

ecos

A SUSTAINABLE FUTURE
FOR CHITTENDEN COUNTY

2018 Plan Update

The Chittenden County Regional Planning Commission (CCRPC) is embarking on the **2018 ECOS Plan**, an update to the **2013 ECOS Plan**. This update will focus mainly on updates to the Metropolitan Transportation Plan and Comprehensive Economic Development Strategy, and will serve as the Regional Enhanced Energy Plan. This document provides an overview of the energy sections and is the first of a three-part series (energy, transportation, and economy) that will be released in the coming months.

Part 1 of 3: ENERGY UPDATE

The update to the energy section identifies actions for reducing energy consumption and reliance on fossil fuels for all sectors of energy (heating, electricity, and transportation). Doing enhanced energy planning for the region will align us with the **State's energy goals** and means the ECOS Plan will have a larger role in the permitting of renewable energy projects at the State level. After the ECOS Plan is approved in June 2018, the CCRPC will be able to review town plans for a determination of energy certification which, if granted, will allow municipalities more influence in the siting of renewable energy projects. Below are a number of energy-related strategies that will enhance the 2018 ECOS Plan.

What is the ECOS Plan?

Since 1976, the Chittenden County Regional Planning Commission has been producing a Regional Plan to protect the County's resources and guide its development. The ECOS Plan is the 2013 regional plan for Chittenden County and includes the Metropolitan Transportation Plan and the Comprehensive Economic Development Strategy. Learn more at ecosproject.com.

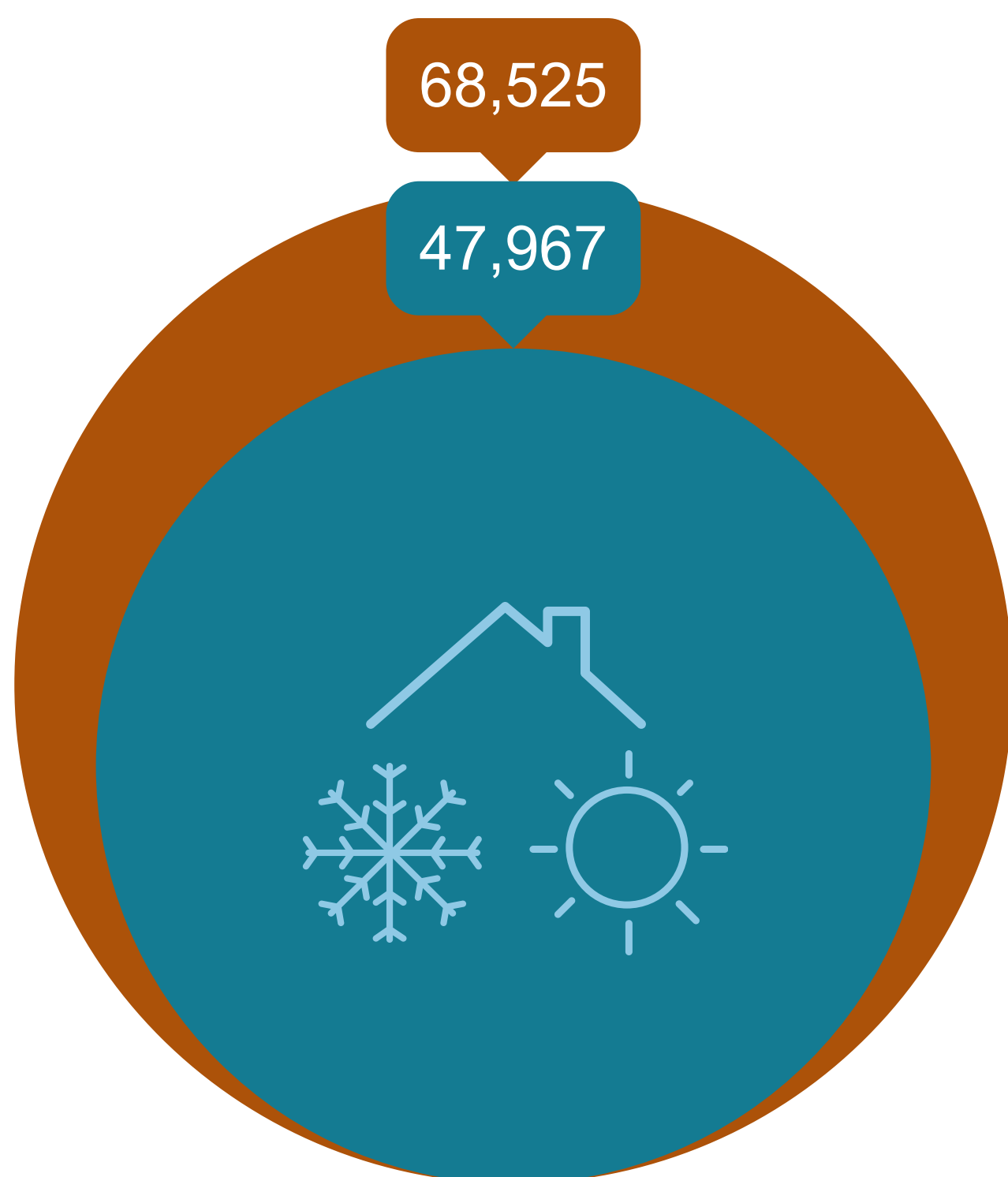
USE 1/3 LESS ENERGY FOR HEATING, TRAVEL & APPLIANCES

