

Battery Energy Storage Systems (BESS)

A Discussion of BESS Tiers and Gardiner Zoning Districts

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May 5, 2026

Goals of This Presentation

- Review current Zoning Districts in Gardiner
- Review common “Tier” system for BESS
- Suggest possible permissions for different BESS tiers in different zones
- Town Board discussion of options to reach consensus and identify remaining questions
- Next steps toward a Town Law
 - Further development/discussion of remaining open questions
 - Following Town Board consensus, begin to draft law (using NYSERDA template), including constraints and setbacks that may be appropriate
 - SEQRA finding on draft law, and any possible SEQRA studies
 - After draft law is ready, hold a public hearing to receive comments
- Proposals for BESS systems > 600 kWh can only be considered by the Planning Board after a Town Law is passed, and the current moratorium is lifted. No such proposals have been submitted to the Town of Gardiner to date.

Immediate Next Steps—Moratorium Extension

- May 12—Resolution referring 6-month extension of moratorium on > 600 kWh BESS systems to Gardiner and Ulster County Planning Boards
- May 12—Motion to set public hearing on 6-month extension
- May 26—Gardiner Planning Board meeting/comments
- June 2—Public hearing on 6-month extension at Town Board mtg.
- June 3—Ulster County Planning Board meeting/comments
- June 9—Gardiner TB votes on local law for extension

Gardiner Zones (Town Code §220)

- SP-1, SP-2, SP-3: Shawangunk Ridge Protection
- RA: Rural Agricultural
- HR: Hamlet Residential
- HM: Hamlet Mixed-Use
- CLI: Commercial Light Industry
- HC: Highway Commercial
- Overlays: Floodplain, Hamlet Expansion, Scenic Protection, Aquifer*
- Floating Districts: Soil Mining, Resort Development, Mobile Home Park, Campground
- PDD*: Planned Development District (Ohioville Acres)

*Notes: Aquifer Overlay section of code not drafted; PDD is in Local Law 2007-5, not §220

Zoning Map

Town Of Gardiner, New York
April, 2008

Overlay Districts

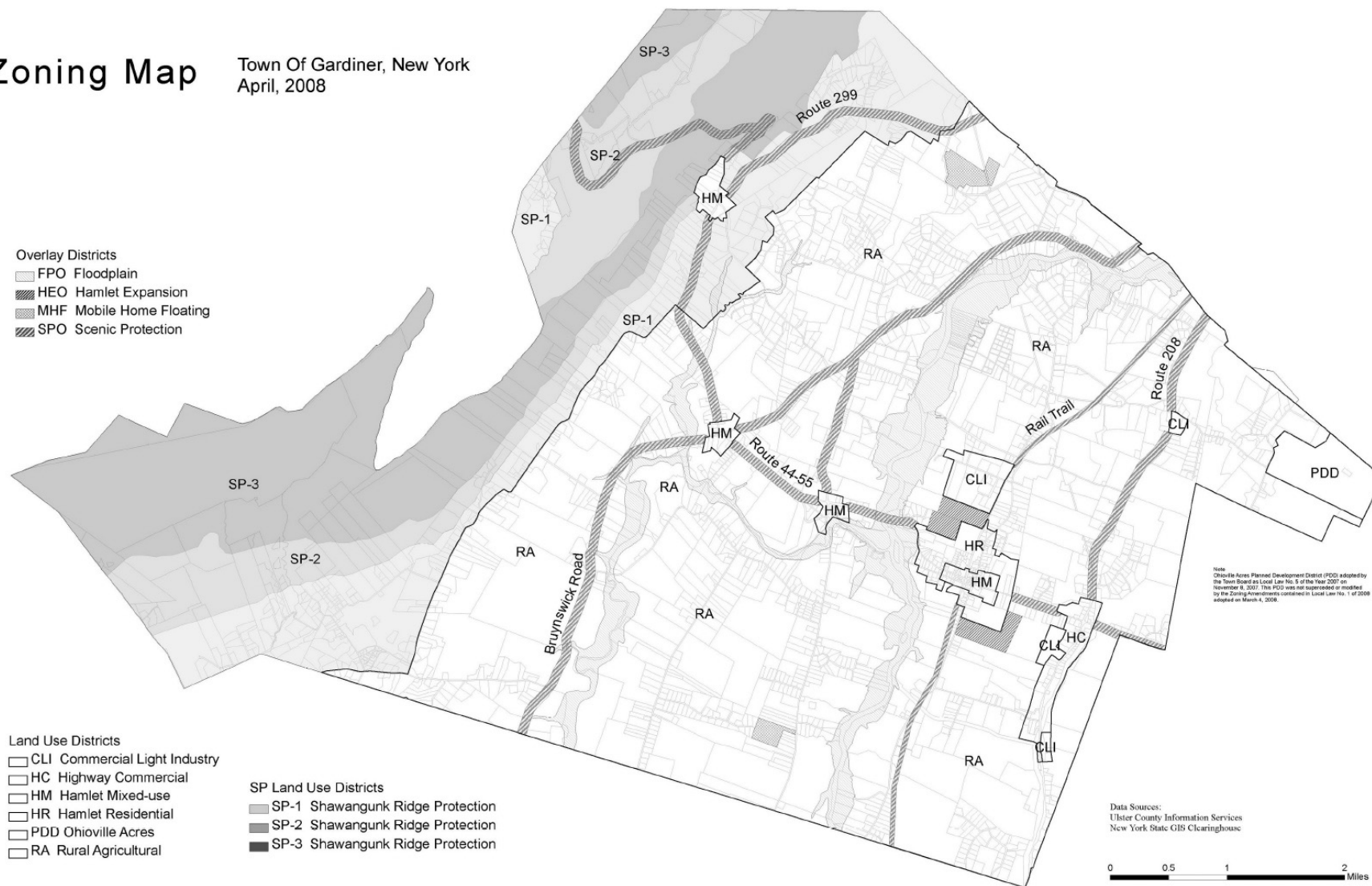
-  FPO Floodplain
-  HEO Hamlet Expansion
-  MHF Mobile Home Floating
-  SPO Scenic Protection

