

# Ready for 100

## Planning the 100% Renewable Future



[TOWNSHIP NAME TK]

[DATE TK]

# What is Ready for 100?

A Sierra Club initiative to help communities transition to:

100% clean renewable electricity by **2035**

100% clean renewable energy, all sectors, by **2050**, including heat and transportation



**SIERRA  
CLUB**

# Ready for 100 Operating Principles

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- Put efficiency first
- Be equitable & just
- Prioritize local generation & job creation
- Be inclusive & transparent in planning & implementation
- Collaborate with neighboring communities
- Advocate & educate!
- Demonstrate immediate progress



# Why Ready for 100?

2020-2021: the “future” arrives, after a landmark decade of climate disasters\*

- Globally: Wildfires, floods, melting events, rogue heat waves
- U.S.: Snow *droughts* in Alaska, *snowmagedon* in Texas
- Regionally: Damaged infrastructure, tree die-backs, freak storms, injurious-insect and algae blooms



\*Source: National Oceanic and Atmospheric Administration (NOAA)  
[<https://www.climate.gov/news-features/category/extreme-events>]

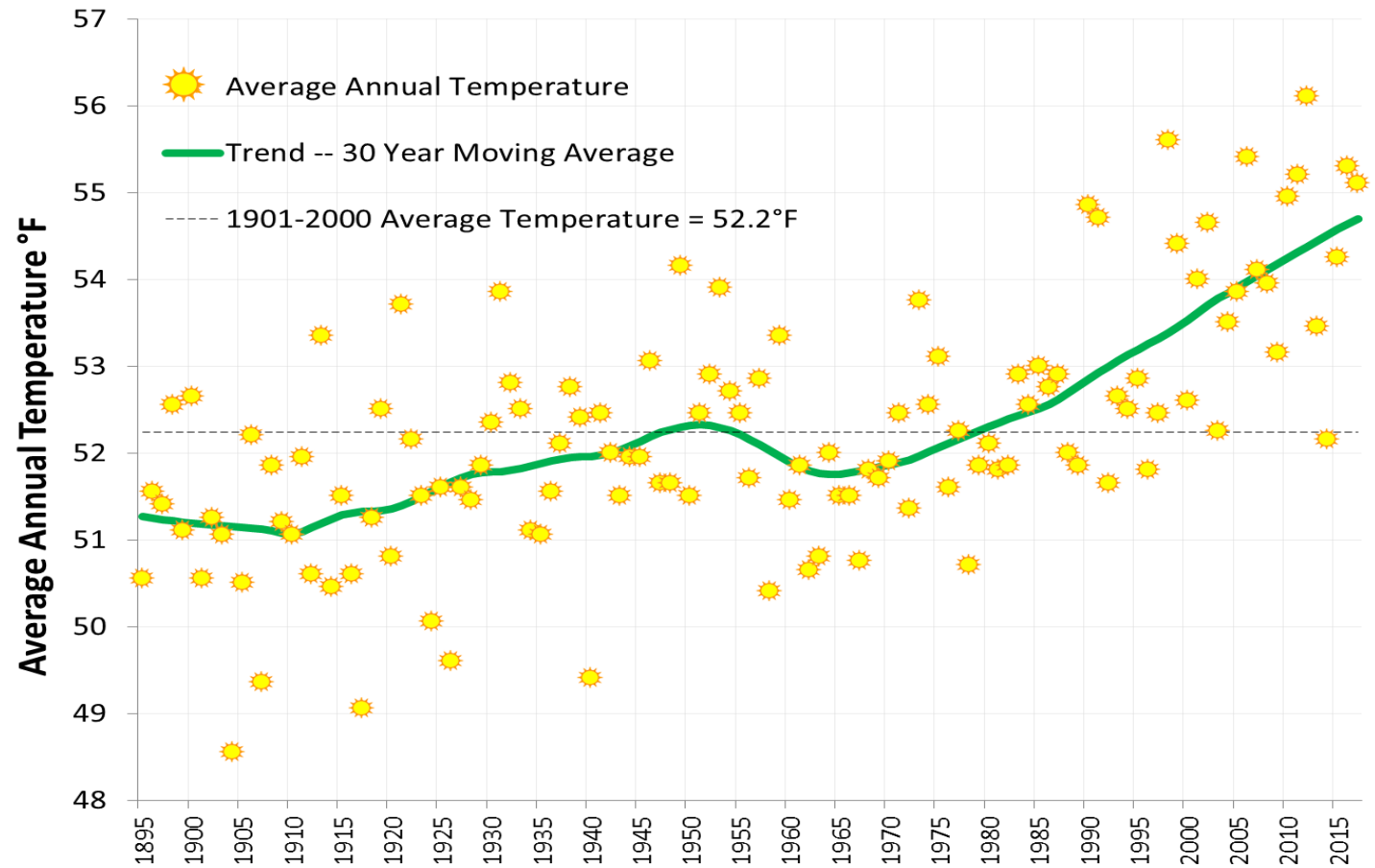




# Average Regional Temperature: 1895–2017

DVRPC data for Southeastern  
PA & Southern NJ. Data last  
accessed May 2018

Source: NOAA



**Source:** DVRPC chart using data accessed 24 May 2018 from [www.ncdc.noaa.gov/cag/](http://www.ncdc.noaa.gov/cag/). Data reflects the average of two regions: Southeastern PA (Climate Div.3) and Southern NJ (Climate Div.2).

# Our infrastructure wasn't made for today's hotter world.

**A sticky situation:** Our roadways, bridges and other critical transportation assets were built in—and *for*—a different era.

A 2017 *Nature* study found that 35% of our roadways were made with materials ill-suited to a changing climate, “significantly threaten[ing] pavement infrastructure” in the U.S.\*

\*Nature. Available at: <https://www.nature.com/articles/nclimate3390>



NYC's subways opened when Teddy Roosevelt was president.

