



INSPECTOR OF BUILDINGS  
TOWN OF MONTAGUE  
One Avenue A  
Turners Falls, MA 01376

APPLICATION FOR PERMIT TO INSTALL SOLAR ENERGY COLLECTION SYSTEM

To the Inspector of Buildings: The undersigned hereby applies for a permit to install **SOLAR ENERGY COLLECTION SYSTEM** according to the following specifications:

Location  
of  
Building No \_\_\_\_\_ Street \_\_\_\_\_ Map \_\_\_\_\_ Lot \_\_\_\_\_

Use of the principal building \_\_\_\_\_ Zoning District \_\_\_\_\_  
Use Group \_\_\_\_\_

Proposed Solar Installation is on:  
Principal building \_\_\_\_\_; Accessory Building \_\_\_\_\_; Ground mounted \_\_\_\_\_

- 1a. Owner \_\_\_\_\_ Phone # \_\_\_\_\_  
address \_\_\_\_\_ Signature \_\_\_\_\_  
b. Builder \_\_\_\_\_ CS LIC.# \_\_\_\_\_  
address \_\_\_\_\_ HIC REG.# \_\_\_\_\_  
c. Architect or Engineer \_\_\_\_\_ REG.# \_\_\_\_\_

**Existing Conditions**

- 2a. Existing building structural elements are: Construction Type \_\_\_\_\_  
foundation \_\_\_\_\_  
exterior walls \_\_\_\_\_ floors/ceilings \_\_\_\_\_  
roof \_\_\_\_\_  
b. Building height \_\_\_\_\_ and/or # of stories \_\_\_\_\_  
c. Existing roof: \_\_\_\_\_  
frame: \_\_\_\_\_ sheathing: \_\_\_\_\_ covering: \_\_\_\_\_

**Specifications**

- 3a. Location of installation \_\_\_\_\_  
b. Size of array: Number of panels \_\_\_\_\_; Total area \_\_\_\_\_  
Installation dimensions; \_\_\_\_\_ ft. by \_\_\_\_\_ ft.  
d. Nearest building is \_\_\_\_\_ feet in a \_\_\_\_\_ direction  
e. Distance to lot lines - Front \_\_\_\_\_ Right \_\_\_\_\_ Left \_\_\_\_\_ Rear \_\_\_\_\_  
g. Array height \_\_\_\_\_ and/or # stories \_\_\_\_\_  
f. Access to array and disconnects. \_\_\_\_\_  
4. Provide (Y/N): Plot Plan \_\_\_\_\_; Roof framing upgrades \_\_\_\_\_  
Foundation Plan \_\_\_\_\_; Mounting Specifications \_\_\_\_\_; and/or Other \_\_\_\_\_  
5. The debris resulting from this work shall be disposed of at:  
\_\_\_\_\_ which is a properly  
licensed solid waste disposal facility as required by MGL.  
6. Estimated cost (must be filled out) \_\_\_\_\_

**Additional Remarks**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Signature of Applicant as Authorized Agent of Owner Date \_\_\_\_\_

# Specifications for Solar Energy Collection System

## GENERAL

Height above grade - average \_\_\_\_\_ maximum \_\_\_\_\_  
Access to Array \_\_\_\_\_  
Location of Disconnects \_\_\_\_\_  
Electrical Permit Application # \_\_\_\_\_

## FOUNDATION (as applicable)

Piers (footings must be frost protected)  
size \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ thick material \_\_\_\_\_  
Foundation design drawings Y/N \_\_\_\_\_

## PANEL MOUNTING AND SUPPORT HARDWARE & POLE engineering (as applicable)

Provide design, hardware detail and specifications.

