

Congress of the United States
Washington, DC 20515

September 12, 2022

Jennifer M. Granholm
Secretary
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

Deb Haaland
Secretary
U.S. Department of Interior
1849 C Street NW
Washington, DC 20240

Joseph DeCarolis
Administrator
U.S. Energy Information Administration
1000 Independence Avenue SW
Washington, DC 20585

Michael S. Regan
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20004

Dear Secretary Granholm, Secretary Haaland, Administrator DeCarolis, and Administrator Regan:

We write today to express our serious concerns regarding the energy and resource-intensive nature of marijuana cultivation. In addition, we have reservations regarding marijuana cultivation's subsequent emissions and believe more research is needed on this industry's rapidly growing demands on our country's energy systems, along with its effects on our environment.

The legalization of marijuana in several states has fueled a sharp increase in the supply of marijuana products coming to market. As such, marijuana cultivation operations have expanded and adapted to optimize the speed of development. As a result, 80% of cultivation occurs in indoor facilities. While this increases growth efficiency, it sacrifices energy efficiency. In fact, indoor marijuana cultivation consumes 709 kBtu/sq ft, while the typical home or office building only consumes 40-50 kBtu/sq ft.¹

The existing reports on energy consumption caused by marijuana cultivation are troubling. In Massachusetts, indoor marijuana cultivation accounts for 10% of industrial electricity consumption statewide.² In Colorado, the energy consumption from marijuana cultivation is so great that its emissions are similar to levels resulting from trash collection and coal mining in the state.³ In fact, one study indicates that the marijuana industry accounts for more than 1% of electricity consumption nationwide,⁴ and research predicts that annual cannabis cultivation electricity demand will grow 65% during the next decade.⁵

According to a report from the National Conference of State Legislatures: "An indoor facility can have lighting intensities similar to hospital operating rooms, which are 500 times greater than recommended reading light levels. These facilities can also have 30 hourly temperature or fan speed air changes, which is 60 times the rate in a normal home. Put another way, a four-plant lighting module uses as much electricity as 29 refrigerators."⁶

¹ <https://www.healtheuropa.com/a-resource-efficient-cannabis-industry-starts-with-benchmarking/103049/>

² <https://www.masslive.com/cannabis/2021/06/indoor-cannabis-grow-centers-responsible-for-10-of-industrial-electricity-consumption-in-massachusetts.html>

³ <https://source.colostate.edu/growing-cannabis-indoors-produces-a-lot-of-greenhouse-gases-just-how-much-depends-on-where-its-grown/>

⁴ https://www.researchgate.net/publication/254408509_The_carbon_footprint_of_indoor_Cannabis_production

⁵ <https://www.morningstar.com/articles/1012080/electricity-demands-covid-comeback>

⁶ <https://www.ncsl.org/research/energy/electricity-use-in-marijuana-production.aspx>

Unfortunately, these reports do not account for the extensive illegal market that still exists and does not face energy or emission regulations that legal operations do.

In addition to substantial electricity demands, a 2021 study in the Journal of Cannabis Research⁷ reports that cannabis plants require significant amounts of water for cultivation both indoors and out – about twice as much water as maize, soybeans, wheat and wine grapes. Even more concerning is the fact that the amount of water used by the cannabis industry is predicted to grow 86% by 2025.⁸ This is acknowledged by the White House Office of National Drug Control Policy (ONDCP) in its National Drug Control Strategy. In fact, ONDCP’s strategy calls for addressing illegal outdoor marijuana cultivation that has diverted precious water resources throughout the country and poses “a serious threat to wildlife, habitat, and humans encountering toxic substances” used by illegal marijuana growers for fertilizer, herbicides, and pesticides.⁹

The demand for prioritizing electricity uses and for increased energy efficiency is a growing concern for the American public. Underscoring this point, the California Independent System Operator and Midcontinent Independent System Operator warned that this summer both systems will face significant strains. As these strains come to fruition, the potential for capacity shortages and blackouts only rises. In light of passage of the Marijuana Opportunity Reinvestment and Expungement (MORE) Act, the SAFE Banking Act in the U.S. House of Representatives, and the introduction of legislation to legalize marijuana at the federal level, it is essential that the nation understand the burden marijuana cultivation puts on the electrical grid and the environment. As such, we ask for your detailed responses to the following questions by November 30, 2022:

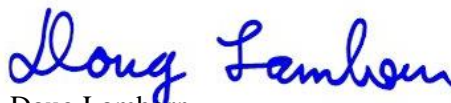
- How does current marijuana legalization impact state energy consumption and emission levels?
- How would federal legalization of marijuana affect national energy consumption and emission levels?
- What is the anticipated growth of energy usage and emissions from the marijuana industry?
- How will growing energy demands from the marijuana industry affect the reliability of our electric grid?
- What impact do illegal marijuana growing operations have on the country’s water supply?
- What harms do illegal marijuana growers' use of various fertilizers, herbicides, and pesticides pose to wildlife, habitats, and humans in the United States?

As Congress debates whether to advance marijuana legalization, the American people must have a better understanding of the environmental costs of this rapidly growing industry. If the Administration seeks to reduce emissions and protect our environment as aggressively as it has previously committed, we must have a comprehensive view of where emissions and other pollution occurs, as they will likely only grow.

Sincerely,



Earl L. “Buddy” Carter
Member of Congress



Doug Lamborn
Member of Congress

⁷ <https://jcannabisresearch.biomedcentral.com/articles/10.1186/s42238-021-00090-0>

⁸ <https://newfrontierdata.com/cannabis-insights/u-s-legal-cannabis-water-use-to-almost-double-by-2025/>

⁹ <https://www.whitehouse.gov/wp-content/uploads/2022/04/National-Drug-Control-2022Strategy.pdf>