

## Energy Extension Survey Worksheet

On November 1, 2019, the Cannabis Control Commission (“Commission”) published amended regulations allowing a Medical Marijuana Treatment Center (“MTC”) with a final Certificate of Licensure before November 1, 2019 to extend the deadline for energy compliance until January 1, 2021. The amended regulations also provided additional pathways for compliance and established the documentation requirements to demonstrate compliance.

MTCs possessing a final license issued prior to November 1, 2019 may choose to request an additional, one-time-only extension of six (6) months, until July 1, 2021, if the licensee agrees to file two Energy Extension Surveys. If the MTC previously received an extension for a colocated cultivation/MTC facility, they are unable to apply and be granted an additional extension.

The Energy Extension Survey is intended for use by MTCs that have requested, and been granted, a six-month extension to the compliance date and have agreed, in turn, to complete and submit the survey twice within six months. The first survey will be due on or before April 1, 2021 (reporting on January 1-March 31, 2021) and an updated survey reflecting any changes will be due on or before July 9, 2021 (reporting on April 1, 2021-June 30, 2021). 935 CMR 501.120(12)(g).

Survey information will be used internally to develop government policy and no information identifying an individual or entity will be published online. In the future, de-identified information may be shared on the Open Data Platform on the Commission’s website.

**This document is intended to provide MTCs with all the survey questions in advance, so they can prepare responses before beginning the online survey in Formstack. Licensees are to submit all surveys through Formstack only and submit only one response per MTC, per reporting period. Eligible licensees will receive the link to the survey after the Commission has approved the licensee’s Energy Extension Request.**



- MTC name \_\_\_\_\_
- MTC address (must be the address for which the information below is being reported)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

In the following section, please report dates that are applicable for the facility that is the subject of this report (MM/DD/YYYY).

- Date of Provisional Medical Use License/Registration \_\_\_\_\_
- Date of Final Medical Use License/Registration \_\_\_\_\_
- Date of Commencement of Medical Use Operations \_\_\_\_\_
- Survey Report Date (*check one*)
  - 04/01/2021
  - 07/09/2021



## **Terminology**

**For the purpose of this survey, the following terms have the following meanings:**

An immature plant is a non-flowering Marijuana plant that is no taller than eight inches and no wider than eight inches produced from a cutting, clipping, or seedling and that is in a growing/cultivating container.

A vegetative plant is the state of the Cannabis plant which is a form of asexual reproduction in plants during which plants do not produce resin or flowers and are bulking up to a desired production size for flowering.

A mature plant is greater than 8” tall.

A mother plant is a marijuana plant that is grown or maintained for the purpose of generating Clones, and that will not be used to produce plant material for sale to another Marijuana Establishment or Medical Marijuana Treatment Center.

Reporting period refers to the 2 three-month periods for which licensees are to submit the Energy Extension Survey (January 1-March 31, 2021 and April 1, 2021-June 30, 2021), unless otherwise instructed herein.

1. What type of horticultural lighting do you use? (*Check all that apply*)

- High Pressure Sodium (HPS)
- Metal Halide (MH)
- Ceramic Metal Halide (CMH)
- Fluorescent
- Light Emitting Diode (LED)

For each type of lighting you use, please provide both the INPUT WATTAGE and NUMBER OF FIXTURES for each room with immature plants, vegetative plants, flowering plants, and mother plants.

- High Pressure Sodium (HPS)
  - Rooms with immature plants
    - Input wattage \_\_\_\_\_
    - Number of fixtures \_\_\_\_\_
  - Rooms with vegetative plants
    - Input wattage \_\_\_\_\_
    - Number of fixtures \_\_\_\_\_
  - Rooms with flowering plants
    - Input wattage \_\_\_\_\_
    - Number of fixtures \_\_\_\_\_
  - Rooms with mother plants
    - Input wattage \_\_\_\_\_
    - Number of fixtures \_\_\_\_\_



- Metal Halide (MH)
  - Rooms with immature plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with vegetative plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with flowering plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with mother plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
- Ceramic Metal Halide (CMH)
  - Rooms with immature plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with vegetative plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with flowering plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with mother plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_



- Fluorescent
  - Rooms with immature plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with vegetative plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with flowering plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with mother plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
- Light Emitting Diode (LED)
  - Rooms with immature plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with vegetative plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with flowering plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_
  - Rooms with mother plants
    - Input wattage\_\_\_\_\_
    - Number of fixtures\_\_\_\_\_



2. HVAC system type (*check all that apply*)

- Roof Top Unit(s) (RTU)
- Chiller
- Mini-split system
- Other\_\_\_\_\_

3. HVAC individual and total system capacity (measured in tons or btuh). Please identify the number and size of each unit (e.g. ten 40-ton RTUs, one 400-ton chiller).

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4. List out each cultivation room/space in your facility and the cubic feet per minute (CFM) delivered to each cultivation room/space.