**Neither were we.**

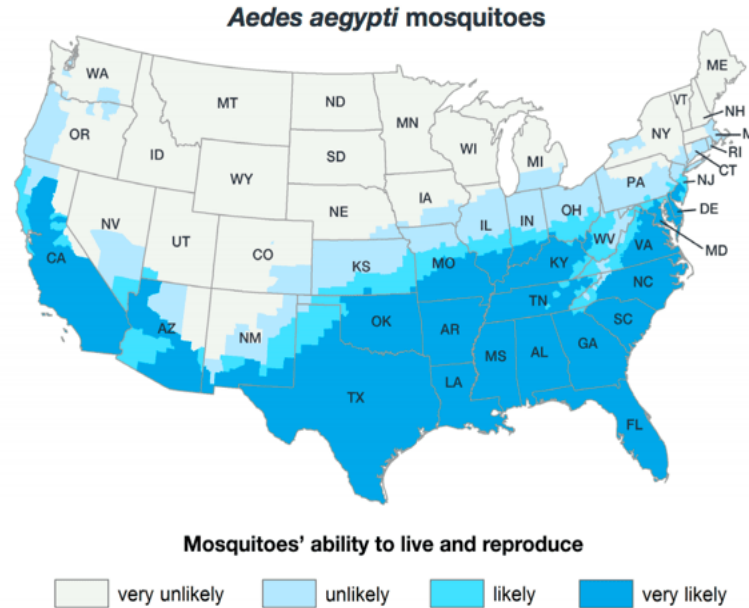
Our Interstate highway system dates to the Eisenhower years.

Photo credits: Left: bikebandit.com. Middle: AccuWeather.com. Right: GlobalChange.gov

# Rising temperatures = rising health threats !!

Local mosquitoes are now active longer, and the *Ae. aegypti* mosquito has expanded its range. This has the potential to bring pathogens like dengue and Zika to new parts of the country.\*

\*CDC. Available at: <https://www.cdc.gov/mosquitoes/mosquito-control/professionals/range.html>



Map: Centers for Disease Control and Prevention

Fossil-fuel-related warming and air pollution have led to an increase in heatstroke, allergies, asthma, stress-related illness and premature death.\*\*\* Small children, the elderly and outdoor workers are especially vulnerable.

\*\*\*CDC. Available at:

<https://www.cdc.gov/climateandhealth/effects/allergen.htm>

Ticks thrive in the warmer, wetter conditions of our changing climate.\*\* The tick-borne illness Lyme disease is especially prevalent in our area. Undiagnosed and untreated, it can cause major disability.

\*\* CDC. Available at: [https://www.cdc.gov/climateandhealth/pubs/VECTOR-BORNE-DISEASE-Final\\_508.pdf](https://www.cdc.gov/climateandhealth/pubs/VECTOR-BORNE-DISEASE-Final_508.pdf)



Photo: Emma Lee/WHYY



Photo: Erika Machtinger, Penn State University, College of Agricultural Sciences



# Not-So-Fun-Fact:

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Bucks County has already warmed 2 degrees Celsius—a widely accepted climate-change tipping point—*double the average for the lower 48 states.*\*

Here, as elsewhere, climate change is contributing to die-backs of common tree species.\*\*

\*Source: The Washington Post  
<https://www.washingtonpost.com/graphics/2019/national/climate-environment/climate-change-america/>

\*\*Source: UMass Extension  
<https://ag.umass.edu/landscape/fact-sheets/dieback-of-eastern-white-pine>



Distressed trees in Buckingham





But here in  
green,  
leafy,  
bucolic  
Bucks  
everything's okay!

(Right?)