Collaborate with utilities to reduce energy use through weatherization of homes and businesses, and the installation of more efficient appliances.

70% of Chittenden County homes need to be weatherized by 2050.

Plan for a majority of new growth to take place in compact areas to reduce travel distances, provide for more energy efficient buildings, and encourage walking, biking, and transit use.

On average, 86% of homes built in Chittenden County since 2012 are in areas planned for growth, exceeding the 80% goal outlined in the ECOS Plan.

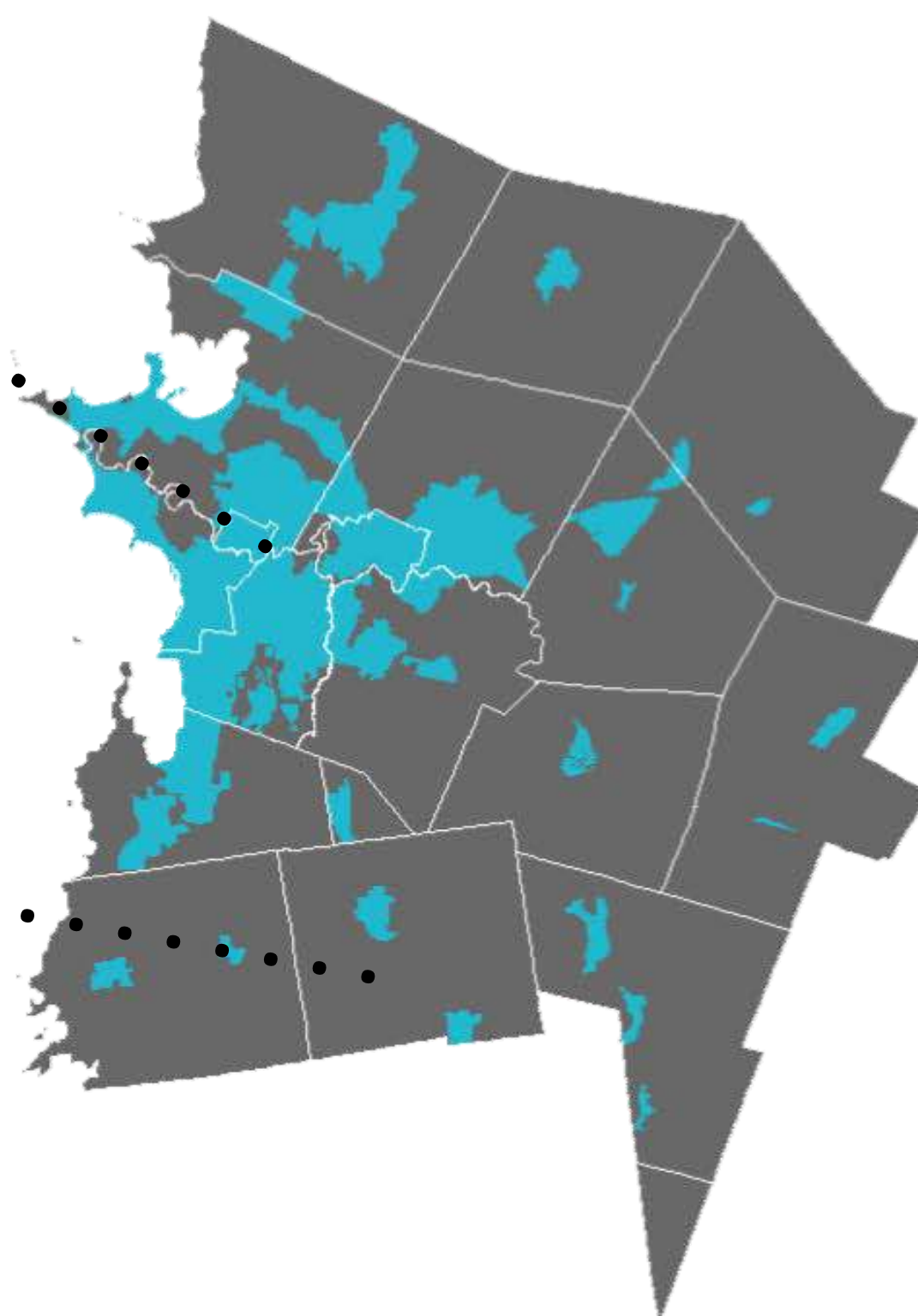


86%

In areas planned for growth


14%