## ROOF MOUNTED (as applicable)

Roof pitch \_\_\_\_\_ in \_\_\_\_\_ other \_\_\_\_\_ , \_\_\_\_\_  
Roof construction information:  
Species and grade of framing lumber \_\_\_\_\_  
Rafters  
dimensions \_\_\_\_\_ x \_\_\_\_\_ horizontal span \_\_\_\_\_ o/c \_\_\_\_\_  
Ridge construction  
dimensions \_\_\_\_\_ x \_\_\_\_\_ x \_\_\_\_\_ lamination max span \_\_\_\_\_  
Ceiling Joists Y/N \_\_\_\_\_  
dimensions \_\_\_\_\_ x \_\_\_\_\_ span \_\_\_\_\_ o/c \_\_\_\_\_  
Roof Sheathing \_\_\_\_\_; Roofing Material \_\_\_\_\_  
Other \_\_\_\_\_

If Trusses are used engineering design review may be required  
max span \_\_\_\_\_ o/c \_\_\_\_\_

Ventilation (state method) \_\_\_\_\_

Additional Explanations \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





**The Commonwealth of Massachusetts**  
**Department of Industrial Accidents**  
**1 Congress Street, Suite 100**  
**Boston, MA 02114-2017**  
**www.mass.gov/dia**

**Workers' Compensation Insurance Affidavit: Builders/Contractors/Electricians/Plumbers.**  
**TO BE FILED WITH THE PERMITTING AUTHORITY.**

**Applicant Information**

**Please Print Legibly**

Name (Business/Organization/Individual): \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_ Phone #: \_\_\_\_\_

**Are you an employer? Check the appropriate box:**

1. ☐ I am an employer with \_\_\_\_\_ employees (full and/or part-time).\*
2. ☐ I am a sole proprietor or partnership and have no employees working for me in any capacity. [No workers' comp. insurance required.]
3. ☐ I am a homeowner doing all work myself. [No workers' comp. insurance required.] †
4. ☐ I am a homeowner and will be hiring contractors to conduct all work on my property. I will ensure that all contractors either have workers' compensation insurance or are sole proprietors with no employees.
5. ☐ I am a general contractor and I have hired the sub-contractors listed on the attached sheet. These sub-contractors have employees and have workers' comp. insurance. ‡
6. ☐ We are a corporation and its officers have exercised their right of exemption per MGL c. 152, §1(4), and we have no employees. [No workers' comp. insurance required.]

**Type of project (required):**

7. ☐ New construction
8. ☐ Remodeling
9. ☐ Demolition
10. ☐ Building addition
11. ☐ Electrical repairs or additions
12. ☐ Plumbing repairs or additions
13. ☐ Roof repairs
14. ☐ Other \_\_\_\_\_

\*Any applicant that checks box #1 must also fill out the section below showing their workers' compensation policy information.

† Homeowners who submit this affidavit indicating they are doing all work and then hire outside contractors must submit a new affidavit indicating such.

‡ Contractors that check this box must attached an additional sheet showing the name of the sub-contractors and state whether or not those entities have employees. If the sub-contractors have employees, they must provide their workers' comp. policy number.

***I am an employer that is providing workers' compensation insurance for my employees. Below is the policy and job site information.***

Insurance Company Name: \_\_\_\_\_

Policy # or Self-ins. Lic. #: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Job Site Address: \_\_\_\_\_ City/State/Zip: \_\_\_\_\_

**Attach a copy of the workers' compensation policy declaration page (showing the policy number and expiration date).**

Failure to secure coverage as required under MGL c. 152, §25A is a criminal violation punishable by a fine up to \$1,500.00 and/or one-year imprisonment, as well as civil penalties in the form of a STOP WORK ORDER and a fine of up to \$250.00 a day against the violator. A copy of this statement may be forwarded to the Office of Investigations of the DIA for insurance coverage verification.

***I do hereby certify under the pains and penalties of perjury that the information provided above is true and correct.***

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Phone #: \_\_\_\_\_

***Official use only. Do not write in this area, to be completed by city or town official.***

City or Town: \_\_\_\_\_ Permit/License # \_\_\_\_\_

**Issuing Authority (circle one):**

1. Board of Health 2. Building Department 3. City/Town Clerk 4. Electrical Inspector 5. Plumbing Inspector  
6. Other \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone #: \_\_\_\_\_



# Information and Instructions

Massachusetts General Laws chapter 152 requires all employers to provide workers' compensation for their employees. Pursuant to this statute, an **employee** is defined as "...every person in the service of another under any contract of hire, express or implied, oral or written."

