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A Cannabis Education Series

Maine Energy Efficiency Rebates for Cannabis Businesses

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Energy Efficiency Incentives for Maine Cannabis Businesses

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Join in the fun!

- Submit your questions via the Q & A function below as they come to you
- We will respond to them during the final portion of the session
- Evaluation survey at the end of the webinar. Thank you for your feedback.

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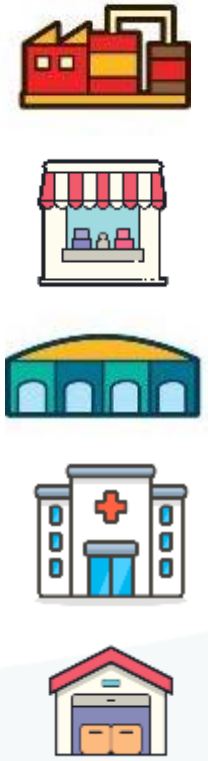
Commercial & Industrial Custom Program

Commercial & Industrial Programs

C&I Prescriptive Program

- Provides fixed-price incentives for a predefined list of “off-the-shelf,” widely available measures
  - space lighting
  - heat pumps
  - boilers & furnaces
  - VFDs for HVAC equipment
- Participants work with a Qualified Partner (QP)

non-cultivation facilities



C&I Custom Program

- Targets site-specific efficiency projects that require tailored engineering analysis
- Designed to help customers overcome barriers associated with larger, more complex projects
- Incentivizes measures not covered in the C&I Prescriptive Program

cultivation facilities

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C&I Custom Program Tracks

- horticultural lighting
- heat recovery
- variable frequency drives (VFDs)
- HVAC controls and optimization
- chillers
- refrigeration upgrades

- pipe insulation
- heat recovery
- condensate recovery
- process steam reduction
- HVAC controls and optimization
- heat exchangers
- recovery boilers

- reciprocating engines
- steam turbines
- anaerobic digesters
- organic Rankine cycle processes

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Basic Program Requirement

- **Must be cost effective**

  All projects must have a benefit-to-cost

  (B:C) ratio of **1.0 or higher**

$$\text{B:C ratio} = \frac{\text{Total Benefit}}{\text{Total Cost}}$$

- ***Benefit*** = net present value of the avoided cost of energy saved by implementing the project
- ***Cost*** = net present value of all of the project costs including labor, material, engineering, etc.

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Minimum Energy Savings Requirements

≥ 36,000 kWh/year

≥ 400 MMBtu/year

≥ 36,000 kWh/year

Incentives

Minimum incentive: $10,000

Incentive capped at the ***lesser*** of:

Retrofits	*Lost Opportunity*
50% of Project Cost	75% of Project Cost
$1,000,000/yr Electric/DG	$500,000/yr Thermal
$0.28/kWh saved	$25/MMBtu saved
1-Year Payback	

replace on burnout

new construction

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Scoping Audits

- No cost to the participant
- Phase 1: online form followed by a phone screening
- Phase 2: utility data screening and site visit
- Final Report with list of options

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Technical Assistance (TA) Studies

- TA Studies help customers verify potential energy savings and determine project costs
- Deliverable: investment-grade analysis
- Program covers **50%** of the cost of a qualifying TA Study **up to $20,000**

