

PowerScore CEA: All Survey Questions

This document previews all survey questions, other than periodic open-ended questions about your facility's uniqueness. Most questions are optional, but the more data you put in, the more KPIs you'll get out of the survey.

<https://powerscore.resourceinnovation.org/go-cea>

Describe your cultivation facility

Calculating your PowerScore depends on a few dozen details about your facility. You will need information about your energy bills, and lighting equipment.

- Which crops do you grow at this facility? Describe each distinct crop your facility produces. Provide each crop a name to track its performance separately.
(Select all that apply)
 - Floriculture
 - Finished Plants (perennials, grasses, herbs, ferns, succulents)
 - Young Plants for Wholesale (plugs and cells of varying cultivars like veggies, herbs, perennials)
 - Leafy Greens
 - Lettuce, Arugula, Spinach
 - Macrogreens (Radish, Beet, Cabbage, Kale, Arugula, Mustard)
 - Microgreens (Radish, Beet, Cabbage, Kale, Arugula, Mustard)
 - Genetics (Lettuce, Arugula, Spinach, Radish, Beet, Cabbage, Kale, Mustard)
 - Cole Crops
 - Mustard family including Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Kohlrabi
 - Genetics
 - Specialty Greens
 - Herbs (Basil, Cilantro, Oregano, Lavender, Amaranth, Sorrel, Cress)
 - Genetics (Basil, Cilantro, Oregano, Lavender, Amaranth, Sorrel, Cress)
 - High Wire Fruit and Vegetable Specialty Crop
 - Vine Tomatoes
 - Tomato Genetics
 - Vine Cucumbers
 - Cucumber Genetics
 - Specialty (Pepper)
 - Fruit
 - Berries (Raspberries, Blueberries, Blackberries)
 - Strawberries
 - Grapes

- Melons (Watermelon, Cantaloupe, Honeydew)
 - Genetics
 - Mushrooms
 - Humulus (Hops)
 - Cannabis
 - Hemp Fiber
 - Hemp Oil Seed
 - CBD (<0.3% THC)
 - THC (>0.3% THC)
- Which of your facility's growing spaces do you want to track?
Describe each distinct growing space in your facility for which you want to enter separate data. Naming each space is optional, but it can also help you identify the correct space.
 - What is the type of each growing space?
 - Outdoor
 - Indoor
 - Greenhouse/Hybrid/Mixed Light
(High and low tunnel environments are considered Greenhouses for the purposes of this survey.)
- Which part of your facility are you wanting to benchmark?
 - Whole facility
 - Your main production environment(s)
 - Your research chamber(s)
- Name of facility
Optional. Will only be used for communication between us and you.
- Facility's postal code
- Year of production
- Last reporting month and year
The last full month you have complete energy, water, and production information you can report.
- For each crop, what is the average area under production throughout the 12-month reporting period?
 - Square Feet
 - Square Meters
- How would you like to enter your water measurements or estimates?
 - Gallons
 - Liters
 - CF (Cubic Feet)
 - CCF (100 Cubic Feet)

Describe your growing environments

Temporary seasonal greenhouse structures such as low tunnels are considered outdoor environments.

- **For Each Growing Space:**
 - What type of environment is Space #1?
 - Indoor or Greenhouse
 - Uses Vertical Stacking?
 - Uses Mobile Racking?
 - How many types of light fixtures are used for growing in Space #1? If lights have different wattages, then they are different types.
 - Greenhouse
 - Light Deprivation?
 - Supplemental Electric Light?
 - How many types of light fixtures are used for growing in Space #1? If lights have different wattages, then they are different types.
 - Outdoor
 - For each crop, what is the average square footage under production throughout the 12-month reporting period in Space #1?
 - Which stages of growth occur in Space #1?
 - Clone or Mother Plants
 - Vegetating Plants
 - Flowering Plants

Describe your lighting fixtures

- **Details for Each Light Type within Each Space:**
 - Make
 - Model
 - Lighting fixture wattage
 - Number of these fixtures
 - While in operation, how many hours a day are the lights in this space turned on? (hours)
 - How many days a year are the lights in this space in operation? (days)

Describe the heating, ventilation, air conditioning, and dehumidification (HVAC) systems you use

Describe the heating, ventilation, air conditioning, and dehumidification (HVAC) systems you use. There are many variables in your cultivation facility that impact HVAC equipment selection, unit size and cost of operation.