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5. Percentage of cubic feet per minute (CFM) that is outdoor air

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6. Air-side equipment type (AHU, FCU, RTU, DOAS, etc.) (*check all that apply*)

- Air Handling Unit (AHU)
- Fan Coil Unit (FCU)
- Roof Top Unit (RTU)
- Dedicated Outdoor Air System (DOAS)
- Other\_\_\_\_\_



7. Supplemental or dedicated dehumidification systems (above and beyond the HVAC systems above) capacity and quantity (*check all that apply*)

- Portable dehumidification units (e.g. Quest, etc.)
- Central desiccant systems
- Desiccant wheels in AHUs
- Heat recovery coils (e.g. MSP, heat pipe, etc.)
- Other \_\_\_\_\_

8. HVAC controls (*check all that apply*)

- Thermostats/humidistats
- Building management system/energy monitoring system
- Dedicated horticultural system (e.g. Argus, iPonic, etc.)
- Advanced strategies (altering equipment sensible heat ratio, operating in dedicated cooling or dehumid modes)
- Other \_\_\_\_\_

9. Building type (*check one*)

- New construction
- Retrofit

10. Total building area in square feet (includes non-cultivation space)

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11. Cultivation area in square feet

- a. Immature \_\_\_\_\_
- b. Vegetative \_\_\_\_\_
- c. Flowering \_\_\_\_\_
- d. Mother \_\_\_\_\_

12. Grow type (*check all that apply*)

- Tiered
- Vertical grow





13. Time in operation (*check one*)

- Less than 6 months
- 6 months to 1 year
- 1-2 years
- 3-4 years
- 4 years or more

14. On-site renewables (*check all that apply*)

- Solar photovoltaic or solar thermal electric energy
- Wind energy
- Fuel cells using eligible RPS Class I renewable fuel
- Landfill methane gas
- Low-emission, advanced biomass power conversion technologies using eligible biomass fuel
- Geothermal energy
- Solar thermal
- Woody biomass
- Biogas
- Liquid biofuels
- Compost heat exchange system
- Other \_\_\_\_\_

15. Roof information

a. Roof surface (EPDM, PVC, etc.) (*check all that apply*)

- Asphalt
- Elastomeric coating
- Modified bitumen
- PVC
- TPO
- EPDM
- Other \_\_\_\_\_



b. Roof insulation material (*check all that apply*)

- Polyisocynaurate (Polyiso)
- Polysterene (XPS or EPS)
- Mineral wool
- Spray foam
- Fiberglass
- Other \_\_\_\_\_

c. Roof insulation R Value \_\_\_\_\_

16. Wall information

a. Wall framing (*check all that apply*)

- Metal
- Wood
- Concrete Masonry Units (CMU)
- Other \_\_\_\_\_

b. Wall insulation material (*check all that apply*)

- Fiberglass
- Mineral wool
- Polyisocynaurate (Polyiso)
- Polysterene (XPS or EPS)
- Closed cell spray foam
- Open cell spray foam
- Structural Insulated Panels (SPIS)
- Other \_\_\_\_\_

c. R value of wall assemblies \_\_\_\_\_

17. Extraction or infused product manufacturing on-site? If so, please specify type.

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18. Plant count

- a. Number of mature plants onsite \_\_\_\_\_
- b. Number of immature plants onsite \_\_\_\_\_

19. Please identify the top 10 strains you are cultivating by volume. For each strain, please provide

- 1. the irrigation rate per plant in gallons per day, and
- 2. the number of plants, using the number assigned to the strain in the prior question.

Please identify a hybrid strain as a separate strain from a pure strain.

- Strain #1 name \_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_



- Strain #2 name\_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
- Strain #3 name\_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_



- Strain #4 name \_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  
- Strain #5 name \_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day \_\_\_\_\_
    - Number of plants \_\_\_\_\_



- Strain #6 name\_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
- Strain #7 name\_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_



- Strain #8 name\_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
- Strain #9 name\_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_



- Strain #10 name\_\_\_\_\_
  - Immature plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Vegetative plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Flowering plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_
  - Mother plants
    - Irrigation rate per plant in gallons per day\_\_\_\_\_
    - Number of plants\_\_\_\_\_

20. Water usage

a. Total volume of water in gallons withdrawn by month for the entire facility

b. \_\_\_\_\_  
 Total volume of water in gallons used on crop by month  
 \_\_\_\_\_

21. Source of irrigation water, including in your answer the source (i.e., purchase; well) and location (*check all that apply*)

- Private well on site
- Private well outside of property
- Public water supply system
- Private water company

22. What type of water method is used? (*Check all that apply*)

- Flood tables
- Drip watering
- Wick systems
- Hand watering
- Aeroponics
- NFT (Nutrient Film Technique) system
- Water culture system





23. Is irrigation automated or manual? (*Check one*)

- Automated
- Manual

24. Is the water source metered or estimated? (*Check one*)

- Metered
- Estimated

25. If the water source is metered, what is the frequency of calibration? (*Check one*)

- Every year
- Every 2 years
- Every 3 years
- Every 4 years

26. If the water source is metered, what is the date of the most recent calibration?

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27. If irrigation water is purchased, please include as an attachment, a scan of the water bills for the past 12 months, or since becoming operational, if that time is less than 12 months.