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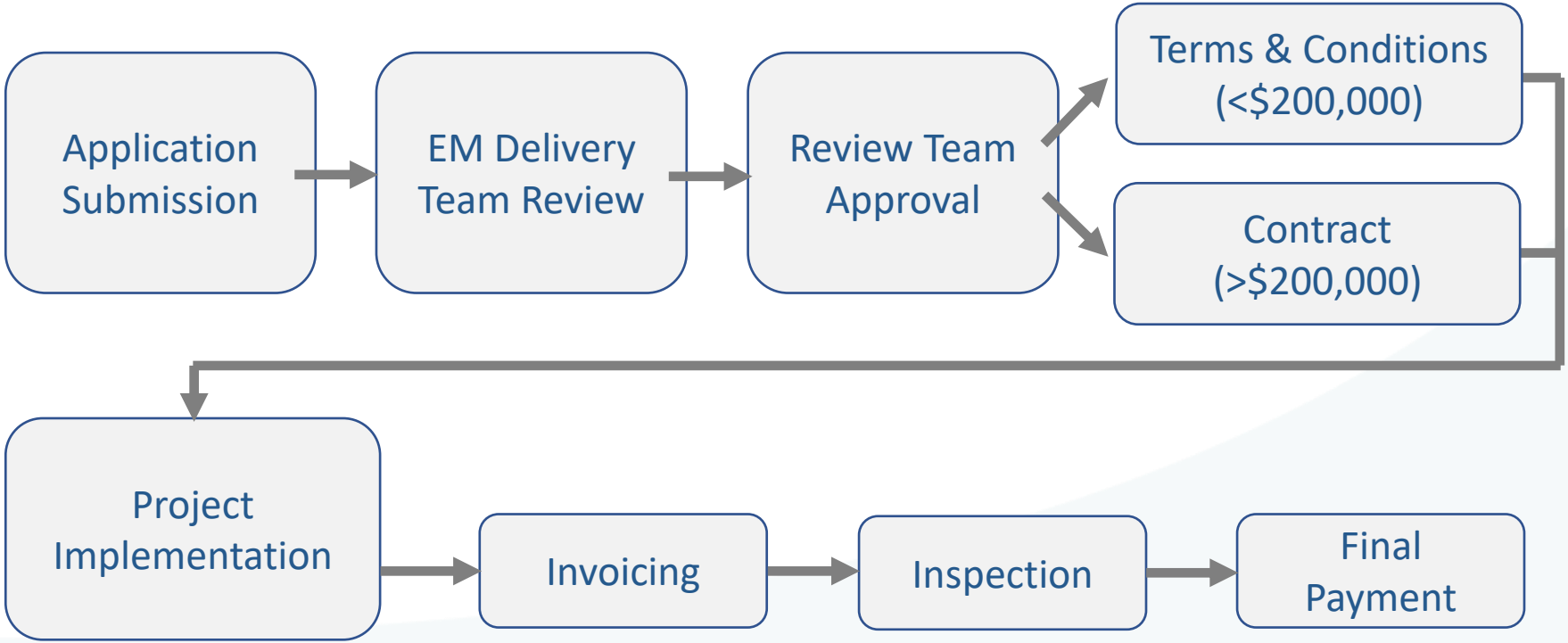
Process



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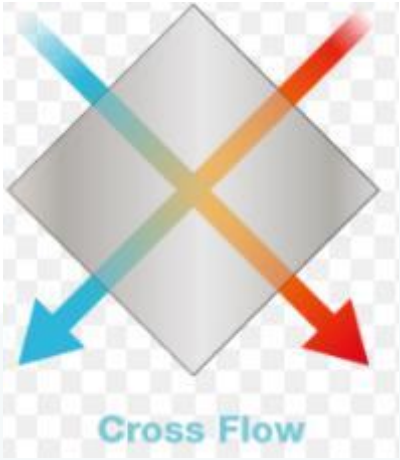
Cannabis Cultivation – Example Projects

- LED horticultural lighting
- High-Efficiency HVAC systems
  - Targeted Sensible Heat Ratio (SHR) performance and high Coefficient of Performance (COP)
- High-Efficiency Dehumidification
  - Heat Recovery
- Combined Heat and Power (CHP)



Basic Application Requirements

1. Signed Application Cover Sheet – *available on website*
2. Project summary and statement of financial need/project readiness
3. Quotes or proposals for high-efficiency equipment and baseline equipment if new construction
4. Savings analysis
   - Facility operation
   - Supporting equipment details
5. Electric and fuel rate documentation

