Achieving 100% Renewable Energy in Hanover

FIRST STEPS

MARCH 2018

At its 2017 town meeting, Hanover citizens showed up in record numbers--nearly double the average turnout--and voted overwhelmingly to commit to using 100% renewable energy for its electricity by 2030 and heating and transportation by 2050. Subsequently, Sustainable Hanover--a town committee established in 2009--expanded its Energy Subcommittee to lead, support, and engage the community in efforts to achieve these goals.

As a first step forward, the Energy Subcommittee created the following statements to guide its efforts.

- ☐ We envision Hanover as a resilient and healthy community powered by affordable and clean renewable energy.
- ☐ The production and distribution of electricity, heating and cooling of buildings, and modes of transportation are efficient and pollution-free.
- ☐ Thoughtful development leads to walkable neighborhoods, flexible and adaptable buildings and lifestyles less dependent upon the automobile.
- ☐ Clean energy related business opportunities and living-wage jobs help our families and community thrive.
- ☐ How we achieve this vision is as important as the vision itself. We value relationships and are committed to an accessible, inclusive, and equitable process for both getting to and maintaining our vision.
- ☐ We welcome, in fact depend upon, ideas, leadership, and participation from entities throughout the town.
- ☐ Hanover inspires and assists other communities to make similar transitions in order to stabilize the climate.

Frequently Asked Questions

Remind me, what were the goals committed to in the vote? Our mandate was passed at Hanover town meeting on May 9, 2017: "To see if the Town will vote to join the "Ready for 100 Action" campaign, thereby committing to a goal of 100% reliance on renewable sources of electricity by 2030 and renewable sources of fuel for heating and transportation by 2050. Joining the "Ready for 100 Action" campaign implies that the Town of Hanover will lead the community in initiatives designed to help local institutions, businesses and residents transition to 100% renewable sources of electricity and fuel oil. The Town has begun by investing in energy efficiency and renewable electricity generation for Town facilities and will follow by transitioning to vehicles and heating systems fueled by renewable sources."

Who is required to meet the goals of 100% renewable electricity by 2030 and transportation and heating/cooling by 2050? No one is required to meet these goals. However, the Energy Subcommittee is committed to working towards these goals with all entities within Hanover's geographic boundaries--our municipality*, schools, businesses, organizations, residences, and Dartmouth College.

What energy sources qualify as "renewable"? We are using the U.S. Environmental Protection Agency's definition of renewable energy. For our purposes, renewable energy refers to a set of energy resources that restore themselves over short periods of time and do not diminish, such as solar, wind, geothermal, low impact hydro and some forms of biomass. (https://epa.gov/greenpower/green-power-partnership-eligible-resources).

How will we measure success? The Energy Subcommittee is developing a set of indicators for measuring our success by sector and welcomes input from others.

Does the renewable energy need to be generated locally here in Hanover? No. We anticipate achieving these goals through a portfolio of renewable energy sources, with generation here in Hanover being an important component. Generation of energy elsewhere, such as offshore wind on the New Hampshire seacoast, and certified renewable energy credits (RECs) will be part of the mix.

How does land use planning fit into these goals? The Energy Subcommittee wishes to preserve our beautiful community and use resources, including our land, judiciously. We encourage others to do the same as we work toward these goals together.

Is resiliency--that is the ability of our energy systems to bounce back from storms and other disruptions--part of achieving our goal? The Energy Subcommittee and Town are using resilience as one criteria for evaluating and selecting potential energy projects. We support other entities doing so as well.

How much will this cost? The Energy Subcommittee and Town are using fiscal prudence and affordability as criteria for evaluating and selecting potential energy projects. Cost estimates will be influenced by a large number of players, outside forces, and rapidly changing technology. Collectively, these forces have dramatically reduced the cost of clean energy over the last decade. Energy transformation is a prudent investment, not only to protect our environment and economy from climate disruption, but also for health reasons. According to one engineering estimate, a transition to clean energy in NH would yield an average annual savings of more than $6,000 per person in energy, health, and climate costs. The transition would also create new clean energy jobs for our community and our economy.

Is Hanover trying to be a model community? As of November 28, 2017, fifty municipalities throughout the country have adopted these goals. Hanover is the first town in New Hampshire to do so and the first in the country to do so by popular vote. Several other municipalities within New Hampshire and Vermont are now working to make similar commitments at their 2018 town meetings. We look forward to sharing our experiences with and learning from other municipalities both nationally and regionally. We anticipate commonalities as well as differences in our respective journeys and expect to both inspire and be inspired by others.

Examples of Existing or Potential Projects for Various Sectors of Hanover

The following table provides examples of existing and/or potential projects going on in various sectors of Hanover for achieving our goal through three key strategies: reduce our energy consumption from all sources, lessen our dependence on fossil fuels, and expand our use of renewable energy.

	Electricity	Heating/Cooling	Transportation
Municipality*	Develop programs to improve access to electricity generated from renewable sources for Hanover residents and businesses.	Leading by example, weatherize municipal buildings to the highest possible efficiency, reducing their cost and energy footprint for heating and cooling.	Transition town fleet to electric vehicles (EVs). Ensure that charging stations are distributed throughout the town for employees, residents, and visitors.
Schools	Install LED lighting, motion-sensing switches, and Energy Star equipment in all buildings.	Add air or ground sourced heat pumps, and use the school as a working example for parents and the wider Hanover community	Replace current bus fleet with electric vehicles. Promote car pooling, biking and walking. Encourage students to learn about next-generation transportation systems.
Residents	Participate in community solar projects that lower the threshold for switching to solar power.	Shift from fossil fuels to air or ground sourced heat pumps to cool and heat homes.	Reduce car dependence with bike paths and bike sharing programs (electric and standard).
Businesses & Organizations	Replace machinery and lighting with the most energy-efficient models and use rooftops for solar panels.	Conduct ongoing energy reviews to find ways of increasing efficiency and fuel savings.	Reduce unnecessary travel; move to virtual meetings. When travel is necessary, encourage ridesharing and/or public transportation. Invest in EVs for employee use.
Dartmouth College	Maximize solar potential by developing rooftop and ground mounted solar arrays on college property.	Replace fossil fuels with renewable resources, likely responsibly harvested biomass.	Work with town and residents to implement a regional transportation system for employees and students, using state-of-the-art electric buses and other transit.

* The governing body of Hanover

For more information, visit our website at hanovernh.org/sustainable-hanover-committee.

If you have questions or ideas to share, please contact a member of the Energy Subcommittee:

Yolanda Baumgartner, Co-Chair - yfoursh@gmail.com
Marjorie Rogalski, Co-Chair - marjorie890@gmail.com

Stowe Beam - stowebeam@gmail.com
Julia Griffin - julia.griffin@hanovernh.org
Rob Houseman - robert.houseman@hanovernh.org
Ian Marcus - ian.f.marcus@gmail.com
Honor Passow - passow@myfairpoint.net
April Salas - april.m.salas@tuck.dartmouth.edu
Judi Colla - judith.colla@gmail.com
Mike Hillinger - ml.hillinger@gmail.com
Peter Kulbacki - peter.kulbacki@hanovernh.org
David McManus - davidwmcm@gmail.com
Jackie Richter-Menge - jrmenge@gmail.com
Ally Samuell - allyson.samuell@sierraclub.org

TOWN of HANOVER
HANOVER, NEW HAMPSHIRE 03755

Sustainable Hanover