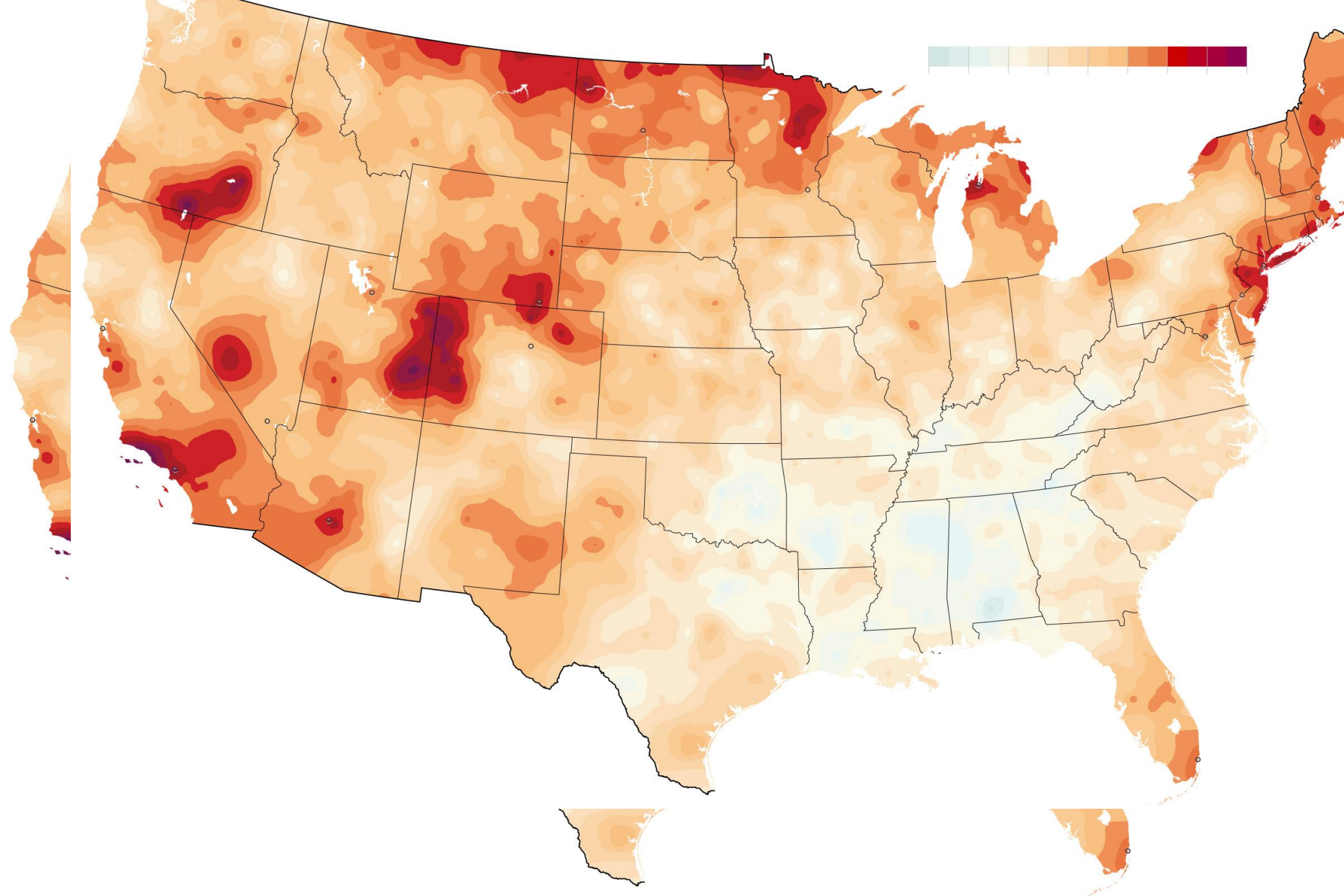
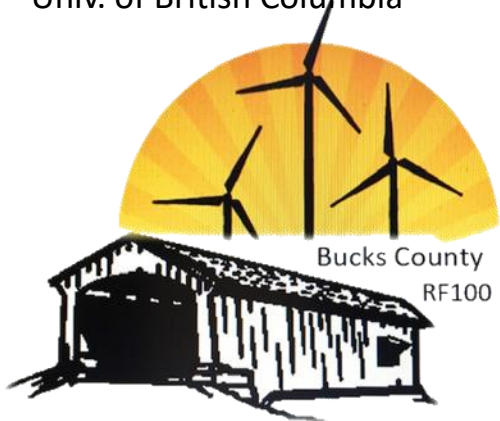
Watson Creek



Bucks County is one of  
**71 U.S. counties**,  
out of 3,107 in the  
lower 48 states, to  
have reached the +2°C  
threshold.\*

These hot spots are  
“chunks of the  
future in the  
present.”

--Daniel Pauly, PhD  
*Sea Around Us Project*  
Univ. of British Columbia



\*Source: National Oceanic and Atmospheric Administration (NOAA)

# This is NOT how we want to “lead.”



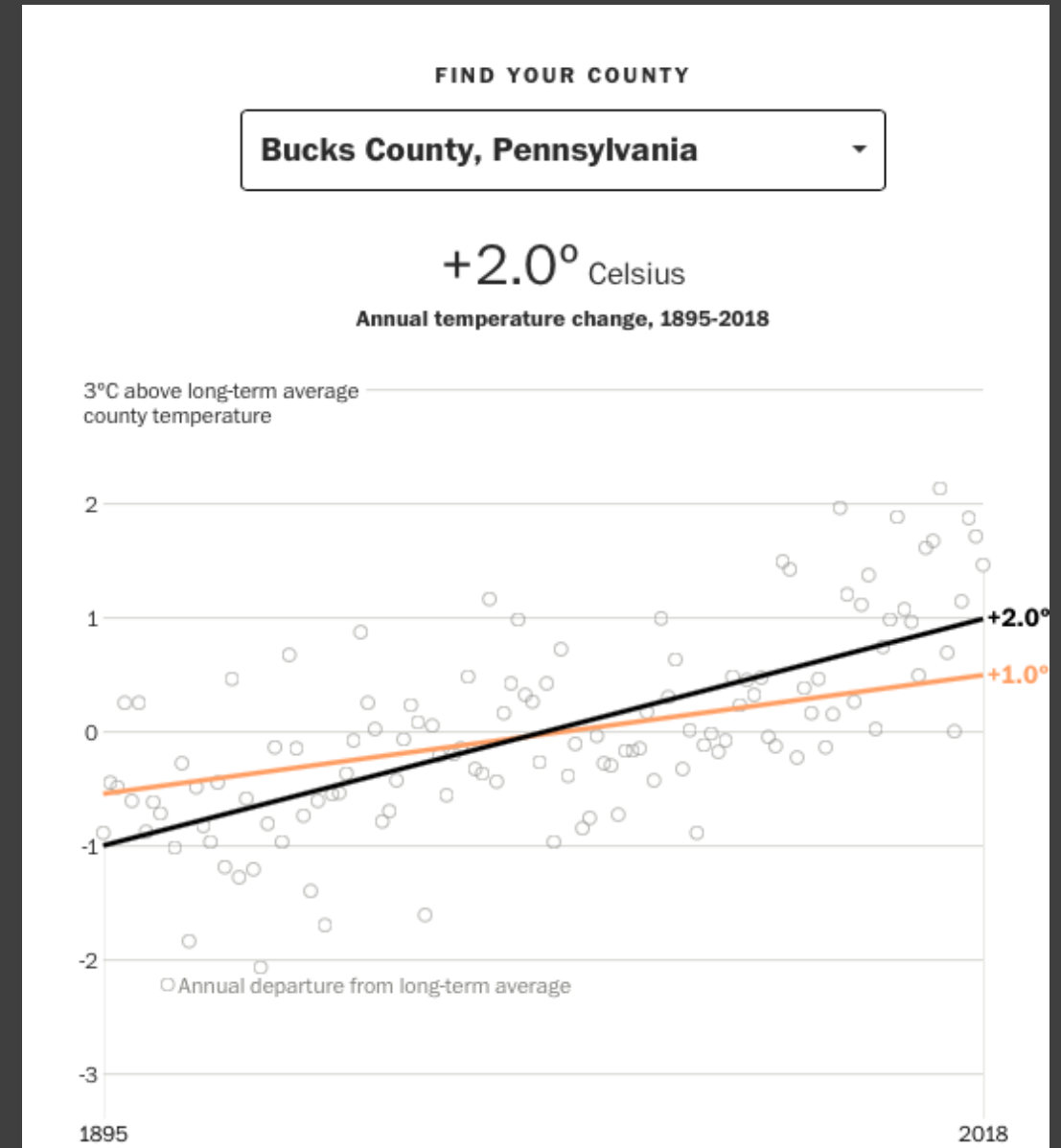
“[P]eople who live in 2-degree Celsius zones are discovering...that climate change seems remote or invisible, until all of a sudden it is inescapable.”