Land Use Districts

-  CLI Commercial Light Industry
-  HC Highway Commercial
-  HM Hamlet Mixed-use
-  HR Hamlet Residential
-  PDD Ohioville Acres
-  RA Rural Agricultural

SP Land Use Districts

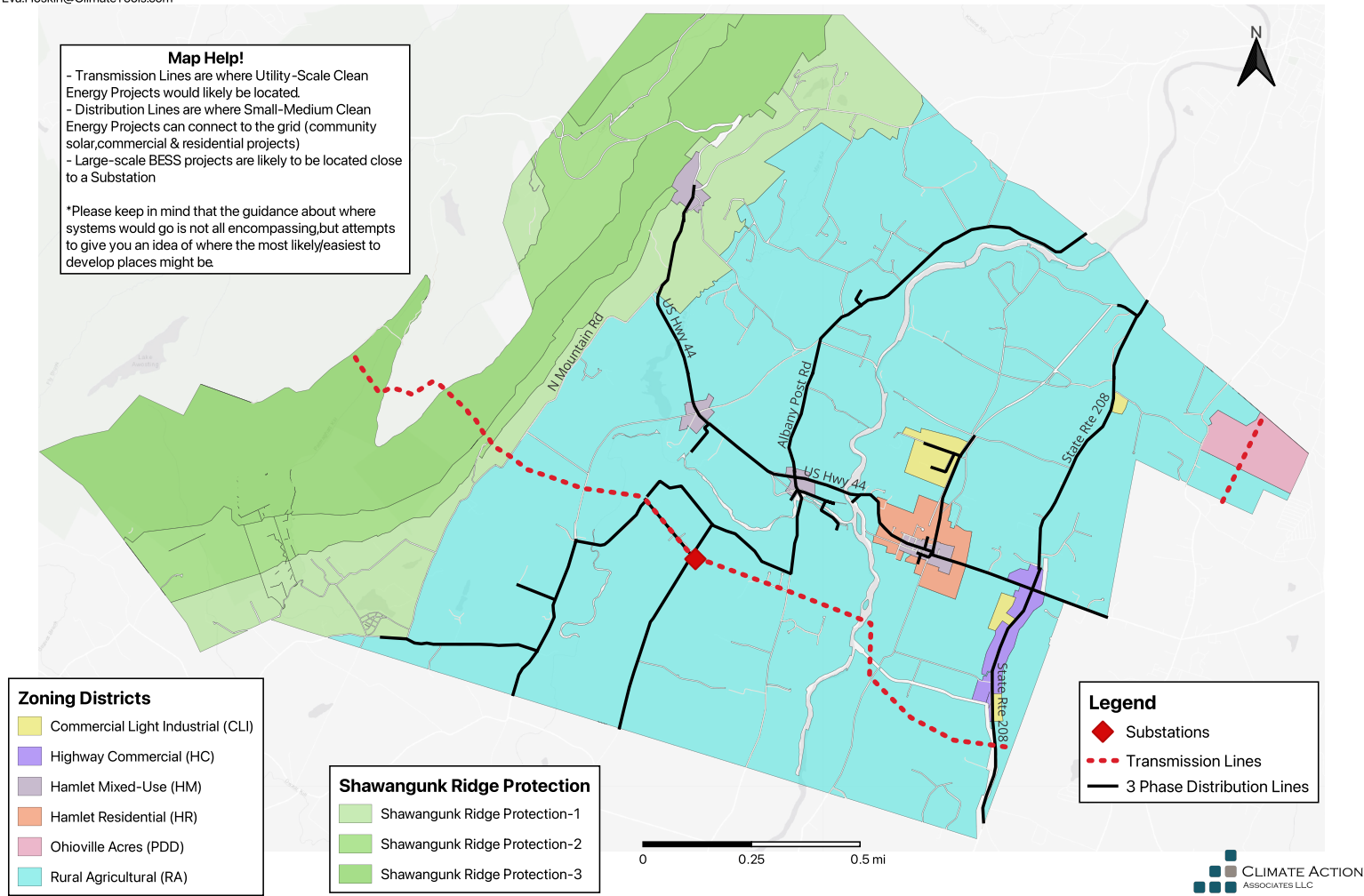
-  SP-1 Shawangunk Ridge Protection
-  SP-2 Shawangunk Ridge Protection
-  SP-3 Shawangunk Ridge Protection



Data Sources:
Ulster County Information Services
New York State GIS Clearinghouse

0 0.5 1 2 Miles

Town of Gardiner - Zoning & Utility Map



BESS Tier 1

- ≤ 80 kWh outside residences, including inside garages (≤ 40 kWh inside utility spaces or basements)
- Governed by NYS Uniform Code (Residential Code §R330.5)
- Propose permitting these in all Zones: SP-3, SP-2, SP-1, RA, HM, HR, CLI, HC, PDD, and Floating/Overlay districts

BESS Tier 2

- >80-600 kWh “Accessory Use”
- Generally aimed at small commercial backup systems
- Governed by Uniform Code (Fire Code §1207.5 sets 600 kWh threshold)
- Propose prohibiting these from the two most controlled SP districts: SP-3 and SP-2.
- Propose prohibiting from most overlay districts: Floodplain, Scenic Protection, Aquifer
- Question 1: Permit in SP-1 or not?
 - SP-1 allows some non-residential Principal Uses (Town Code §220-10B)
 - Bed-and-breakfast; overnight camp/day camp; public utility facility; recreational business, outdoor; riding academy
 - Community Uses: educational/charitable/religious; membership club; nature preserve
- Question 2: Permit in HR and Hamlet Expansion Overlay or not?