See Program Opportunity Notices (PONs) for detail

Application Example – LED Horticultural Lighting

- Signed Application Cover Sheet
- Quotes or proposals
- Lighting intensity designs if available
- Intended operation details
  - Number of rooms and when lights will be on
  - Dimming considerations
  - Verification of approximately equal lighting levels
- Supporting HVAC equipment – interactive effects

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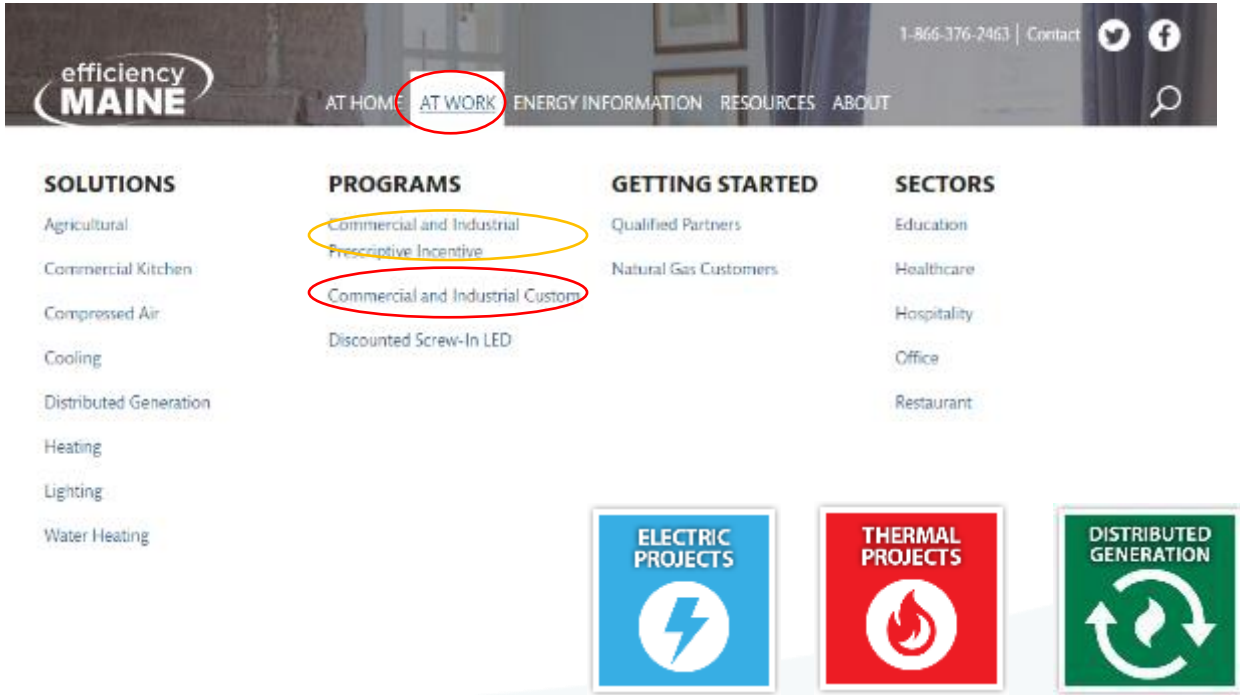
Website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References

- https://www.efficiencymaine.com/custom-electric-projects/
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ENLIGHTEN YOUR GROW