*2° C: Beyond the limit*

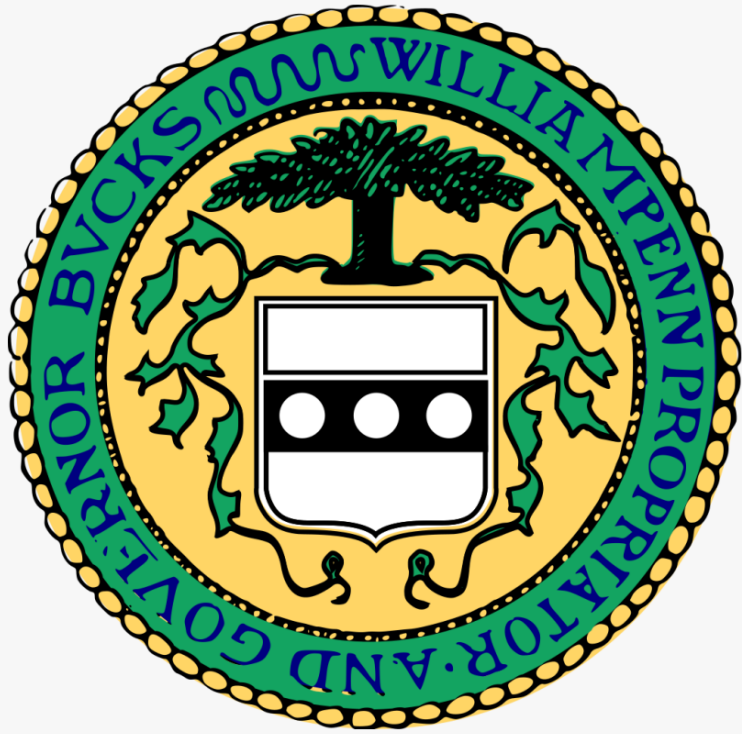
The Washington Post, Aug. 13, 2019

Black line: Average temperature increase in Bucks since consistent record-keeping began in 1895.

Orange line: Average rise in temperatures in the contiguous U.S. during the same period.







But Bucks—and  
[TOWNSHIP NAME TK]—  
can.

- [FACT ABOUT TOWNSHIP ENERGY USAGE TK]
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[DVRPC CHARTS AND DATA FOR TOWNSHIP NAME TK]



We all have a role to play in the fight against climate change.



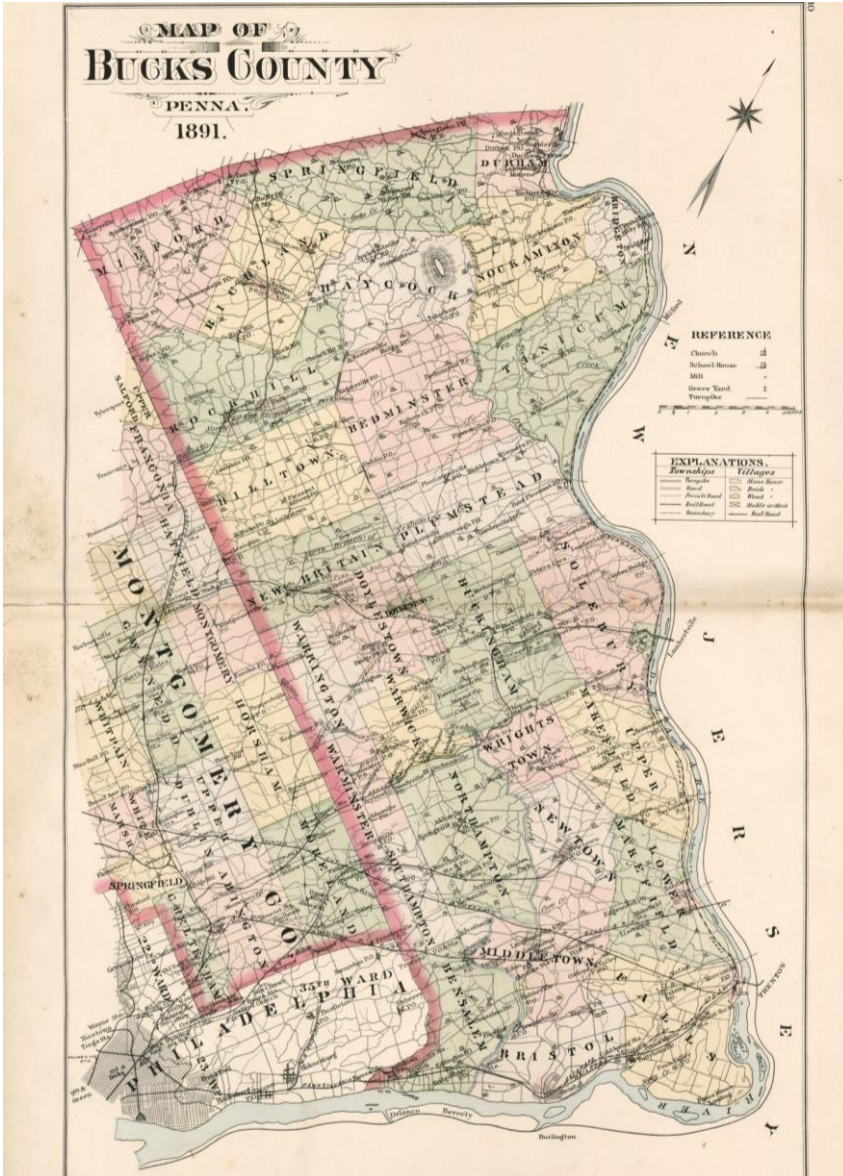
Residential use accounts for the highest energy expenditures and greenhouse gas (GHG) emissions of any sector.



