

Solar Farms: Community Impact

**PROPOSED AMENDMENTS TO THE
FREEPORT ZONING ORDINANCE:
SOLAR ENERGY SYSTEMS**

**PUBLIC HEARING
TOWN OF FREEPORT**

FEBRUARY 3, 2021



Cumberland Animal Clinic (49 KW)

Solar in Maine



- Solar Farms have become increasingly popular in recent years in part, due to state statute changes signed into law in June 2019.
- LD 1711 - Increased the size and generation allowed for solar facilities
- Types of solar:
 - “behind the meter” or accessory systems
 - Community Solar 1-5 MW
 - Grid-scale Solar 10+MW

Community Solar: State Regulations



Before LD 1711

- 9 – member limit per solar farm
- Size constrained by member limit (previously 250-400 panels, approx. < 1 acre)
- Very little guidance from the state on land use and municipal permitting

After LD 1711 (passed June 18, 2019)

- 200 – member limit for net metering Solar Farms and no limit on members for “Subscription”
- 5 MW capacity for Community Solar (roughly 25-30 acres, 20,000 panels)
 - Larger systems may be permitted with municipal partnership or PUC contract. (LD 1494)
- Maine Audubon released guidance on solar siting and land use best practices
- Preference for “previously developed or impacted lands” (impervious surfaces, capped landfills, former gravel pits, or Brownfield sites)



Impacts on Municipalities

With an increase in development of Community solar projects in Maine, many municipalities are considering the best ways to allow for this type of development.

Renewable energy generation through solar facilities can benefit communities when the facilities are sited appropriately and communities have development standards.

- Since 2019, Maine communities have seen an influx in Community solar applications.
- Implementation of land use standards to encourage appropriate siting.
- Land use considerations
 - Location
 - Visual impacts
 - Safety & security
 - Decommissioning

Types of Projects



- Most Community or Large Solar Farms are developed as fixed, ground-mounted arrays.
- Consist of the following components:
 - PV panels
 - Inverters
 - Transformer
 - Connection to the utility grid
 - Access road & fencing

Mounting/Racking Systems



Project Samples: Large Solar Farm



Warren, MA
5.6 MW
19,000 panels
+/-30 acres



Project Samples: Large Solar Farm



Palmer, MA
1.2 MW
4,598 panels
+/- 7 acres



Project Samples: Small Solar Farm



Maine Idyll
89.44 KW
+/- 0.5 acres



Limitations on Development



- State size cap – 5 MW
- Competitive bid process w/ PUC
 - State permits
 - ✦ Site Location of Development permit (SLODA)
 - ✦ Natural Resources Protection Act permit (NRPA)
- Project sites within 1 mile of 3-phase utility connection
- Local Standards
- Financial Feasibility