A project of
Climate Resources Group

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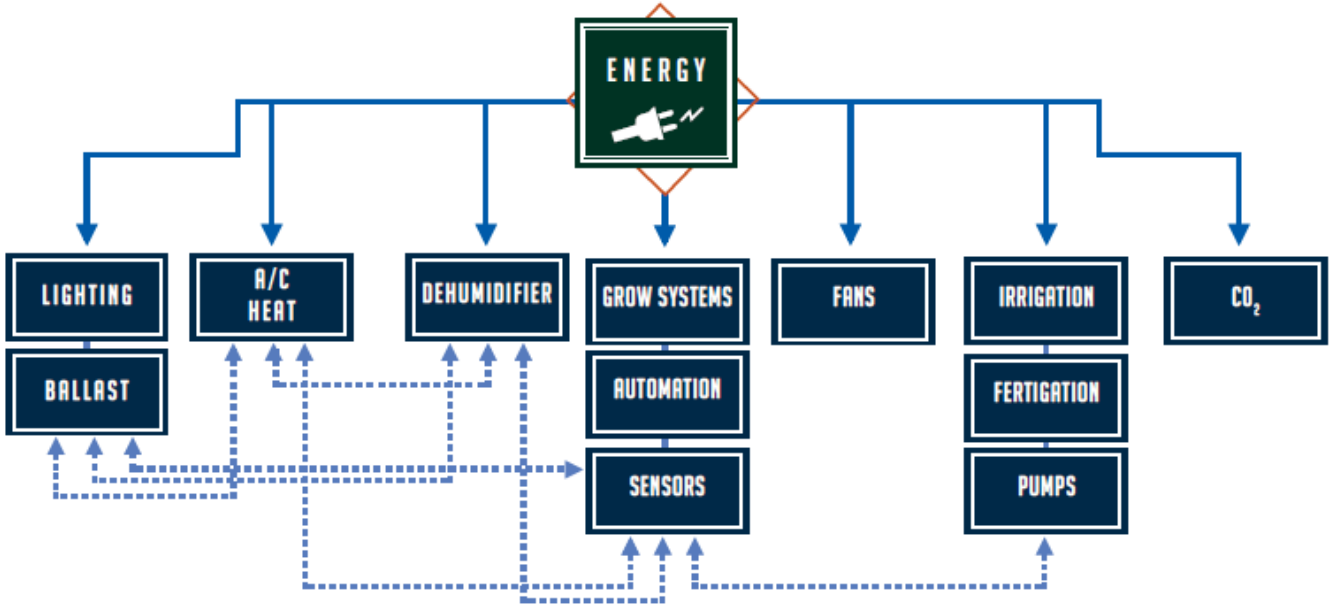
Enlighten Your Grow

Enlighten Your Grow helps cannabis businesses build and operate more resource-efficient and productive facilities in Maine and New England

- Energy and waste compliance services
- Facility energy performance evaluations
- Standard Operating Procedures for sustainability and efficiency
- Utility incentive facilitation

Efficiency opportunities in dispensaries

Efficiency opportunities in cultivation



Lighting example – 60 LEDs in retrofitted veg rooms

- Baseline light: MH
  - 675 W
  - $350 per light
- Proposed scenario: LED
  - 350 W
  - $650 per light

Assume:
- 18 hours/day/350 days
- $0.1153/kWh blended power rate
- PAR output similar
- Light costs include all necessary hardware

- 125,307 kWh annual electricity savings
- $14,447 annual cost savings on electricity alone (w/o lifetime replacement costs)
- **$3,552 Efficiency Maine incentive (incentive needed to reach 1 year payback)**

Lighting example – 60 LEDs in new flower rooms

- Baseline light: HPS
  - 1100 W
  - $490 per light
- Proposed scenario: LED
  - 350 W
  - $1200 per light

Assume:
- 12 hours/day/350 days
- $0.1153/kWh blended power rate
- PAR output similar
- Light costs include all necessary hardware

- 117,180 kWh annual electricity savings
- $13,510 annual cost savings on electricity alone (w/o lifetime replacement costs)
- **$32,810 Efficiency Maine incentive ($0.28 / kWh saved)**
  - Simple payback after incentive: 1.17 years

Enlighten Your Grow energy efficiency incentive facilitation services

- Support your company's preparation of the application, including development of Baseline and Proposed Scenarios
- Work along with your team and lighting and/or mechanical engineers with eye toward maximizing performance and incentive opportunities
- Ensure your application is complete, well-reasoned, and clearly presented for expeditious review

Q&A

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