An **employer** is defined as "an individual, partnership, association, corporation or other legal entity, or any two or more of the foregoing engaged in a joint enterprise, and including the legal representatives of a deceased employer, or the receiver or trustee of an individual, partnership, association or other legal entity, employing employees. However the owner of a dwelling house having not more than three apartments and who resides therein, or the occupant of the dwelling house of another who employs persons to do maintenance, construction or repair work on such dwelling house or on the grounds or building appurtenant thereto shall not because of such employment be deemed to be an employer."

MGL chapter 152, §25C(6) also states that **"every state or local licensing agency shall withhold the issuance or renewal of a license or permit to operate a business or to construct buildings in the commonwealth for any applicant who has not produced acceptable evidence of compliance with the insurance coverage required."** Additionally, MGL chapter 152, §25C(7) states "Neither the commonwealth nor any of its political subdivisions shall enter into any contract for the performance of public work until acceptable evidence of compliance with the insurance requirements of this chapter have been presented to the contracting authority."

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## Applicants

Please fill out the workers' compensation affidavit completely, by checking the boxes that apply to your situation and, if necessary, supply sub-contractor(s) name(s), address(es) and phone number(s) along with their certificate(s) of insurance. Limited Liability Companies (LLC) or Limited Liability Partnerships (LLP) with no employees other than the members or partners, are not required to carry workers' compensation insurance. If an LLC or LLP does have employees, a policy is required. Be advised that this affidavit may be submitted to the Department of Industrial Accidents for confirmation of insurance coverage. **Also be sure to sign and date the affidavit.** The affidavit should be returned to the city or town that the application for the permit or license is being requested, **not** the Department of Industrial Accidents. Should you have any questions regarding the law or if you are required to obtain a workers' compensation policy, please call the Department at the number listed below. Self-insured companies should enter their self-insurance license number on the appropriate line.

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## City or Town Officials

Please be sure that the affidavit is complete and printed legibly. The Department has provided a space at the bottom of the affidavit for you to fill out in the event the Office of Investigations has to contact you regarding the applicant. Please be sure to fill in the permit/license number which will be used as a reference number. In addition, an applicant that must submit multiple permit/license applications in any given year, need only submit one affidavit indicating current policy information (if necessary) and under "Job Site Address" the applicant should write "all locations in \_\_\_\_\_ (city or town)." A copy of the affidavit that has been officially stamped or marked by the city or town may be provided to the applicant as proof that a valid affidavit is on file for future permits or licenses. A new affidavit must be filled out each year. Where a home owner or citizen is obtaining a license or permit not related to any business or commercial venture (i.e. a dog license or permit to burn leaves etc.) said person is NOT required to complete this affidavit.

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The Department's address, telephone and fax number:

The Commonwealth of Massachusetts  
Department of Industrial Accidents  
1 Congress Street, Suite 100  
Boston, MA 02114-2017

Tel. # 617-727-4900 ext. 7406 or 1-877-MASSAFE

Fax # 617-727-7749

[www.mass.gov/dia](http://www.mass.gov/dia)





CHARLES D. BAKER  
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Department of Fire Services  
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SECRETARY OF EXECUTIVE OFFICE  
OF PUBLIC SAFETY AND SECURITY

PETER J. OSTROSKEY  
STATE FIRE MARSHALL  
DEPARTMENT OF FIRE SERVICES

**Joint Memorandum**

To: Building Inspectors and Fire Prevention Officers

From: Layla D'Emilia, Commissioner, Division of Professional Licensure

Peter Ostroskey, State Fire Marshal, Department of Fire Services

Date: June 7, 2021

Re: **Superseding Guidance for Energy Storage System (ESS) Installations in One- and Two-Family Dwellings**