Describe your water sources and recirculation

- Please select any significant sources for the water you use at your facility for cultivation and non-cultivation processes: (Select all that apply)
 - Potable
 - Municipal Potable Water
 - Groundwater
 - Reservoir
 - Private Well / Bore
 - Non-potable
 - Natural Surface Water
 - River / Stream
 - Pond / Lake
 - Municipal Recycled Water
 - On-site Reclaimed (Recycled) Water
 - Condensate
 - Rainwater
 - Irrigation Runoff
- How do you use water in your facility? (Select all that apply)
 - Watering for plant growth
 - Fogging for plant health
 - Hydronic HVAC processes and systems
 - Integrated pest management
 - Potable drinking water
- Do you recirculate water in your operation?
 - Do you treat your recirculated water?
 - Did you review recirculated water quality before selecting treatment equipment? (Y / N)
 - What water treatment processes do you use for your recirculated water?
(Same options as source water treatment)
- How much of your annual water usage is for cultivation? (0-100%)
- When and how much water do you use and store during the year?
For each month...
 - Water Usage
 - Source Water Storage
 - Recirculated Water Storage

Describe your electricity sources and usage

For the most accurate and current results, answer the following questions for the most recent 12-month period.

- Does your reported electricity consumption include non-facility usage, such as a residential dwelling or unrelated business?
 - Please estimate the percentage of your overall reported electricity consumption that is attributable to crop cultivation operations. (0-100%)
- Does your facility produce renewable electricity onsite?
 - What types of renewable electricity does your facility produce onsite?
 - Solar PV
 - Wind
 - Other
 - Our numbers are reported as net electricity consumption and include renewable energy production. (Y / N)
 - **For each month of the reporting year:**
 - Renewable Electricity Generated (kWh)
- Over the 12-month period, how many total annual kilowatt hours (kWh) did your facility use? Enter 0 for any months that you did not consume any electricity from the grid.
Please report the most recent 12 months of energy consumption, or the previous calendar year's energy consumption.
For each month of the reporting year:
 - Electricity Usage (kWh)
 - Peak Electric Demand (kW / kVA)
- Would you like to upload images or files of your electricity bill data?
- Does your facility use an electric utility as a fuel source? We're still building a more complete database of utilities and energy providers.
- Do you work with your utility to source your electricity from solar, wind, or hydro?

Describe your other energy sources

- Did your facility use natural gas in the last 12 months?
 - What is the name of your natural gas utility?
- Does your operation consume other delivered fuels?
 - What delivered fuels does your operation consume?
 - Back up generator
 - Biofuels (cord wood, wood pellets, other)
 - Propane
 - Fuel oil

Describe your other energy usage

For the most accurate and current results, answer the following questions for the most recent 12-month period.

- **For each month's consumption of the reporting year:**
 - Natural Gas (Therms / CCF)
 - Back Up Generator (Gasoline Gallons / Diesel Gallons / Natural Gas Therms / Natural Gas CCF)
 - Biofuels (Tons / Cords)
 - Propane (Gallons)
 - Fuel Oil (Gallons)

Describe your annual production

- For each crop, what is the total production throughout the same 12-month reporting period?
 - Measure Method
 - Fresh weight
 - Dry weight
 - Number of Plugs/Cells
 - Number of Pots/Baskets
 - Units
 - Kilograms
 - Pounds
 - Hundredweight (cwt)
 - Units
 - Annual total production

Describe your facility's waste management approach

- Over the same 12-month period, how much green/plant waste did your facility dispose of? (Pounds / Cubic Yards)
- What does your facility do with its green/plant waste? (Check all that apply.)
 - Handled On-Site
 - Compost
 - Aerobic Waste Management
 - Landfill / Dump
 - Incinerator
- What does your facility do with any agricultural or growing media waste?

- Landfill / Dump
 - Recycle
 - Compost
- What does your facility do with supplies and materials waste? (trellis netting, etc)
 - Landfill / Dump
 - Recycle
- How does your facility keep track of compliance waste?

How would you like to move forward?

- E-mail address
We will e-mail your PowerScore, but we will not share your e-mail with anyone.
- Yes, I would like to occasionally receive email updates from the Resource Innovation Institute
- Would you like to support RII's conservation efforts by joining as a member?
ResourceInnovation.org/joinwithus/
- Are you considering a lighting, HVAC and/or dehumidification upgrade over the next 12 months? (Y / N)
- Have you used incentives from a utility program? (Y / N)
- Would you like to be contacted by your utility representative to learn more about incentives for which you may be eligible? (Y / N)