BESS Tier 3--Proposal

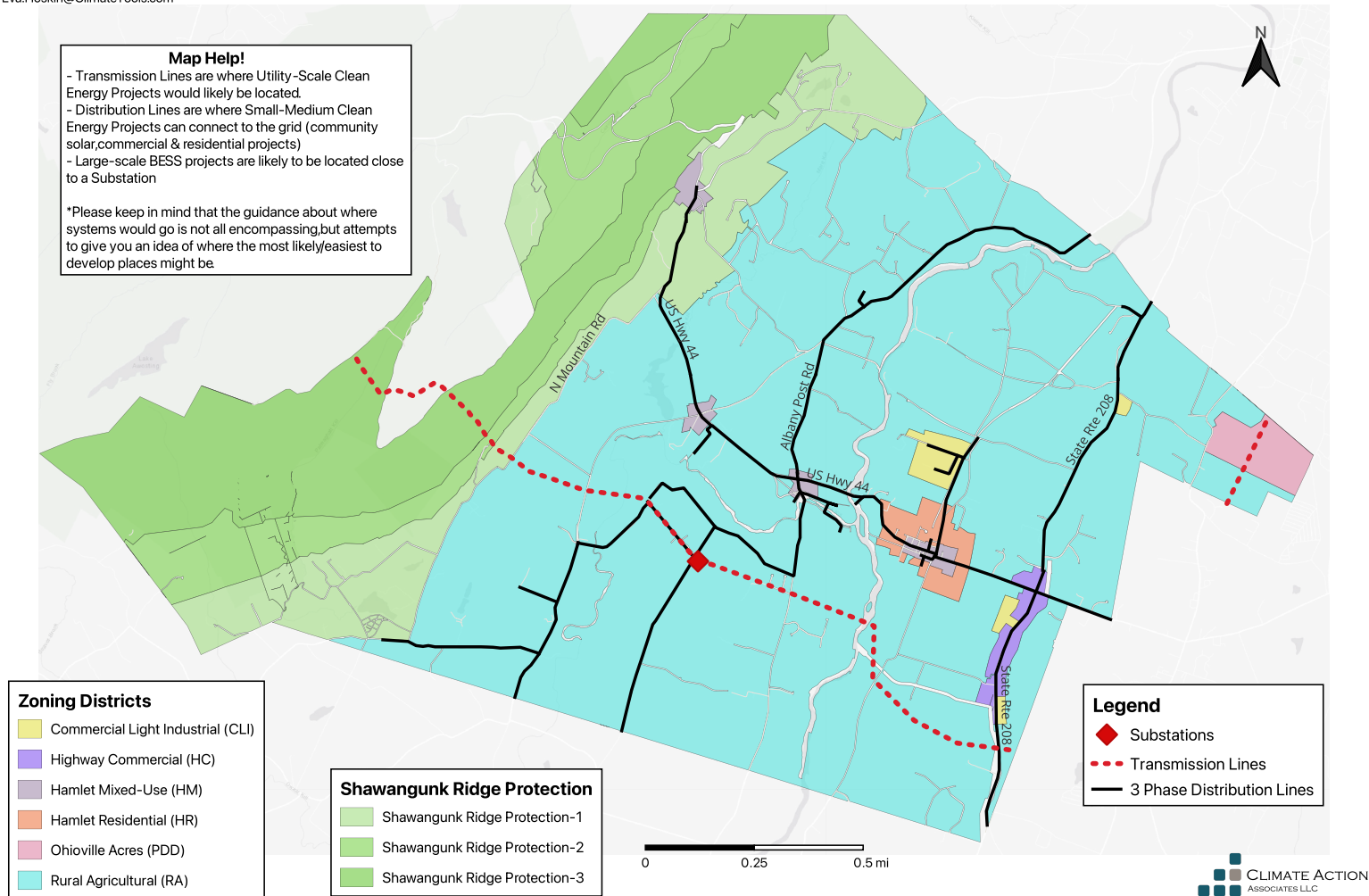
- >600 kWh to 8 (?) MWh (600 kWh threshold in Fire Code §1207.5.2)
- Large commercial backups or small utility scale
- Extensive fire code safety requirements (e.g., §§1207.1.6, 1207.1.7, 1207.3.4.1, 1207.4.9.1)
 - Hazard mitigation analysis, large-scale fire test, battery monitoring system, video monitoring, peer review, local training, etc.
- Potentially could be associated with community solar arrays of hundreds of kilowatts up to a few Megawatts
- Propose prohibiting from all SP districts, HR, existing overlay and floating districts, and much of RA (see next slide)
- Propose allowing in CLI, HC, and PDD

BESS Tier 3--Questions

- Question 3: Permit in parts of RA and HM or not?
 - Sub-question 3a: Should there be an overlay district along 3-phase transmission lines in RA and HM?
 - Sub-question 3b: Should there be an overlay district at the Burnt Meadow substation and/or along the high-voltage transmission lines in RA?
 - Sub-question 3c: Should permission be allowed in conjunction with any large-scale solar array sited in RA?
- Question 4: Is 8 MWh the right upper limit for Tier 3?