In 2015, [TOWNSHIP NAME TK] emitted [NUMBER TK] metric tons of GHG from all sources.\*



\*Source: DVRPC. 2015 data.  
(Most recent available.)



Back when this map was new,  
people had few options about where to  
spend their energy dollars.

Energy was uniformly dirty &  
non-renewable. Often, it was  
harmful to one's health too.

Today, we have  
**CHOICES.**



This...

or

This.



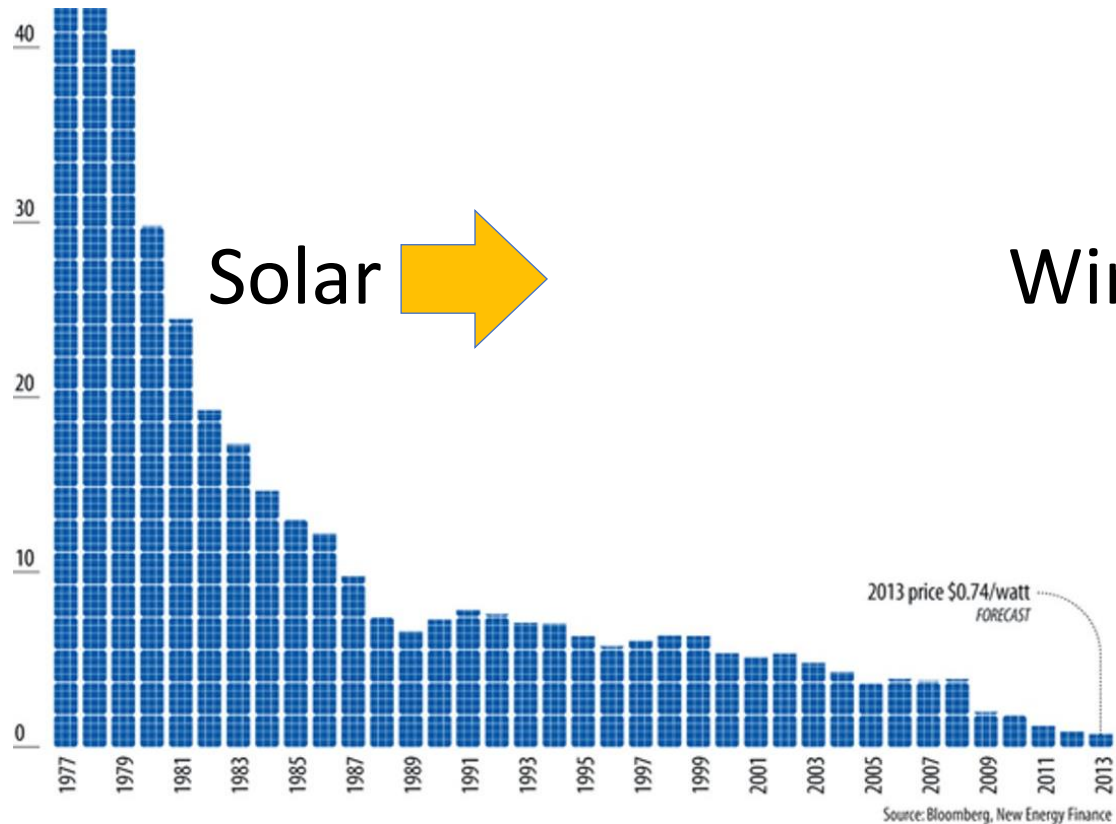
That is, continue pumping CO<sub>2</sub> into the atmosphere at current rates...

OR begin the transition to 100% clean, renewable energy.