In rural areas

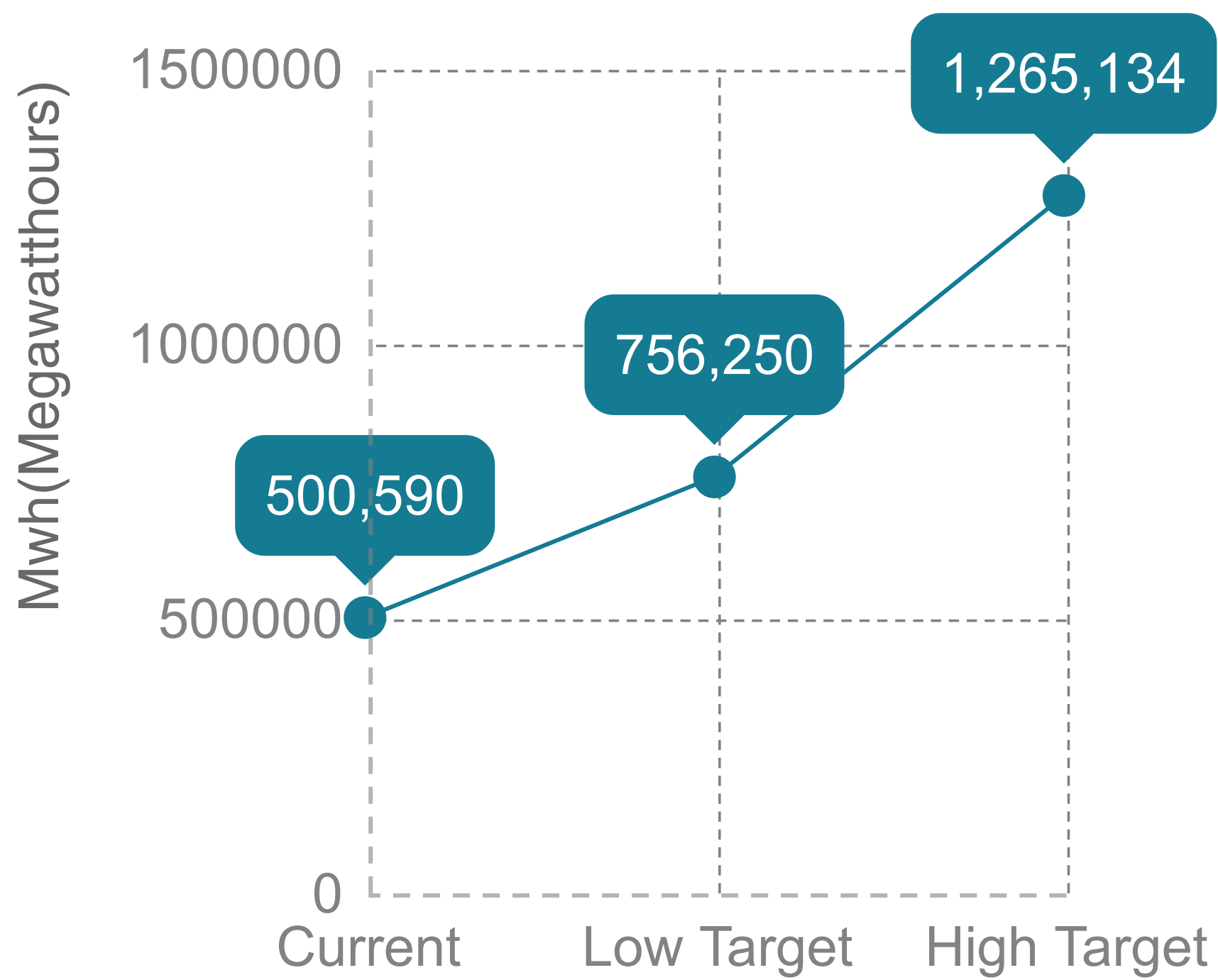



■ Total Homes ■ Homes Needing Weatherization

90% OF ENERGY NEEDS TO BE FROM RENEWABLE SOURCES BY 2050

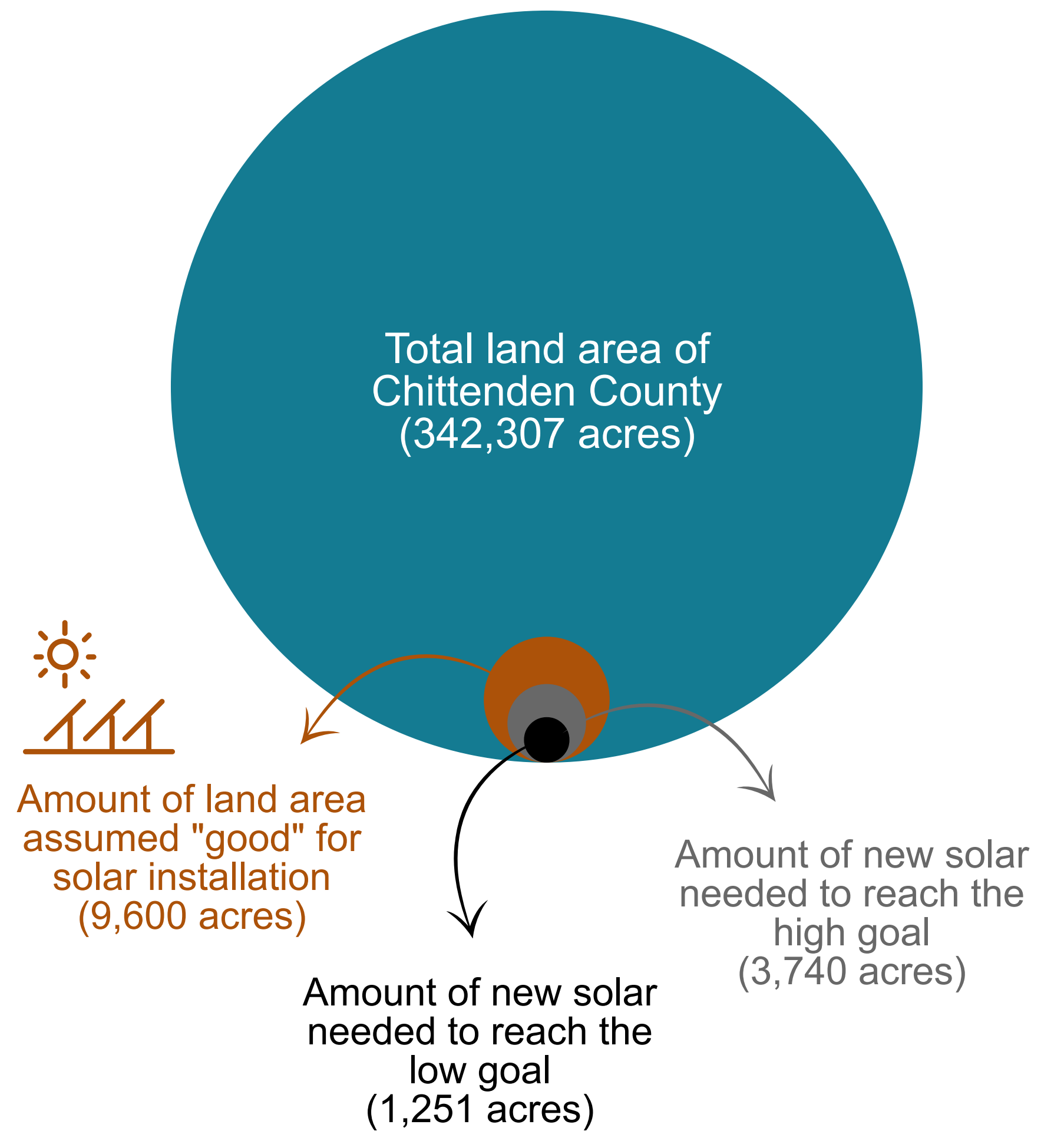
 We've estimated how much additional renewable energy (wind, solar, biomass, and hydro) the region needs to generate.


