

# Legalized Cannabis & Energy Use

## Going Green While Growing Green

### Growing Cannabis Uses a Lot of Energy

Whether for medicinal or recreational use, the demand for legal cannabis is growing fast, and with that demand comes significant energy consumption. There is an opportunity for the energy efficiency industry to start deploying programs and policies to decrease energy usage in this ever-growing industry. By collaborating in this nascent phase, efficiency stakeholders can help grow facilities meet their energy needs in a smart, sustainable way. Cannabis cultivation is an extremely energy-intensive process. The energy needs for a grow operation have been compared to data centers, which are 50 to 200 times more energy-intensive than a typical office building.

Generally, lighting is the largest energy user in grow operations, but due to the temperature and humidity needs of the plants, air conditioning, ventilation and dehumidification follow close behind. According to estimates, energy can account for more than one-third of the costs associated with producing cannabis.

A 2012 study found that national grow operations consumed about \$6 billion in energy each year.<sup>1</sup> At the time, only 15 states had legalized medical cannabis. Today, 31 states allow cannabis for medicinal or recreational use, including six in the Midwest.

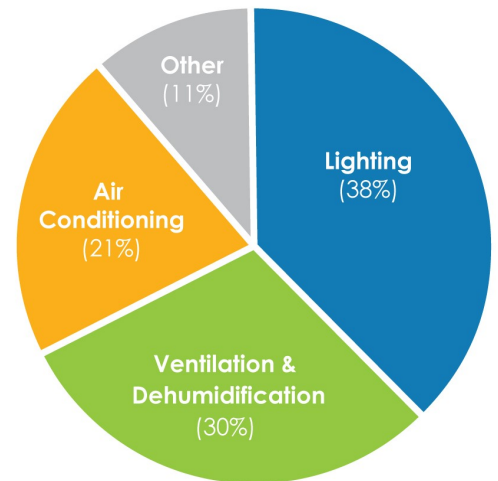
### Cannabis Legalization in the Midwest

In the Midwest, medicinal cannabis is legal in six states, and five more have legalized CBD oil, a product made from the cannabis plant with very low THC content. While the consumption of CBD oil is allowed, there are very few manufacturers licensed to produce the oil in each state, and some states do not permit the production to occur within state limits, making the energy impacts from CBD low.

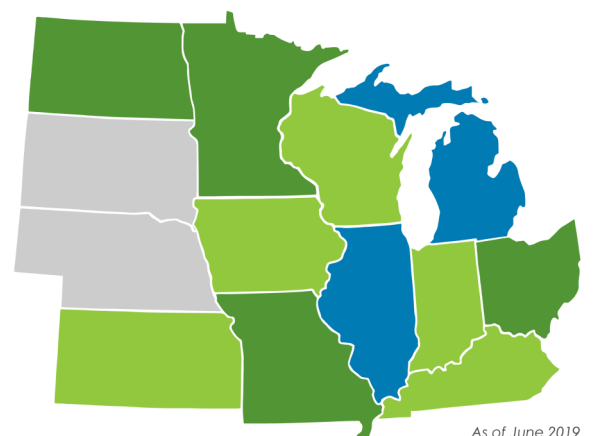
Michigan and Illinois are the only Midwest states where recreational cannabis is legal, though that could change in the near future.

**This uncertain legal outlook, coupled with the high energy demands of new grow operations can make it difficult for utilities to plan their future generation needs.**

Breakdown of Energy Use in Cannabis Growing Operations



Legal Status of Cannabis in Midwest States





Based on legal status and the number of growing licenses permitted by each state, we estimate the cannabis industries in Illinois, Michigan and Ohio currently have the highest energy demands in the region. As a result, these states have the greatest potential to benefit from energy efficiency measures. Customizing outreach and services within medicinal markets would be a wise investment for the future if and when recreational production becomes legal in other Midwestern states.

### Energy Efficiency Can Help

Engaging the cannabis industry early in the design and construction phases for new production facilities is crucial for reducing energy use. Outreach and education best practices include:

- Working with grow facilities to understand their energy use
- Tailoring efficiency rebates to the cannabis sector
- Designing electric rates to incentivize efficient energy use
- Creating fair policies for connecting grow facilities to the grid
- Educating cultivators on the line extension process

### Get Involved

MEEA is gauging interest in a Cannabis Working Group that includes utilities, regulators, policy-makers and cannabis growers. This working group would make it easier to share information, design incentives and craft smart, energy-saving policies tailored to the unique demands of this industry.

Are you interested in participating? Do you have other thoughts surrounding cannabis and what MEEA can do in this space? Send us an email and let's connect.

### Contact

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<sup>1</sup> Mills, E. 2012. "The Carbon Footprint of Indoor Cannabis Production." Energy Policy 46: 58– 67. <http://evanmills.lbl.gov/pubs/pdf/cannabis-carbon-footprint.pdf>