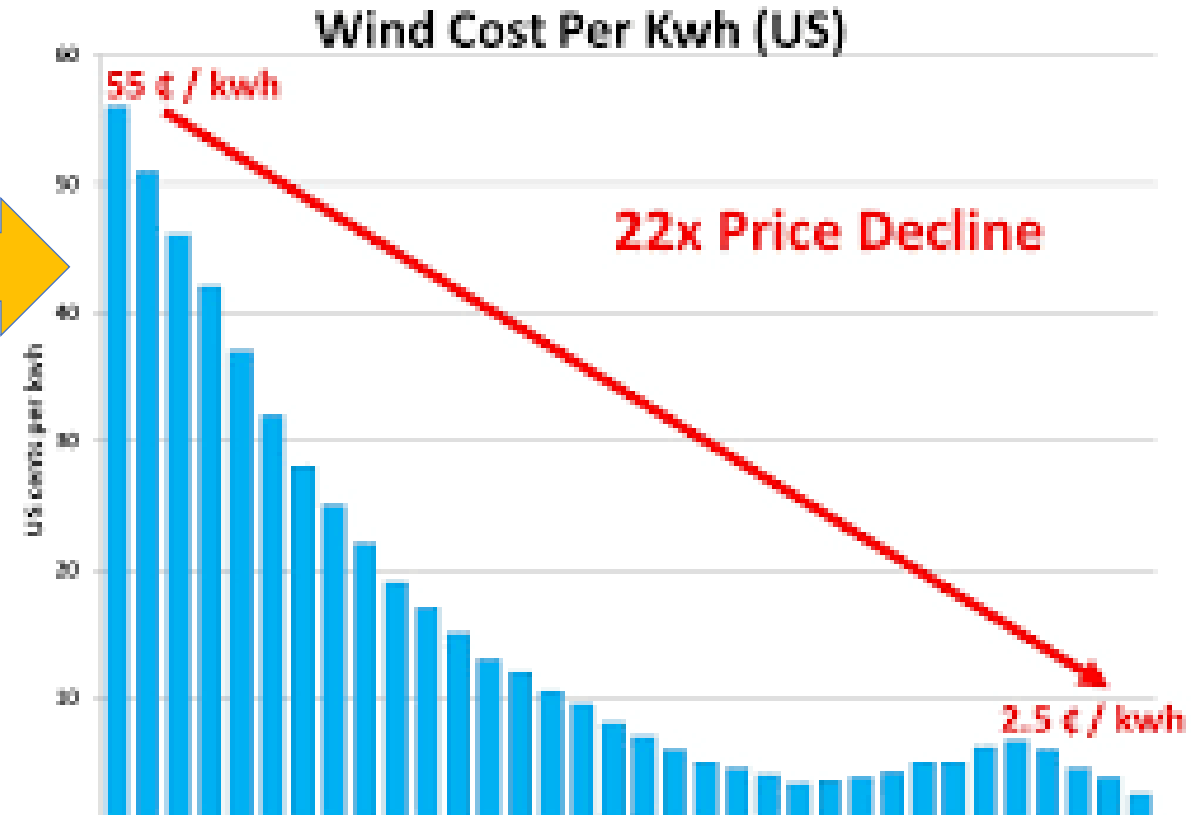


Our children,  
grandchildren  
& future  
generations  
are depending  
on us to make  
the right  
choices.

**Fortunately for them and for us,  
the price of clean, renewable energy keeps falling...**

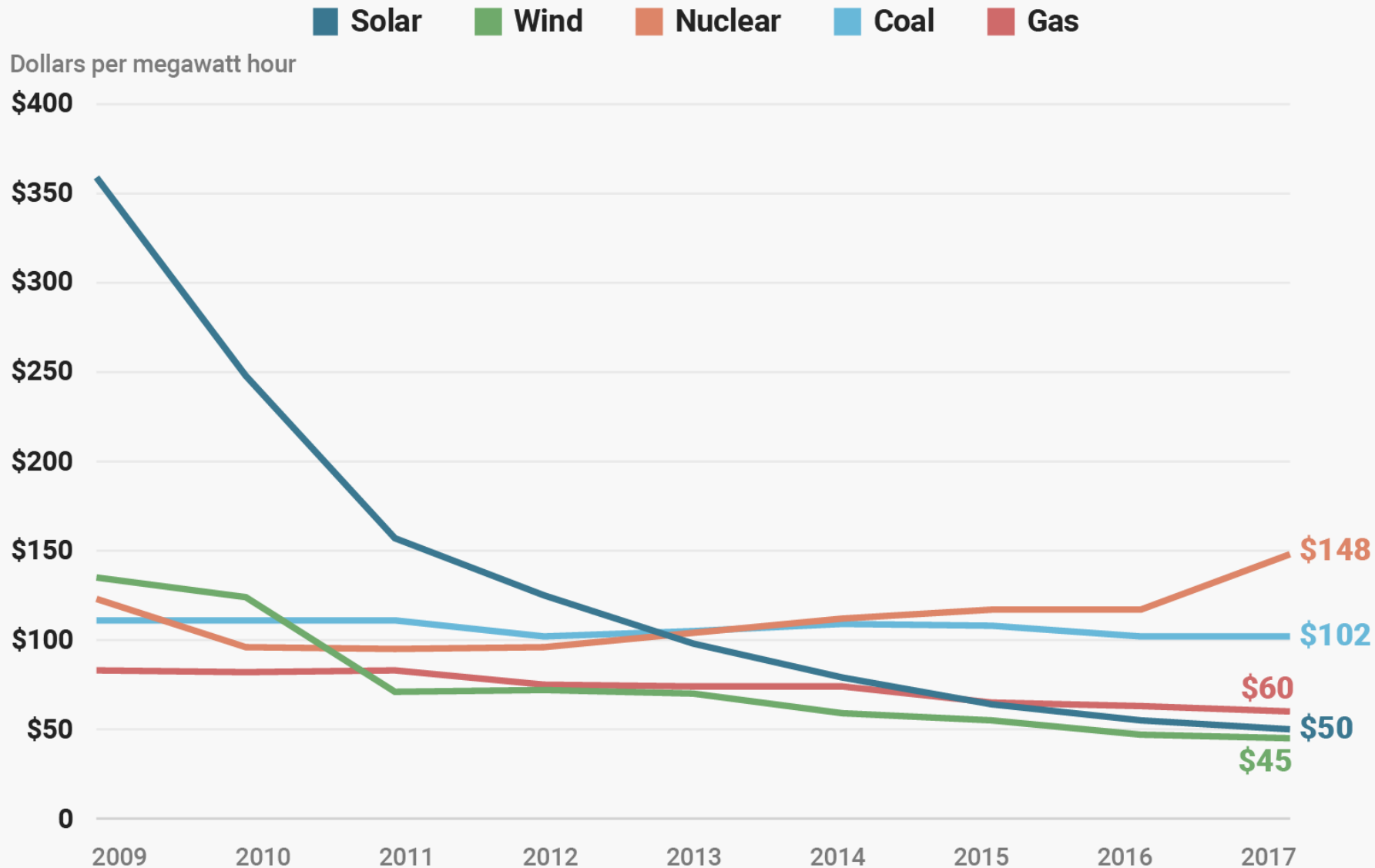


**Wind** →





# The average cost of energy in North America



***“[U]sing renewable energy is increasingly cost-effective compared to other sources, even when renewables must compete with the heavily-subsidized fossil fuel industry.”***

