

Ready for 100% Renewable Energy – Questions and Answers

What is the “Ready for 100% Action” campaign?

The goal of the “Ready for 100% Action” campaign is to commit our town to use 100% clean, renewable and sustainable energy in all three energy sectors: electric power, heating, and transportation. The goal is to move to 100% renewable electric power by 2030 and to have 100% renewable heating and transportation by 2050. This would apply to all residences, businesses, churches & municipal buildings.

What is “renewable” and what is “sustainable”?

A renewable and sustainable energy source is one that is repeatedly available, without diminution, and has minimal environmental impact, such as wind, solar, small hydro and geothermal.

Why now?

Our current energy path is not sustainable (environmentally, economically and resource-wise). Fossil fuels are no longer abundantly available. In fact, the only remaining reserves of fossil fuels are in the most difficult and expensive locations to reach. As a result, fossil fuel prices will become increasingly volatile. Switching to renewable energy is actually the smartest thing we can all do to ensure a safe, stable and enduring future for ourselves and our planet. Indeed, renewable energy solutions are growing at a rapid pace, are being adopted by major nations and corporations around the globe, and without question will be the dominant model in the very near future worldwide. If we don't take advantage of this growing trend toward renewables, we may find ourselves left behind financially and technologically.

Is 100% by 2050 feasible?

We believe so. Reliable scientific models using wind, water & solar sources have been designed to show the feasibility of this goal (Jacobson, et. al., Stanford University). Technological innovation in renewable energy and battery storage are moving at a very rapid pace. Tremendous advances have been made in just the last 5 years, justifying our optimism that this goal is achievable.

Electric vehicles are available, and their battery power is moving vehicles 200 miles and more on one charge. Electric buses are already being widely used in cities across our nation and worldwide, and even electric heavy duty vehicles are being developed and used today in Germany.

Energy storage technologies exist in small and large scale systems (batteries, pumped hydro, molten salt, etc.). Tesla (U.S.) and Sonnen (Germany) are just 2 companies that have developed residential battery systems that serve as battery backup, smart control of energy use, and a way to relieve peak demand pressure on the grid. Smart grid technology exists that can maximize the minimal use of energy.

Achieving this goal means MUCH MORE than just putting solar panels on houses.

In order to achieve a 100% renewable energy target by 2050, yes, it will mean installing solar panels and wind turbines wherever it is feasible based upon planning and zoning rules developed by town committees. It will also mean creating community solar installations for those houses that are not good solar sites. But successfully reaching this goal will **also** involve a great many other actions, including: reducing our energy use, weatherizing our homes, transitioning to electric vehicles, moving away from oil and gas to heat our homes and our water, and instead installing electric heat pumps and other renewably powered heating systems. It also means finding ways to store energy (adopting the most cutting edge battery technologies), and promoting smart ways to maximize the most from the minimum use of energy.

Will I be forced to move to renewable energy?

No. The targets are non-binding. This commitment is meant to serve as a compass to guide future decisions in our town. We expect the town to make prudent fiscal choices which will increasingly be for renewable energy. For example, each time a town vehicle needs to be replaced, the hope is that it will be replaced with a vehicle that runs on a renewable source of energy. The idea is that the town will help facilitate and create positive incentives for residents to follow the renewable path. This could include establishing future building codes to embrace the latest energy efficiency innovations, helping to make

homes and buildings more efficient, creating community solar opportunities for residents, and installing electric vehicle charging stations around town.

We advocate a just and equitable transition.

It is important that our town provide whatever support & opportunities it can to help make it possible for everyone to benefit from the transition to a clean energy economy. Setting a target date of 2050 gives us 32 years to plan and prepare. We all need to look ahead and be aware of how a future run by renewable energy may affect our current livelihoods. As jobs in the fossil fuel industry diminish, we need to support those who currently work in this field by making sure they have access to clean energy jobs. The good news is that many new opportunities for innovation and employment in the renewable energy sector will be opening up.

Are other towns, cities and regions working toward similar goals?

Yes! As of Oct. 30, 2017, **47 U.S. cities and towns** have committed to achieving ambitious renewable energy goals, and so far 5 U.S. cities have succeeded in reaching 100% renewable electricity. In addition, entire countries such as Denmark, Costa Rica and Scotland, regions in Germany, and cities in Austria, Australia, S. Korea, Sweden, Poland, Canada, among many others, are either well on their way to achieving 100% renewable goals, or have already reached them. Furthermore, **113 corporations** worldwide, including Kellogg's, Goldman Sachs, Microsoft, Lego, & Walmart, have committed to transitioning to renewable energy, some as early as by 2020.

What plan can our town follow to achieve the 100% renewable energy target?

It is important to understand that each town is unique. There is no fixed plan that every town must follow. Each town needs to explore its own resources and strengths, and devise a plan that will work for that town. The first steps that need to be taken would be to calculate our residential and municipal energy needs, weatherize our homes, participate in as many energy efficiency programs as possible, reduce our energy use, take stock of what locations might be suitable for large solar or wind installations, and possibly hire consultants to recommend the best energy strategies and renewable energy projects that would benefit our town.

How much will this cost?

There are no specific costs tied to this proposal. Instead it establishes a framework for future growth that emphasizes sustainability and energy efficiency. The town will be tasked with balancing energy innovation with fiscal responsibility. Future expenditures by the town will be subject to the standard budgetary process that identifies the costs and benefits (both tangible and intangible).

It is our hope that towns will see the wisdom of dedicating funds to invest in renewable energy projects. Smart financial investments by other cities and towns have resulted in significant returns, saving towns money, and even generating revenue through the selling of surplus renewably generated energy, or even through new businesses that grow from the manufacture or distribution of new renewable energy technology.

How can a town find the money to pay for investment in renewables?

Renewable energy projects can be financed in various ways: including grants, loans and power purchase agreements (PPA's) (where an investor pays the up front costs and the user pays monthly costs equivalent to or less than existing monthly energy bills).

What happens if we fall short?

If we reach 2050 and have only achieved, say, an 80% renewables target, then we have achieved 80% —and we continue on the path to 100% as soon as possible.

Visit the following web pages for links to informative videos and documents:

<http://www.plainfielddnh.org/energy/energy.htm> or

<http://www.cornishnh.net> (select Committees & then click on Cornish Energy Committee)

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