

Excerpt of Town of Dover Govt. Operations Climate Action Plan  
outlining recommendation to reduce GHG emissions through LED Streetlight  
Replacement

# **Government Operations Climate Action Plan for the Town of Dover, New York**

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Throughout the Town and County, focusing emissions reduction planning on transportation and residential and commercial energy usage will have the largest impact on GHG emissions. The next section will provide information and ideas about how to achieve significant and measurable emissions reductions for the municipal operations in the Town of Dover.

## 4. Government Emissions Reduction Focus – Reduction Plan

### 4.1 Practical Considerations

Several factors must be considered when identifying climate actions that make sense for the Town of Dover. These include

- estimated GHG reduction from implementation,
- estimated Cost (initial and ongoing),
- estimated Savings (electricity and fuel),
- timing (short-, medium-, or long-term),
- ability to cost-effectively meet GHG reduction targets (“Bang for the Town’s Buck”).

### 4.2 Priority Reduction Actions

Based on the potential CSC certification actions identified in Table 2 and the targeted areas of GHG reduction identified in Section 3, First Environment used available information and the ICLEI software – ClearPath – to model anticipated GHG emission reductions, costs, and savings for the following priority climate actions:

- Town Hall Lighting Sensors,
- Town Hall retrofit - energy efficiency,
- Electric - Hybrid Vehicle,
- Vehicle Fleet Efficiency and Rightsizing,
- LED Streetlight Replacement,
- Town Ballfield LED Lights Replacement,
- Solar Energy – Power Purchase Agreement.

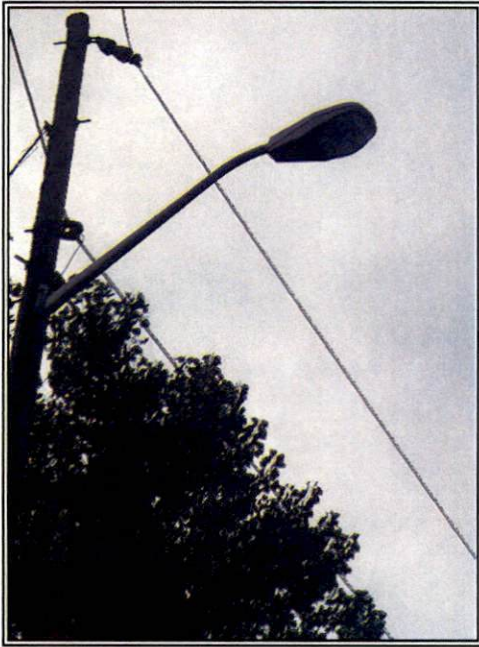
Based on a detailed analysis of each of these climate actions, the following table summarizes the results. For a detailed description of this analysis and reduction plan, see Appendix A.

Reduction Measure	Expected GHG Emission Reduction (tCO <sub>2</sub> e/year)	Priority	Comment
PPA - Solar Energy	-16	1	Simple implementation; Low-Medium Cost; Significant GHG emissions reduction
LED Streetlight Replacement	-43	1	Complex implementation; High Cost; Significant GHG emissions reduction

## 5.2 Actions to Meet Year 5 Goal of 10 Percent Reductions

The following table summarizes the recommended actions focused on LED lighting and energy efficiency upgrades. These actions are anticipated to exceed the Town of Dover's Year 5 (2022/23) reduction goal of 10 percent.

Additional Reduction Measures	Expected GHG Emission Reduction (tCO2e/year)	Possible CSC Points	Estimated Cost / Annual Savings	Comment
LED Lights Replacement - Ballfield	8	1-4	<u>Cost: \$12,400</u> <u>Savings: \$4,200/yr</u>	<ul style="list-style-type: none"> <li>• Medium complexity implementation</li> <li>• Medium cost</li> <li>• Medium GHG emission reduction</li> </ul>
Town Hall Lighting Sensors	2	1-5	<u>Cost: \$6,000</u> <u>Savings: \$1,000/yr</u>	<ul style="list-style-type: none"> <li>• Simple implementation</li> <li>• Low cost</li> <li>• Minor GHG emission reduction</li> </ul>
Town Hall Retrofit - Energy Efficiency	6	1-5	<u>Cost: \$12,000</u> <u>Savings: \$3,250/yr</u>	<ul style="list-style-type: none"> <li>• Medium complexity</li> <li>• Medium cost</li> <li>• Medium GHG emission reduction</li> </ul>
Phase I of LED Streetlight Replacement	8	1-5	<u>Cost: \$16,500</u> <u>Savings: \$6,500/year</u>	<ul style="list-style-type: none"> <li>• Complex implementation</li> <li>• High cost &amp; large savings</li> <li>• Medium GHG emission reduction</li> </ul>
TOTAL Since Year 1:	40 (10.8%) >10% reduction			



*Example of Cobra Head-style streetlight currently in use. Replacing existing streetlights with LED streetlights could result in significant emissions reductions.*