28. For each of the top 10 strains being cultivated during the reporting period, please share

1. number of days per growing cycle, and
2. number harvested per growing cycle.

- Strain #1 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
- Strain #2 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
- Strain #3 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_



- Strain #4 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
  
- Strain #5 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
  
- Strain #6 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
  
- Strain #7 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
  
- Strain #8 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
  
- Strain #9 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_
  
- Strain #10 name \_\_\_\_\_
  - Number of days per growing cycle \_\_\_\_\_
  - Number harvested per growing cycle \_\_\_\_\_



29. Number of plant rotations per year

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30. Amount of total harvested product (in grams) for this reporting period

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31. Is excess water from runoff captured and reused? (*Check one*)

- Yes
- No

32. Is water vapor captured and reused? (*Check one*)

- Yes
- No

33. If the answer to 31 or 32 is yes, please answer the following:

a. What type and level of treatment does captured and reused water go through before being returned as a feed?

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b. What is the volume in gallons of this water being captured and reused?

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34. What percentage of total water use does the volume of water being captured and reused constitute? *(Check one)*

- 0%
- 1-10%
- 11-20%
- 21-30%
- 31-40%
- 41-50%
- >50%

35. Is process wastewater generated from facility? *(Check one)*

- Yes
- No

36. If the answer to 35 is yes, please identify the volume in gallons per month.

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37. Is wastewater from the facility treated? *(Check one)*

- Yes
- No

38. How is wastewater from the facility disposed? *(Check one)*

- Sewer connection
- Industrial holding tank
- No discharge

39. Please describe any other aspect of your operation that you believe has impacted your water usage, such as: change in equipment, change in staff, altered schedule of watering, etc.

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40. How many pounds of trash have you disposed in the past 12 months or since becoming operational, if that time is less than 12 months?

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41. Waste prevention activities and reuse activities reduce waste at the source by creating less trash through using less materials or donating materials for use by non-profits and other organizations. For more information, please see: <https://www.mass.gov/lists/donation-reuse>. Have you engaged in waste prevention or reuse practices regarding the following materials? (*Check all that apply for the prior 12 months or since becoming operational, if that time is less than 12 months.*)

- Bottles and cans
- Construction materials
- Computers and other electronics
- Cardboard and other packaging
- Cellular phones
- Furniture
- Food
- Paper
- Ink/toner
- Light bulbs/fluorescent lights
- Textiles

42. If you engaged in waste prevention or reuse practices regarding the materials listed in question 41, please estimate how many pounds you reduced or donated in the past 12 months or since becoming operational, if that time is less than 12 months.

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43. Do you recycle any of the following materials? (Check all that apply for the prior 12 months or since becoming operational, if that time is less than 12 months.)

- Bottles and cans
- Construction materials
- Computers and other electronics
- Cardboard and other packaging
- Cellular phones
- Furniture
- Food
- Paper
- Ink/toner
- Light bulbs/fluorescent lights
- Textiles

44. How many pounds of material identified in Question 43 have you recycled in the past 12 months or since becoming operational, if that time is less than 12 months?

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45. Have you composted any of the following materials? (Check all that apply for the prior 12 months or since becoming operational, if that time is less than 12 months.)

- Food
- Grass
- Leaves/brush/branches
- Yard trimmings
- Mixed organics
- Other yard waste
- Sand/soil/dirt
- Cannabis plant material

46. How many pounds of the materials identified in Question 45 have you composted in the past 12 months or since becoming operational, if that time is less than 12 months?

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47. Please provide information on products containing recycled content that you have purchased in the past 12 months or since becoming operational, if that time is less than 12 months. For more information on purchasing products containing recycled content, please see the following directory:

[https://nerc.org/documents/green\\_purchasing/grnprdctsvndrdir.html#9](https://nerc.org/documents/green_purchasing/grnprdctsvndrdir.html#9). (Check all that apply)

- Paper and envelopes
- Toner cartridges
- Other office supplies
- Janitorial products (e.g., trash bags, paper towels)
- Vehicle fluids (e.g., antifreeze, motor oil)
- Compost
- Landscaping materials (e.g., plastic lumber)
- Packaging and shipping materials

48. Please list vehicles used by the MTC by make, model, and year. For each vehicle, please provide the mileage for the beginning of the reporting period. For each survey submission, you will be asked to provide an update on the vehicle's mileage (i.e., vehicle mileage as of October 1, 2020 and January 1, 2021).

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49. Have you provided any electric vehicle service equipment for the use of your employees and/or customers?

- Yes
- No

50. Please identify the company that supplies your electricity.

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