,11</sup>; and  
37  
38 Whereas, Community solar programs, which are projects that allow multiple groups to benefit  
39 from energy generated from solar panels, are an option for healthcare systems that do not have

1 the budget and/or the available roof space to invest in solar energy, and healthcare  
2 organizations can serve as “anchor tenants” in community solar programs to utilize solar energy  
3 while reducing energy costs and without having to install solar panels<sup>8,10,12</sup>; and  
4

5 Whereas, Communities of color, Black, Hispanic, and Indigenous communities, have not  
6 benefited from solar energy panels due to lower levels of homeownership, but since individuals  
7 from this population represent the majority of Medicaid patients, they would benefit indirectly  
8 from Medicaid-funded hospitals installing solar panels to decrease hospital expenditures<sup>13,14</sup>;  
9 and

10  
11 Whereas, Given the healthcare sector’s significant greenhouse gas contribution, it is imperative  
12 that healthcare organizations transition to renewable energy for the U.S. to reach its goal of net  
13 zero emissions by 2050<sup>15</sup>; and

14  
15 Whereas, Our AMA has existing policy which supports the reduction of power plant emissions  
16 and has declared climate change a public health crisis with policies H-135.949 and D-135.966,  
17 respectively; therefore be it

18  
19 RESOLVED, That our AMA disseminate a public statement highlighting the importance of  
20 healthcare systems’ timely transition to renewable energy, including wind, solar, geothermal  
21 technology, biomass, and hydropower energy; and be it further

22  
23 RESOLVED, That our AMA support implementations of policies and incentives that promote the  
24 healthcare sector’s transition to renewable energy.

Fiscal Note: Minimal

---

**References:**

1. Chung JW, Meltzer DO. Estimate of the Carbon Footprint of the US Health Care Sector. *JAMA*. 2009;302(18):1970-1972. doi:10.1001/jama.2009.1610
2. Bay Area Council Economic Institute. "Building a Climate-Smart Healthcare System For California." Bay Area Council Economic Institute. March 2018.
3. Eckelman, M.J., Sherman, J., Environmental Impacts of the U.S. Health Care System and Effects on Public Health. *PLoS One*. 2016. 11(6): p. e0157014.
4. Eckelman MJ, Huang K, Lagasse R, Senay E, Dubrow R, Sherman JD. Health Care Pollution And Public Health Damage In The United States: An Update. *Health Affairs*. 2020;38(12):2071-2079. <https://doi.org/10.1377/hlthaff.2020.01247>
5. United States Environmental Protection Agency. Renewable Energy at EPA. Updated January 24, 2022. Accessed September 25, 2022. <https://www.epa.gov/greeningepa/renewable-energy-epa>
6. Silverstein, K. Gundersen Health Systems Is on a Mission to Remain Energy Independent. *Environment and Energy Leader*. May 3, 2022. Accessed July 3, 2022. <https://www.environmentalleader.com/2022/05/gundersen-health-systems-is-on-a-mission-to-remain-energy-independent/>
7. Office of Energy Efficiency & Renewable Energy. Energy Department Recognizes Gundersen Health for Energy Efficiency Leadership. U.S. Department of Energy. July 23, 2019. Accessed July 3, 2022. <https://www.energy.gov/eere/articles/energy-department-recognizes-gundersen-health-energy-efficiency-leadership>
8. CentraState Health. Reducing Costs and Environmental Impact through Solar. CentraState Healthcare System. October 11, 2019. Accessed July 3, 2022. <https://www.centrastate.com/blog/reducing-costs-and-environmental-impact-through-solar/>
9. Oakey, D. Here Comes the Sun: Kaiser Permanente is Using Solar Panels to Create its Own Green Energy and Ease the Negative Health Effects of Climate Change. *Look insideKP Northern California*. October 9, 2019. Accessed July 5, 2022. <https://lookinside.kaiserpermanente.org/here-comes-the-sun/>
10. Office of Energy Efficiency & Renewable Energy: Solar Energy Technologies Office. Community Solar Basics. Accessed September 9, 2022. <https://www.energy.gov/eere/solar/community-solar-basics>
11. Database of State Incentives for Renewables & Efficiency. DSIRE. Accessed July 5, 2022. <https://www.dsireusa.org/>

12. Nayas, R. Why Hospitals and Schools are Crucial for Solar. Bluewave. May 12, 2020. Accessed July 5, 2022. <https://bluewave.energy/bw-resources/why-municipalities-hospitals-schools-are-so-important-for-community-solar>
13. Sunter DA, Castellanos S, Kammen DM. Disparities in rooftop photovoltaics deployment in the United States by race and ethnicity. *Nat Sustain* 2, 71–76 (2019). <https://doi.org/10.1038/s41893-018-0204-z>
14. Kaiser Family Foundation. Medicaid Coverage Rates for the Nonelderly by Race/Ethnicity: Timeframe 2019. Accessed September 17, 2022. <https://www.kff.org/medicaid/state-indicator/nonelderly-medicaid-rate-by-raceethnicity/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>
15. The White House. FACT SHEET: President Biden Signs Executive Order Catalyzing America's Clean Energy Economy Through Federal Sustainability. Published December 8, 2021. Accessed September 9, 2022. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/08/fact-sheet-president-biden-signs-executive-order-catalyzing-americas-clean-energy-economy-through-federal-sustainability/>