Chittenden County needs to generate 756,250 Mwh (Megawatt hours) of energy to meet the low target, or a 51% increase -- and 1,265,134 Mwh to meet the high target, or a 153% increase. The low and high ranges represent two pathways toward meeting the State's 90% renewable goal.



 We've estimated how much land area is needed to meet those renewable energy generation targets.


At 75% solar, the county has approximately 3x to 8x the acreage needed to achieve the high- and low-range targets respectively.



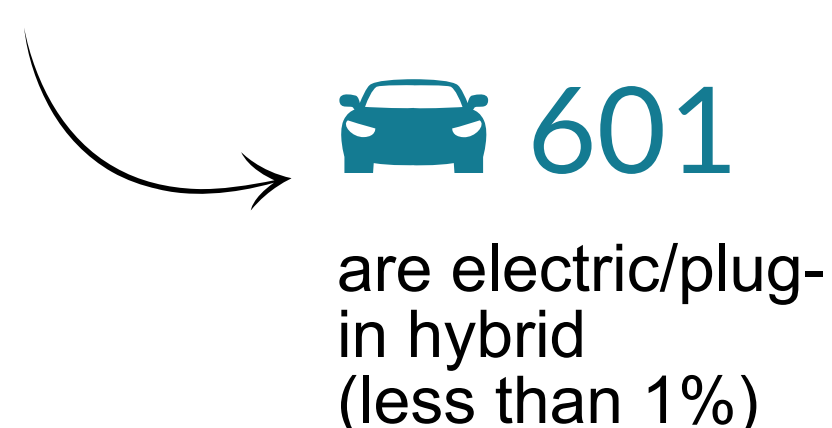
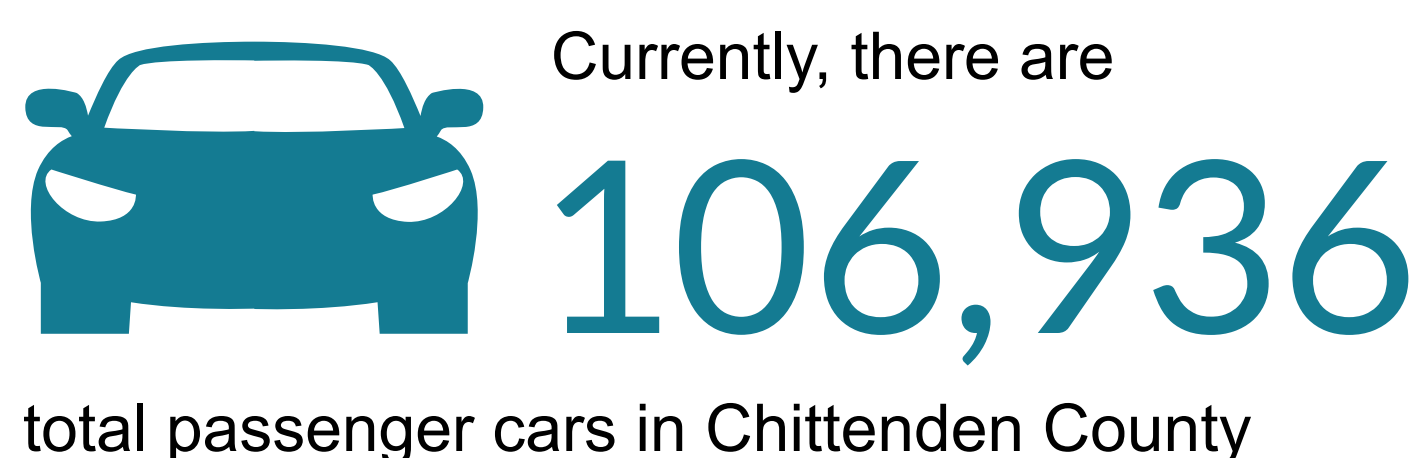
 We've identified land areas with environmental constraints, which may not be appropriate locations for renewable energy generation facilities (solar, wind, biodigesters, etc.).