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**This guidance document is updated and includes additional clarifying information. It supersedes the guidance dated May 21, 2021 that was emailed to recipients on May 24, 2021.**

**ESS installations under 20 KWh are not currently regulated and shall be installed in accordance with the manufacturer's instructions and listing requirements.**

The advancement in stationary battery storage of electrical power generated by photovoltaic systems has outpaced prescriptive requirements in the current 780 CMR, *Massachusetts State Building Code*, and 527 CMR 1.00, *Massachusetts Comprehensive Fire Safety Code*. As a result of receiving many inquiries from municipal building and fire officials about how 780 CMR and 527 CMR 1.00 regulate Energy Storage Systems (ESS), this document has been created to provide guidance to authorities having jurisdiction (AHJs) to permitting ESS for one- and two-family dwellings. This guidance document aims to create consistency with issuing building, fire and electrical permits for ESS across the Commonwealth and provide minimum safeguards for the occupants of one- and two-family dwelling structures.

527 CMR 1.00: Chapter 52 currently regulates lithium ESS installations over 20 KWh. However, when adopted in October 2019, it was not anticipated that ESS installed in one- and two-family dwellings would exceed 20 KWh and the provisions of Chapter 52 are more aligned with commercial-type ESS installations. Therefore, this guidance may aid the AHJ in evaluating alternative means of design to a nationally accepted standard prior to the issuance of a permit. 527 CMR 1.00: 1.4 *equivalencies, alternatives, and modifications* is traditionally applied in cases where technology outpaces code adoption.





Plans for such installations must be submitted to building, fire and wiring inspector/officials for review and approval in accordance with 780 CMR, 527 CMR 1.00:1.4 and 52, and 527 CMR 12.00 prior to the issuance of a permit.

**The provisions below are an industry standard that are currently under review for potential adoption in the future version of the codes, and may aid the AHJ in evaluating alternative means of design to a nationally accepted standard:**

- The *ESS* must be *listed* and *labeled* in accordance with UL 9540 and be installed in accordance with the manufacturer's instructions and NFPA 70. [2020 NFPA 855: 15.2]
- Individual battery storage units are to be separated from each other by not less than 3 feet (914 mm) except where smaller separation distances are allowed by the manufacturer's specifications. [2020 NFPA 855: 15.5]
- ESS shall not be installed in the living area of dwelling units, in sleeping rooms, or closets or spaces opening directly into sleeping rooms. [2020 NFPA 855: 15.6.2]
- ESS shall be installed in the following locations:
  1. ESS shall only be installed in **attached garages** separated from the dwelling unit living and sleeping areas in accordance with the building code (780 CMR R302). [2020 NFPA 855: 15.6.1]
    - If the room or space where the ESS is to be installed is not finished, the walls and ceiling of the room or space shall be protected with not less than 5/8" Type X gypsum board. [2020 NFPA 855:15.6.1.1]
    - If the room or space where the ESS is to be installed is finished, but the walls and ceiling of the room or space are protected with less than 5/8" Type X gypsum board, an equivalent level of construction is needed to achieve the same fire resistance rating of 5/8" Type X gypsum.
  2. ESS shall only be installed **in basements not used for living or sleeping purposes, and shall only be installed in utility closets, storage closets, or storage spaces within basements.**
    - If the basement space or utility closet where the ESS is to be installed is not finished, the walls and ceiling of the basement space, or utility closet shall be protected with not less than 5/8" Type X gypsum board. [2020 NFPA 855:15.6.1.1]
      - Typically, utility closets or open spaces containing appliances within basements are separated from the remainder of the dwelling by noncombustible construction with clearance to combustibles in accordance with the manufacturer's specifications (reference 780 CMR M1306.1). If the ESS is installed outside a utility closet, a similar noncombustible or minimal fire resistance rated construction provision could be applied as an alternative design.
      - Combustible construction shall be protected by 5/8" Type X gypsum per manufacturer's instructions but not less than 24" extending to the sides and above the unit (including the ceiling).