James Ellsmoor,  
“Renewable energy is now the cheapest option,” *Forbes*,  
June 15, 2019

Meanwhile, the cost of fossil  
fuels has become all too clear,



in more ways than one.



We can do better.



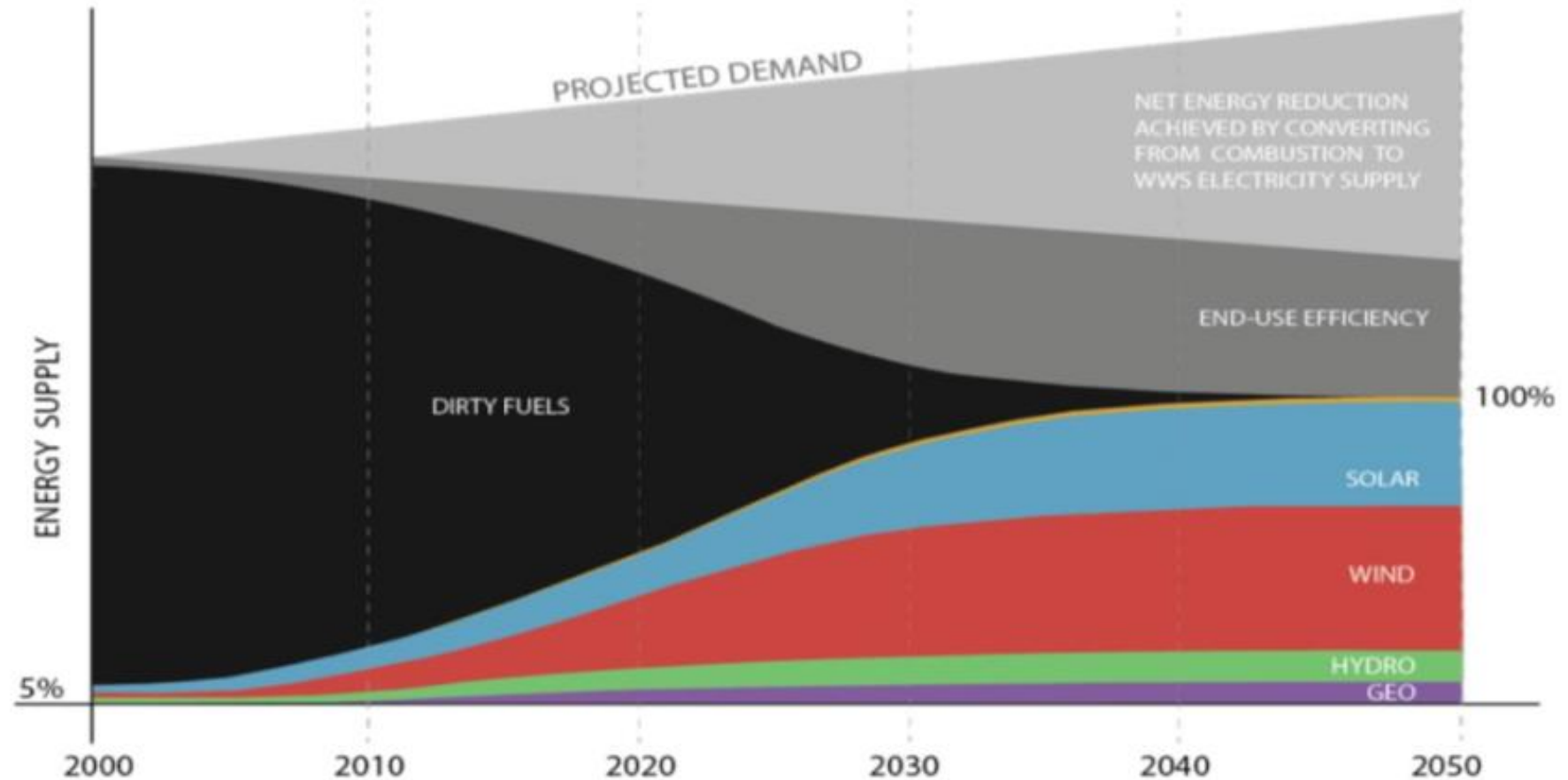
Getting to  
“net zero”  
won’t happen  
overnight.

But we can get there  
if we all work  
together.

Which is what RF100  
is all about.



## Energy Use Goal - 100% Renewable





# 1 *in* 4

people in America now  
live in a community  
committed to a  
transition to 100%  
clean, renewable energy

A map of the United States with state boundaries outlined in blue. Several states are highlighted in yellow: Washington, Oregon, California, Nevada, Arizona, New Mexico, New York, and Vermont. Numerous small yellow dots are scattered across the map, representing communities committed to a 100% clean, renewable energy transition. The dots are more densely clustered in the highlighted states and along the West Coast.

> 150 communities across the U.S.