Note: Gardiner zoning code, in § 220-47J(1)(b), allows a large-scale solar array to occupy a maximum of 10 acres (50% of a 20-acre lot), which corresponds to a maximum power delivery of ~2 MW.

Town of Gardiner - Zoning & Utility Map



BESS Tier 4

- 8 (?) MWh to ~1,000 MWh
- Large utility-scale projects, which need to access high-voltage transmission lines and possibly electrical substations.
- Same Fire Code requirements as Tier 3
- Propose permitting in PDD
- Question 5: Should Tier 4 be permitted in an overlay district at the Burnt Meadow power substation and/or along part of the H-V transmission line that runs through that station?

Summary of Proposed Tiers and Current Zones

	Tier 1 (< 80 kWh)	Tier 2 (80-600 kWh)	Tier 3 (0.6-8 MWh)	Tier 4 (> 8 MWh)
SP-3	Yes	No	No	No
SP-2	Yes	No	No	No
SP-1	Yes	?	No	No
RA	Yes	Yes	No*	No*
HR	Yes	?	No	No
HM	Yes	Yes	No	No
Overlays	Yes	No [#]	No	No
Floating	Yes	Yes	No	No
CLI	Yes	Yes	Yes	No
HC	Yes	Yes	Yes	No
PDD	Yes	Yes	Yes	Yes

- No* for RA alludes to the possible issues of overlays (1) along 3-phase distribution lines (Tier 3) or (2) along high-voltage transmission lines and Burnt Meadow substation (Tiers 3 and 4).
- No[#] for Overlays indicates the possibility of allowing Tier 2 in Hamlet Expansion Overlay.

Proposed Questions to Discuss

- Question 1: Permit Tier 2 (80-600 kWh) in SP-1 or not?
- Question 2: Permit Tier 2 (80-600 kWh) in HR and Hamlet Expansion Overlay or not?
- Question 3: Permit Tier 3 (up to ~8 MWh) in parts of RA and HM or not?
 - Sub-question 3a: Should there be an overlay district along 3-phase transmission lines?
 - Sub-question 3b: Should there be an overlay district at the Burnt Meadow substation and/or along part of the high-voltage transmission lines in RA District?
 - Sub-question 3c: Should permission be allowed by defining a floating district in conjunction with a large-scale solar array sited in the RA District?
- Question 4: Is 8 MWh the right upper limit for Tier 3?
- Question 5: Should there be an overlay district allowing Tier 4 (> 8 MWh) at the Burnt Meadow power substation or along part of the H-V transmission lines?

Backup slides Follow

Protection of Gardiner and its Residents

- Risks that we want to mitigate/minimize
 - BESS system fires and consequences
 - BESS noise and viewshed issues
 - Public health consequences from fossil fuel burning
 - Increasing wildfire likelihood and severity due to climate change
 - Electricity price spikes during demand peaks
 - Cost of expensive upgrades to electrical transmission infrastructure
 - Potential for grid collapse as electricity demand increases

General Comments

- Town code and zoning laws provide guidance and constraints for future BESS developments
 - Small-scale BESS (< 600 kWh, currently defined as Tiers 1 and 2) are subject to general building code and fire code restrictions and inspections
 - Larger-scale BESS (> 600 kWh, Tiers 3 and 4) have many additional requirements from the New York State fire code
 - Any proposals to construct Tier 3 or 4 BESS would require a site plan, planning board review, special use permit, demonstration that all the requirements of the fire code are met, any additional requirements that we might put in our BESS code, and site-specific SEQRA review
- BESS code would establish guidelines for permitting (or not) different BESS tiers in various locations, currently unregulated in Town Code. This does not imply any commitment to hosting such systems, none of which have been proposed to the Town of Gardiner to date.