View a detailed map on the next page. White areas and possible constraint areas are potentially appropriate areas for these facilities, while known constraints are not.

TRANSFORM THE TRANSPORTATION & HEATING SECTORS TO ELECTRICITY POWERED BY RENEWABLE SOURCES

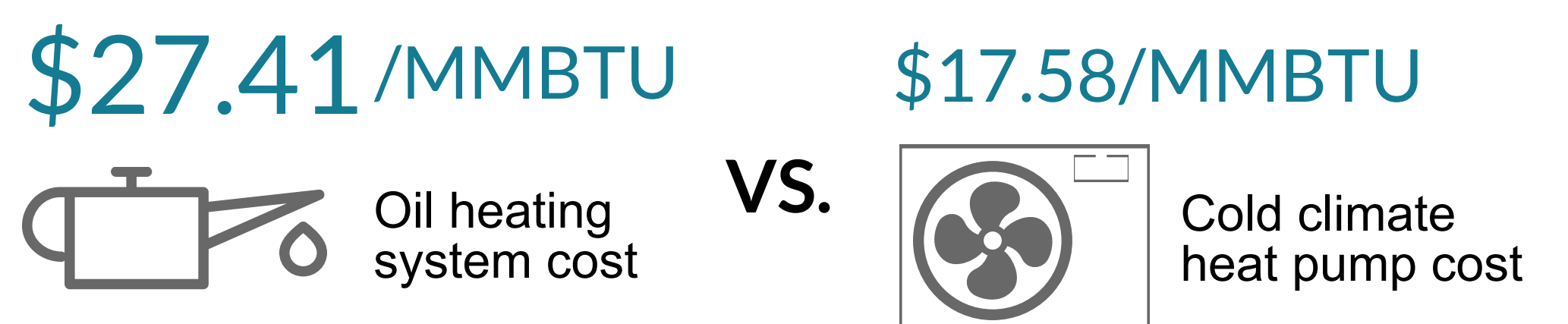
 Because the transportation sector accounts for 38% of the county's energy use, it's important that we transform it through the promotion of electric vehicles and installation of electric vehicle charging stations.

Target: 89% of passenger cars should be electric.



 Because the heating sector accounts for 44% of the county's energy use, it's important that we collaborate with partners to reduce fossil fuel use in the heating sector through installation of heat pumps.