- If the room or space where the ESS is to be installed is finished, but the walls and ceiling of the room or space are protected with less than 5/8" Type X gypsum board, an equivalent level of construction is needed to achieve the same fire resistance rating of 5/8" Type X gypsum in the location(s) indicated above.
- 3. **In detached garage or accessory structure.** If a detached garage or structure is closer than 10' to the dwelling unit, then the walls within 10' of the dwelling unit should be treated with the same level of protection as an attached garage (see item #1).
- 4. **Outdoors on exterior walls, or on the ground located a minimum of 3' from doors and windows.**
  - If the ESS is installed outdoors on exterior walls, the ESS must be mounted on non-combustible construction (similar to electrical panels).
  - If the ESS is installed within an enclosure that shares a wall with the dwelling unit, heat detection should be provided and be interconnected with the dwelling unit smoke alarms.
- A hardwired-powered smoke alarm shall be installed in the immediate vicinity of the ESS and interconnected with the smoke alarms installed throughout the dwelling in compliance with 780 CMR R314. Where ESS are installed in an attached garage or an area in which smoke alarms cannot be installed in accordance with their listing, a hardwired-powered, interconnected listed heat alarm shall be installed and be connected to the smoke alarm system required by 780 CMR R314. [2020 NFPA 855: 15.9.1 and 15.9.2]
- Individual ESS units shall not exceed a maximum rating of 20 kWh. The aggregate rating of the ESS shall not exceed:
  - 40 KWh within enclosed utility closets or storage spaces.<sup>1</sup>
  - 80 KWh in attached or detached garages, or detached accessory structures.
  - 80 KWh in outdoor/exterior wall installations. [2020 NFPA 855:15.7.1]
- An ESS installation exceeding the permitted individual or aggregate ratings shall be installed in accordance with 527 CMR 1.00: Chapter 52 and 780 CMR.
- Inverters shall be *listed* and *labeled* in accordance with UL 1741 or provided as part of the UL 9540 listing. Systems connected to the utility grid shall use inverters *listed* for utility interaction. [2020 NFPA 855: 15.8.1]
- An ESS installed in a location subject to vehicle damage shall be protected by *approved* barriers. [2020 NFPA 855: 15.10]
- Indoor installations of ESS that produce hydrogen or other flammable gases during charging are to be provided with mechanical *ventilation* in accordance with 780 CMR M1307.4.

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<sup>1</sup> This aggregate rating is the standard for basements. To reiterate, ESS shall only be installed in basements not used for living or sleeping purposes, and shall only be installed in utility closets, storage closets, or storage spaces within basements.

- A label shall be required on the installed system containing the contact information for the qualified maintenance and service providers. [2020 NFPA 855:15.4.1]

The following information shall be provided with the application of an ESS installation: A copy of the manufacturer's specifications, installation manual, operation, maintenance, and decommissioning instructions. Upon the completion of the project this information shall be provided to the owner or placed in a conspicuous location near the ESS equipment.

In order to install an ESS, a building owner must obtain a permit from the building official per 780 CMR, fire official per 527 CMR 1.00, and wiring inspector per 527 CMR 12.00.

If a property *owner* (or their designee) within your jurisdiction is seeking a permit to install an ESS, and you have questions or concerns, please do not hesitate to contact the state representatives noted below. While there is no route to state-wide approval of alternative designs, we anticipate similar alternatives being proposed across multiple jurisdictions and can assist with the review of these proposed installations to create consistency.

- District State Building Inspector (<https://www.mass.gov/doc/state-building-inspector-district-assignments/download>)
- Division of Fire Safety, Department of Fire Services (<https://www.mass.gov/info-details/dfs-staff-list-and-directory#division-of-fire-safety->). For communities North of I-90, contact Kristen McDonough at [Kristen.mcdonough@mass.gov](mailto:Kristen.mcdonough@mass.gov). For communities along South of I-90, contact Jake Nunnemacher at [Jacob.nunnemacher@mass.gov](mailto:Jacob.nunnemacher@mass.gov).