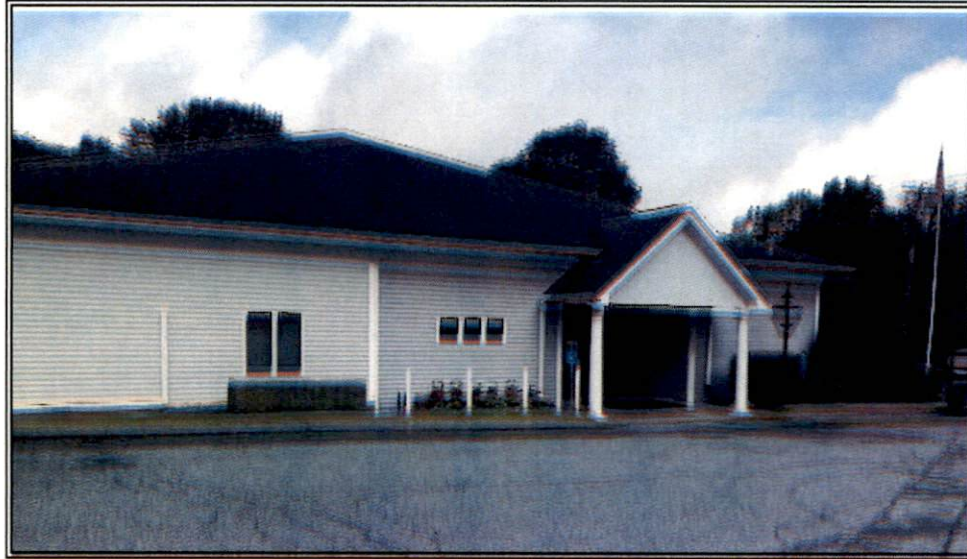
### 5.3 Actions to Meet Year 10 Goal of 20 Percent Reductions

The following table summarizes the recommended actions focused on LED streetlight replacement. This action is anticipated to exceed the Town of Dover's Year 10 (2027/28) reduction goal of 20 percent.

Additional Reduction Measures	Expected GHG Emission Reduction (tCO <sub>2</sub> e/year)	Possible CSC Points	Estimated Cost / Annual Savings	Comment
Phases II and III of LED Streetlight Replacement	35	5-10	Cost: \$ 72,200 Savings: \$28,500/year	<ul style="list-style-type: none"> <li>Complex implementation</li> <li>High cost</li> <li>Significant GHG emission reduction</li> </ul>
TOTAL Since Year 1:	75 (20.3%) >20% reduction			

A more detailed analysis of the proposed actions and expected benefits and cost is included in the GHG Inventory report, attached in Appendix A

Elements to help leave the Town of Dover a little better than when they found it and, through the process, to lead the community by their example.



*Dover Town Hall*

## **6.1 Town of Dover Elected Officials**

The development of this Govt. Operations Climate Action Plan provides the touchstone of the Town's commitment to protecting its natural resources and implementing workplace practices that help reduce GHG emissions and waste and promote recycling and reuse. At the time of this document's publication (December 2018), the Town has made significant progress toward completion of these specific CSC actions to achieve Bronze-level certification (with funding support of a NYS DEC Climate Smart Communities Certification Program grant):

- Adoption of the Climate Smart Communities Pledge (Pledge Element 1.1);
- Designation of Climate Smart Communities certification coordinators and a Climate Smart Dover Task Force (PE 1.2 and 1.3);
- Government Operations Greenhouse Gas (Emissions) Inventory, 1, 5 and 10-Year GHG Reduction Target Plan (PE 2.1 and 2.3);
- Government Operations Climate Action Plan (PE 2.5);
- Natural Resource Inventory (PE 6.17);
- Town-wide Road-Stream Crossings Inventory and Vulnerability Assessment Study (PE 7.1);
- Review of Existing Community Plans and Projects to Identify Climate Adaptation Strategies and Policies or Projects that May Decrease Vulnerability (PE 7.3);
- Joined a National or Regional Climate Campaign or Program (PE 1.5);
- Maintain a website on local climate protection efforts (PE 9.4).

Based on municipal and community interests revealed in the course of this project, it is recommended that Town of Dover officials consider these CSC Pledge Element actions to further lead efforts to protect town-based natural resources and implement CSC workplace practices:

- Conduct energy audits of local government buildings (PE 3.1).
- Upgrade interior lighting (PE 3.2).
- Install water-efficiency fixtures (PE 3.4).
- Adopt a vehicle fleet efficiency policy (PE 3.10).
- Right-size the local government fleet (PE 3.11).
- Convert streetlights to LED (PE 3.15).
- Reduce number of outdoor fixtures (PE 3.17).
- Upgrade outdoor lighting to more efficient and/or solar technology (PE 3.18).
- Provide recycling bins next to all trash receptacles in local government buildings (PE 3.20).
- Provide e-waste collection in local government buildings (PE 3.22).
- Establish a financing mechanism for energy efficiency and renewable energy projects in government-owned buildings (PE 3.25).
- Adopt a green power purchasing policy to ensure increasing local government energy supplies come from renewables (PE 4.1).
- Conduct feasibility studies for renewable energy installation (PE 4.3).
- Purchase renewable energy credits (PE 4.4).
- Develop and adopt a Comprehensive Plan with Sustainability Elements (PE 6.1).
- Incorporate smart growth principles into land-use policies and regulations (PE 6.2).
- Adopt a Complete Streets policy (PE 6.9).
- Update the Multi-Hazard Mitigation Plan to address changing conditions and identify specific strategies into local plans and projects (PE 7.6).
- Develop and implement a heat emergency plan (PE 7.7).
- Create or update a watershed assessment to identify flooding and water quality priorities (PE 7.10).
- Develop or enhance early warning systems and community evacuation plans (PE 7.22).

## 6.2 Town-Appointed Boards

The Town of Dover has appointed volunteer boards comprised of talented residents who assist elected leaders with review of land use development projects, preservation and enjoyment of open space and recreational facilities, and with conservation of town-based natural resources. At this time, those administrative and advisory entities include: the Climate Smart Dover Task Force, Conservation Advisory Council, Master Plan Technical Review Committee, Planning Board, Recreation Commission and Zoning Board of Appeals.