#### Relevant RFS Position Statements:

##### **410.004R Safe Disposal of Unused Pharmaceuticals**

That our AMA: (1) request that the Environmental Protective Agency conduct studies to understand better the public health and environmental impact of discarded pharmaceuticals on the nation's drinking water, (2) develop programmatic guidelines for the disposal of unused pharmaceuticals that optimally protect public health, patient confidentiality and environmental resources. (Resolution 1, I-05) [See also: AMA Policy H-135.993] (Reaffirmed Report E, A-16)

##### **410.025R Environmental Toxins and Reproductive Health**

That our AMA-RFS: (1) support rigorous scientific investigation into the causes and prevention of birth defects; (2) support rigorous scientific investigation into the linkages between environmental hazards and adverse reproductive and developmental health outcomes; (3) support policies to identify and reduce exposure to environmental toxic agents; (4) support policies to address the consequences of exposure to environmental toxic agents including the reporting of identified environmental hazards to appropriate agencies; (5) encourage physicians to learn about toxic environmental agents common in their community and educate patients on how to avoid toxic environmental agents; and (6) support policies and practices that support a healthy food system. (Resolution 3, A-14)

#### Relevant AMA Policy:

##### **H-135.949 Support of Clean Air and Reduction in Power Plant Emissions**

1. Our AMA supports (a) federal legislation and regulations that meaningfully reduce the following four major power plant emissions: mercury, carbon dioxide, sulfur dioxide and nitrogen oxide; and (b) efforts to limit carbon dioxide emissions through the reduction of the burning of coal in the nation's power generating plants, efforts to improve the efficiency of power plants and continued development, promotion, and widespread implementation of alternative renewable energy sources in lieu of carbon-based fossil fuels.

2. Our AMA will: (a) support the Environmental Protection Agency's proposal, under the Clean Air Act, to regulate air quality for heavy metals and other air toxins emitted from smokestacks. The risk of dispersion through air and soil should be considered, particularly for people living downwind of smokestacks; and (b) urge the EPA to finalize updated mercury, cadmium, and air toxic regulations for monitoring air quality emitted from power plants and other industrial sources, ensuring that recommendations to protect the public's health are enforceable.

Citation: Res. 429, A-03; Reaffirmation: I-07; Reaffirmed in lieu of Res. 526: A-12; Reaffirmed: Res. 421, A-14; Modified: Res. 506, A-15; Modified: Res. 908, I-17; Appended: Res. 401, A-22

##### **H-135.923 AMA Advocacy for Environmental Sustainability and Climate**

Our AMA (1) supports initiatives to promote environmental sustainability and other efforts to halt global climate change; (2) will incorporate principles of environmental sustainability within its business operations; and (3) supports physicians in adopting programs for environmental sustainability in their practices and help physicians to share these concepts with their patients and with their communities.

Citation: Res. 924, I-16; Reaffirmation: I-19

##### **D-135.966 Declaring Climate Change a Public Health Crisis**

1. Our AMA declares climate change a public health crisis that threatens the health and well-being of all individuals.
2. Our AMA will protect patients by advocating for policies that: (a) limit global warming to no more than 1.5 degrees Celsius, (b) reduce US greenhouse gas emissions aimed at carbon neutrality by 2050, and (c) support rapid implementation and incentivization of clean energy solutions and significant investments in climate resilience through a climate justice lens.
3. Our AMA will develop a strategic plan for how we will enact our climate change policies including advocacy priorities and strategies to decarbonize physician practices and the health sector with report back to the House of Delegates at the 2023 Annual Meeting.

Citation: Res. 420, A-22

### **H-135.973 Stewardship of the Environment**

The AMA: (1) encourages physicians to be spokespersons for environmental stewardship, including the discussion of these issues when appropriate with patients; (2) encourages the medical community to cooperate in reducing or recycling waste; (3) encourages physicians and the rest of the medical community to dispose of its medical waste in a safe and properly prescribed manner; (4) supports enhancing the role of physicians and other scientists in environmental education; (5) endorses legislation such as the National Environmental Education Act to increase public understanding of environmental degradation and its prevention; (6) encourages research efforts at ascertaining the physiological and psychological effects of abrupt as well as chronic environmental changes; (7) encourages international exchange of information relating to environmental degradation and the adverse human health effects resulting from environmental degradation; (8) encourages and helps support physicians who participate actively in international planning and development conventions associated with improving the environment; (9) encourages educational programs for worldwide family planning and control of population growth; (10) encourages research and development programs for safer, more effective, and less expensive means of preventing unwanted pregnancy; (11) encourages programs to prevent or reduce the human and environmental health impact from global climate change and environmental degradation. (12) encourages economic development programs for all nations that will be sustainable and yet nondestructive to the environment; (13) encourages physicians and environmental scientists in the United States to continue to incorporate concerns for human health into current environmental research and public policy initiatives; (14) encourages physician educators in medical schools, residency programs, and continuing medical education sessions to devote more attention to environmental health issues; (15) will strengthen its liaison with appropriate environmental health agencies, including the National Institute of Environmental Health Sciences (NIEHS); (16) encourages expanded funding for environmental research by the federal government; and (17) encourages family planning through national and international support.

Citation: CSA Rep. G, I-89; Amended: CLRPD Rep. D, I-92; Amended: CSA Rep. 8, A-03; Reaffirmed in lieu of Res. 417, A-04; Reaffirmed in lieu of Res. 402, A-10; Reaffirmation I-16