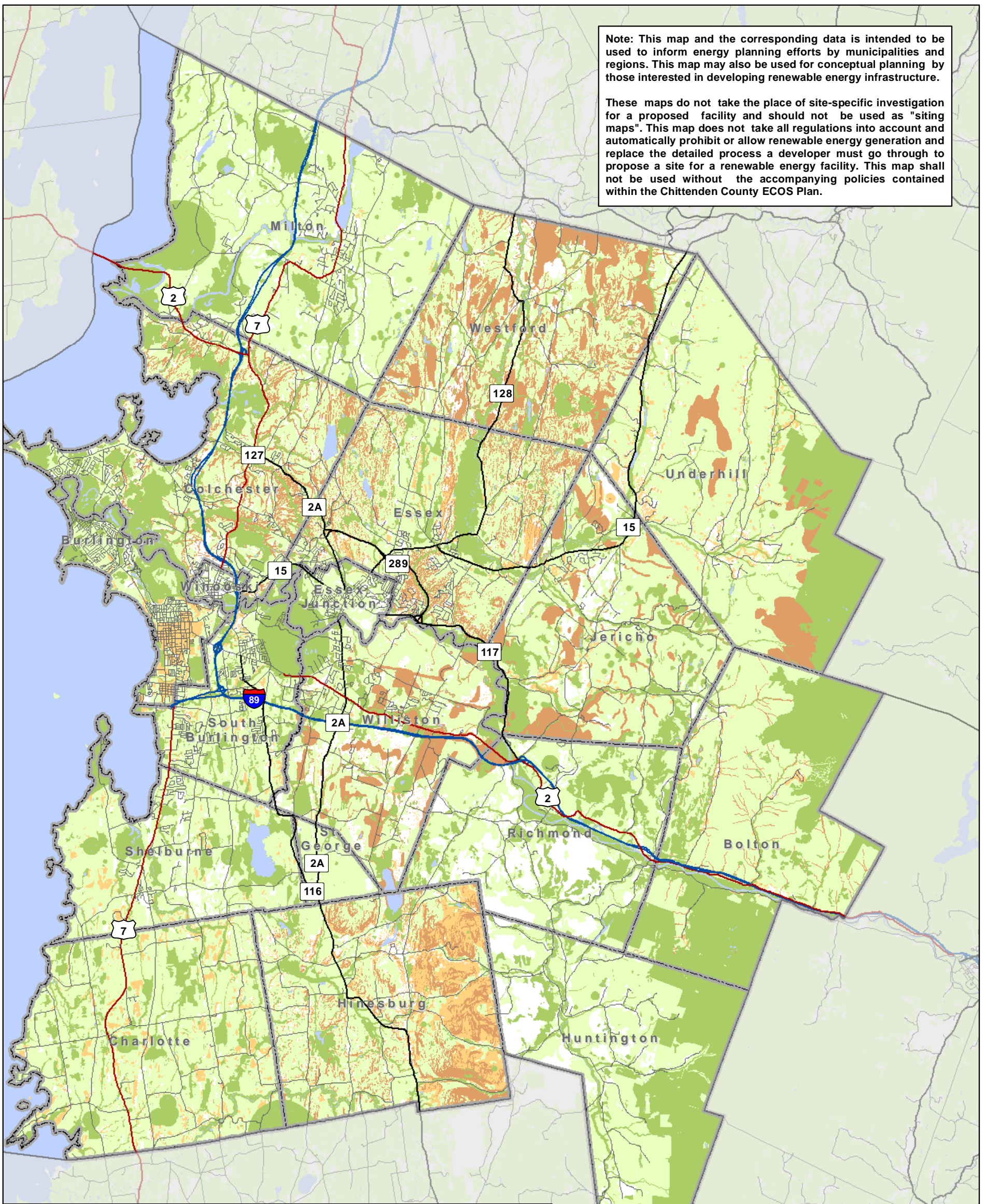
Cold climate heat pumps are more efficient than oil heating systems.



To learn more about the 2018 ECOS Plan and submit your feedback on energy planning, visit ecosproject.com/2018-ECOS-Plan.

Note: This map and the corresponding data is intended to be used to inform energy planning efforts by municipalities and regions. This map may also be used for conceptual planning by those interested in developing renewable energy infrastructure.

These maps do not take the place of site-specific investigation for a proposed facility and should not be used as "siting maps". This map does not take all regulations into account and automatically prohibit or allow renewable energy generation and replace the detailed process a developer must go through to propose a site for a renewable energy facility. This map shall not be used without the accompanying policies contained within the Chittenden County ECOS Plan.

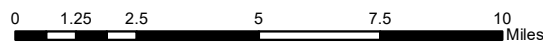


State and Local Development Constraints

Legend

- State Known Constraints
- State Possible Constraints
- Local Known Constraints
- Local Possible Constraints

ECOS Plan Policy: Development should be located so as to avoid state and local known constraints that have been field verified and to minimize impacts to state and local possible constraints which have also been field verified.



State Known Constraints
 Vernal Pools; VCGI, 2017
 DEC River Corridors; VCGI, 2017
 FEMA DFIRM Floodways; VCGI, 2017
 RTE + Sig. Natural Comm; VCGI, 2017
 Wetlands; VSWI Wetlands Class Layer,

State Possible Constraints
 Agricultural Soils; VCGI, 2017
 FEMA Special Flood Hazard Areas; VCGI, 2017
 Protected Land; VCGI
 Act 250 Mitigation Areas; VCGI, 2017
 Deer Wintering Areas; VCGI, 2017
 Priority Forest Blocks, Vermont Conservation Design
 Hydric Soils; VCGI, 2017
 Local Known and Possible Constraints, CCRPC and Municipalities

Disclaimer:
 The accuracy of information presented is determined by its sources. Errors and omissions may exist. The Chittenden County Regional Planning Commission is not responsible for these. Questions of on-the-ground location can be resolved by site inspections and/or surveys by registered surveyors. This map is not sufficient for delineation of features on the ground. This map identifies the presence of features, and may indicate relationships between features, but is not a replacement for surveyed information or engineering studies.

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Map 9: Natural System Areas