## So, who is already “Ready for 100”?

[LEARN MORE](#)

# See who has committed in neighboring counties:

- Ambler Borough
- Bethlehem
- Downingtown
- Haverford
- Kennett TWP
- Narberth
- Norristown
- Plymouth TWP
- Philadelphia
- Phoenixville
- Radnor
- Reading
- Springfield TWP
- Upper Merion
- West Chester Area COG
- Whitemarsh TWP
- ...and counting!

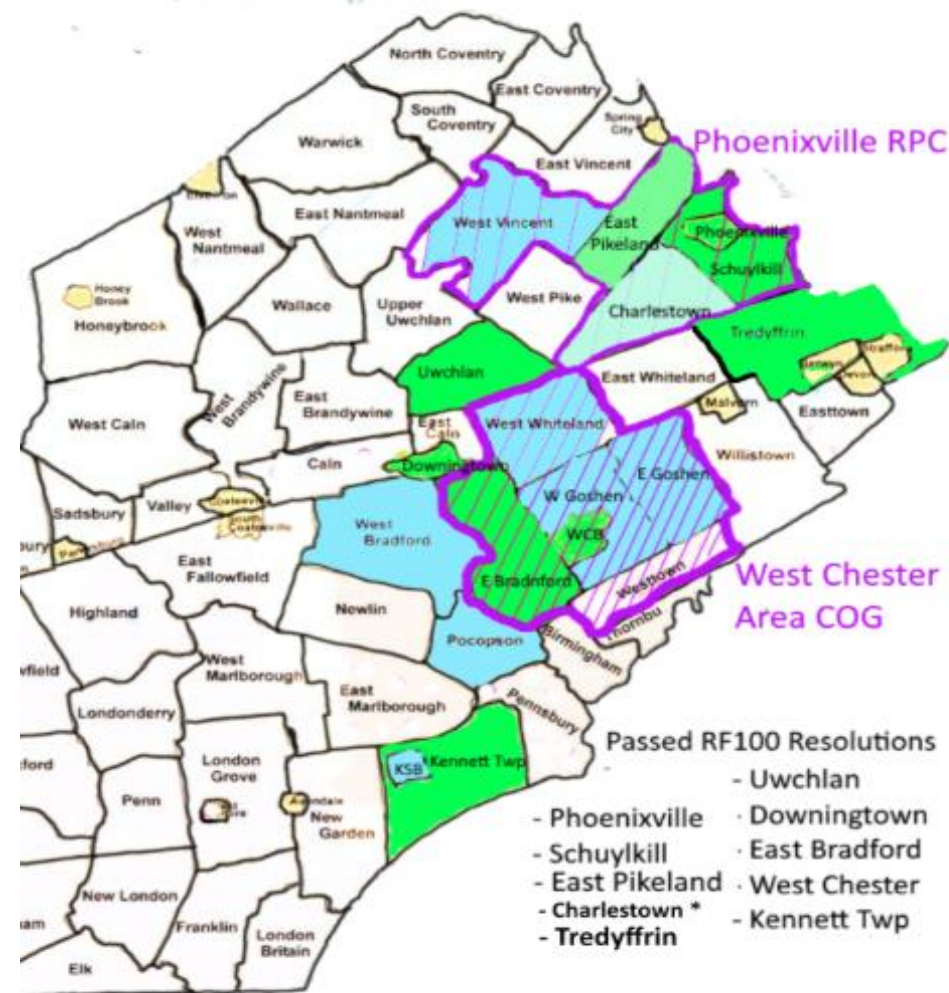


# Collaboration is key.

Across the U.S., RF100 communities are coming together to share ideas, lower costs and realize efficiencies on their way to 100% clean, renewable energy.

In SE Pennsylvania, the West Chester Area Council of Governments (COG) is a model.

## Chester County



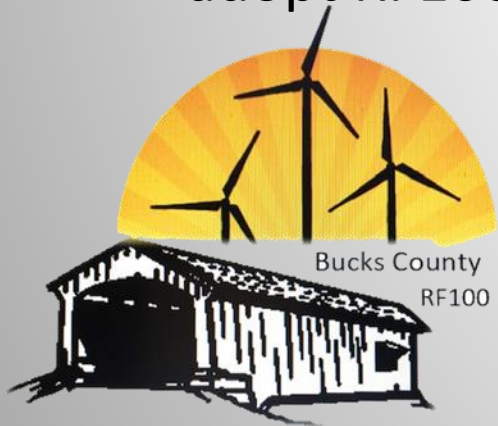


# Meanwhile, here in Bucks...

- Buckingham followed Doylestown Township and Solebury to unanimously approve RF100 (October 2020)
- Bucks County passed its own RF100 resolution (February 2021)
- And other Bucks municipalities are considering or working to adopt RF100/clean-energy commitments



APPROVED!



*To join the RF100-Bucks working group or for more information, go to <https://groups.google.com/g/ready-for-100-bucks-pa?pli=1> or contact Andrea Strout at [alstrout\\_2000@yahoo.com](mailto:alstrout_2000@yahoo.com).*

# Next steps for [TOWNSHIP NAME TK]

- Commit to goals and principles of RF100 via resolution
- Work with other township officials, neighboring municipalities and the county to educate and build support
- Get input, perspective and buy-in from residents, businesses and other stakeholders
- Develop energy transition plan and timeline
- Work the plan

[TOWNSHIP SEAL TK]



# To summarize...

## Set Goals



**RF100 Resolution: community-wide renewable energy by\_\_\_\_\_.**

## Make a Plan

**Energy Transition Plan: open and inclusive of all stakeholders.**

## Take Action



**Get it done: municipal policies, community engagement, business leadership.**



**For their generous assistance,  
collaboration & inspiration,  
we say thanks to**

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- [INDIVIDUAL/ORGANIZATION NAMES TK]
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- Ready for 100-Bucks &
- Sierra Club, SE Pennsylvania Chapter

