ENERGY DEMAND BASIS OF DESIGN

for

CANNA ORGANIC FARMS, Inc.

Nipomo, CA

By

BMA Mechanical

Dustin Lane

CEA # NR16-15-20017

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Executive Summary

The proposed facilities are for use in the cultivation and processing of cannabis. The energy usage for each facility is derived solely from process equipment required for the cultivation and processing of cannabis. The process equipment used includes greenhouse grow lights, odor mitigation systems, security systems, security lighting, water pumps, and HVAC systems. Each system was selected to provide the proper operating conditions while minimizing energy.

There are no greenhouse gas emitting equipment being proposed for these facilities.

1. FACILITY INFORMATION

A. Facility Name: Canna Organic Farms, Inc.

B. Property Owner:

   i. Name: Kassandra Cisneros

   ii. Email: 514e.tefft@gmail.com

C. Facility Operator(s) / Licensee(s):

   i. Name: Canna Organic Farms, Inc. / Luis Garcia

   ii. Phone number: 805-233-7565

   iii. Email: cannaorganicfarmsinc@gmail.com

D. Facility address: 514 E. Teft Street, Nipomo, CA 93444

E. Facility mailing address: 514 E. Teft Street, Nipomo, CA 93444

F. Facility type: Cannabis Cultivation, Nursery, Processing, and Distribution Transport-Only

G. Facility hours of operation: M-Sa 6:30am-6:00pm

H. Description of facility operations: Cannabis Cultivation, Nursery, Processing, and Distribution Transport-Only

I. Emergency contact information:

   i. Name: Luis Garcia

   ii. Phone number: 805-233-7565

   iii. Email: cannaorganicfarmsinc@gmail.com

J. Land Use Permit Application Number with County of San Luis Obispo: DRC2019-00049

K. Air permit and permit number: TBD

2. FACILITY ENERGY DEMAND INFORMATION

A. Energy Demand & Greenhouse Gas Emissions

Greenhouse:
The facility will consist of (9) 30'x100' Greenhouses connected along the long axis with no dividing wall for a combined area of 27,000 square feet. The energy demand will be generated from the following process sources:

- LED Grow Lighting (high-efficiency)
- Security Lighting System (motion sensor)
- Security Camera System (low voltage)
- Odor Mitigation System, including fans, ionization units, and filter units

Each system will be selected to minimize energy usage and meet or exceed current energy standards. There is no greenhouse gas emitting equipment in this facility.

Process/Distribution Building:
The building will be a single-story modular type building for the processing, packaging, and distribution of cannabis. The energy demand will be generated from the following sources:

- HVAC System (Wall-Mounted Heat Pump Units)
- Security Lighting System (motion sensor)
- Security Camera System (low voltage)
- Odor Mitigation System, including exhaust fans and filter units

Each system will be selected to minimize energy usage and meet or exceed current energy standards. There is no greenhouse gas emitting equipment in this facility.

Nursery:
The facility will consist of a 6,875 square foot Cannabis Nursery Greenhouse ((5) 1,200 square foot Greenhouses and (1) 880 square foot Greenhouse) with 5,500 square feet of Nursery canopy for the growing of seedlings. The energy demand will be generated from the following process sources:

- LED Grow Lighting (high-efficiency)
- Security Lighting System (motion sensor)
- Security Camera System (low voltage)
- Odor Mitigation System, including fans and filter units

Each system will be selected to minimize energy usage and meet or exceed current energy standards. There is no greenhouse gas emitting equipment in this facility.

Product Storage Container(s):
The building will be self-contained "C-train" structure to hold dried and packaged product for transportation to another facility off-site. The container will be equipped with a recirculating HVAC system and Odor Mitigation System. The energy demand will be generated from the following process sources:

- HVAC System (Wall-Mounted Heat Pump Units)
- Security Lighting System (motion sensor)
- Security Camera System (low voltage)
- Odor Mitigation System, including fans and filter units

Each system will be selected to minimize energy usage and meet or exceed current energy standards. There is no greenhouse gas emitting equipment in this facility.

3. APPENDICES

A. Canna Organic Farms – Total Annual Energy Estimate

End Report

APPENDIX A

BMA, Inc. 08/11/21

CANNA ORGANIC FARMS (NIPOMO, CA)
ANNUAL ENERGY ESTIMATE **Job # 21156.00**

ITEM DESCRIPTION:	VOLTS	AMPS	WATTS	# OF UNITS	HRS / DAY	TOTAL (kWh/yr)	NOTES
Greenhouse Grow Lights	-	-	60.00	360	3.25	25,552.80	(40) lights per Greenhouse (Typ. X 9)
Site Security Cameras	-	-	500.00	4	24.00	17,472.00	
Site Security Lighting	-	-	150.00	5	0.75	204.75	
Processing Building Operation	-	-	28,000.00	1	5.70	58,094.40	
Product Storage Container Operation	-	-	10,500.00	1	5.00	19,110.00	
Well Pump	-	-	6,300.00	1	3.00	6,879.60	
Greenhouse Circulating Fans (Holland Heater)							
Holland Heater CAF45	230	1.74	400.20	36	14.00	73,419.09	24/7 operation during flowering (February to August)
Bipolar Ionization Units			8.00	18	14.00	733.82	24/7 operation during flowering (February to August)
Process Bldg. Exhaust w/ Carbon Filter							
Roof-mounted Upblast Fan	115	1.50	172.50	1	24.00	1,506.96	
Element Air / HEPA & Carbon Filter							
Greenhouse	115	1.80	207.00	54	14.00	56,963.09	24/7 operation during flowering (February to August)
Nursery	115	1.80	207.00	12	14.00	12,658.46	24/7 operation during flowering (February to August)
Product Storage Container	115	1.80	207.00	1	24.00	1,808.35	
Ventilation Louver Bipolar Ionization							
iMod Ionization Bars	120	0.12	14.40	18	14.00	1,320.88	24/7 operation during flowering (February to August)
Can-Fan 50 / Carbon Filter							
Processing Building	120	1.50	180.00	3	24.00	4,717.44	
					TOTAL =	**280,441.65**	

Note:
*Hours per Day based on average use per day for the year