

Ready for 100 Resolution



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On behalf of Cheltenham EAC

March 6, 2019

We are the first generation to feel the sting of climate change, and we are the last generation that can do something about it.

--Jay Inslee, Governor of Washington

Green Text with Underscore is a hyperlink to source document. To follow the link, CTL+left click.



What (Slide 3)



Why (Slides 4 to 7)



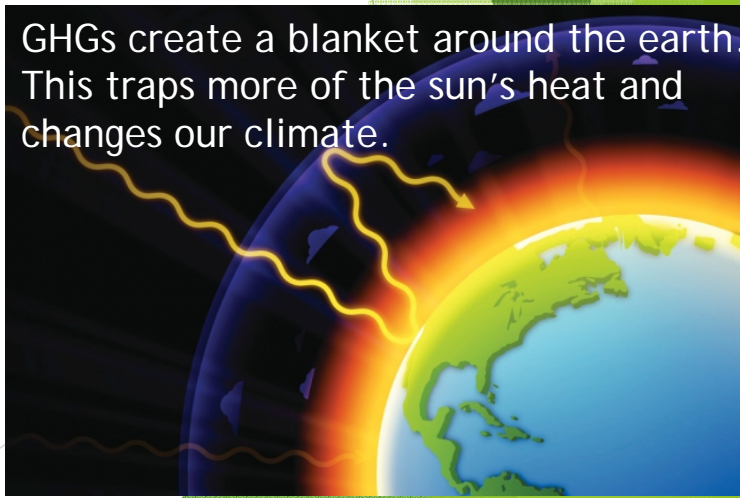
How (Slides 8 to 11)

What: Ready for 100 Resolution

- ▶ Commit to transition Cheltenham to 100% renewable electricity by 2030 and 100% renewable energy across all sectors by 2050
- ▶ Includes:
 - ▶ Public and private
 - ▶ Fixed (eg, buildings) and transportation
- ▶ Renewable energy is defined as non-fossil fuel
- ▶ This resolution is NOT...A specific, set path towards 100% renewable energy that will cost money we don't have.
- ▶ This resolution is...a GOAL
 - ▶ Will allow development of a transition plan which can facilitate adoption of technology as it becomes available and affordable
 - ▶ Given our fiscal situation, EAC recognizes the transition to renewable energy should be cost neutral
 - ▶ Will guide Township decisions involving buildings, vehicles and energy suppliers
 - ▶ Will guide Township planning regarding transportation infrastructure and land use
 - ▶ Will guide Township zoning codes in regards to energy efficiency
- ▶ To be successful
 - ▶ We must also conserve energy through efficiency
 - ▶ Electrify vehicles and heating systems

Why: To Reduce Greenhouse Gas (GHG) Emissions

- ▶ To avoid the worst effects of climate change, we have 12 years to take strong action towards cutting GHGs ([UN IPCC report](#))
 - ▶ Americans need to cut GHGs by 83% to stop climate change
 - ▶ Burning fossil fuels contributes 80% of GHG emissions
- ▶ Governor Wolf has set goal of 26% reduction in GHG by 2025 and 80% by 2050 (compared to 2005 levels) by [executive order](#)
- ▶ Cheltenham has resolved to up-hold the Paris Accords and our Sustainability Plan both of which require transition to renewable energy to cut GHGs
- ▶ Ready for 100 is a national [program](#) from Sierra Club which supports municipalities in transitioning to renewable energy
- ▶ By end of 2018, 100 cities, 11 counties and 2 states have passed 100% renewable energy resolutions
 - ▶ Philadelphia and Pittsburgh are IN
 - ▶ Phoenixville, West Chester, Downingtown, Radnor, Springfield Twp among others are IN
 - ▶ Considering: Abington, Ambler, Lansdale, Lower Merion Township, Narberth, Plymouth Township, Whitemarsh Township, and others



GHGs create a blanket around the earth. This traps more of the sun's heat and changes our climate.

Why: Climate Change will hurt everyone in Cheltenham (and beyond)

- ▶ Hurts public health (esp. in vulnerable populations)
 - ▶ ↑ asthma + deaths due to fossil fuel air pollution
 - ▶ ↑ pollen and allergies
 - ▶ ↑ insect-borne disease
 - ▶ ↑ heat-related deaths
- ▶ Hurts infrastructure
 - ▶ ↑ intense rain events projected for Philadelphia region
 - ▶ ↑ in strong storms (eg, Nor'easter)
 - ▶ ↑ Heat-related damage to roads
 - ▶ ↑ cooling costs due to number of days >100 in Philadelphia
- ▶ Leads to geopolitical instability and food shortages
 - ▶ Staple crop yields ↓
 - ▶ Arable land ↓
 - ▶ Massive number of climate refugees



Montgomery County Gets 'F' Air Quality Grade In New Study

The American Lung Association released its "State of the Air 2018" report and gave Montgomery County an 'F' grade for ozone pollution.

Report: Philly is third-worst place in U.S. for asthma sufferers

Pennsylvania Leads Country With Highest Number Of Lyme Disease Cases



A chocapocalypse could be upon us.

Scientists are predicting that chocolate may become nearly impossible to grow in the coming years due to hotter temperatures and less rain in climates where cacao plants are raised. Researchers estimate that by 2050, chocolate lovers will have to find an alternative sweet to satisfy their cravings, according to the National Oceanic and Atmospheric Administration.

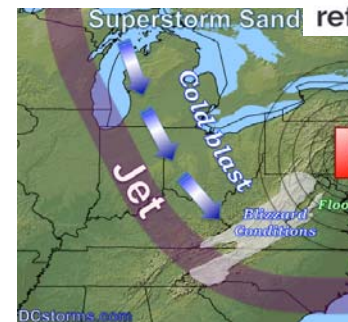


Beer Prices Could Double Because Of Climate Change, Study Says

October 16, 2018 - 12:17 PM ET

Climate Change

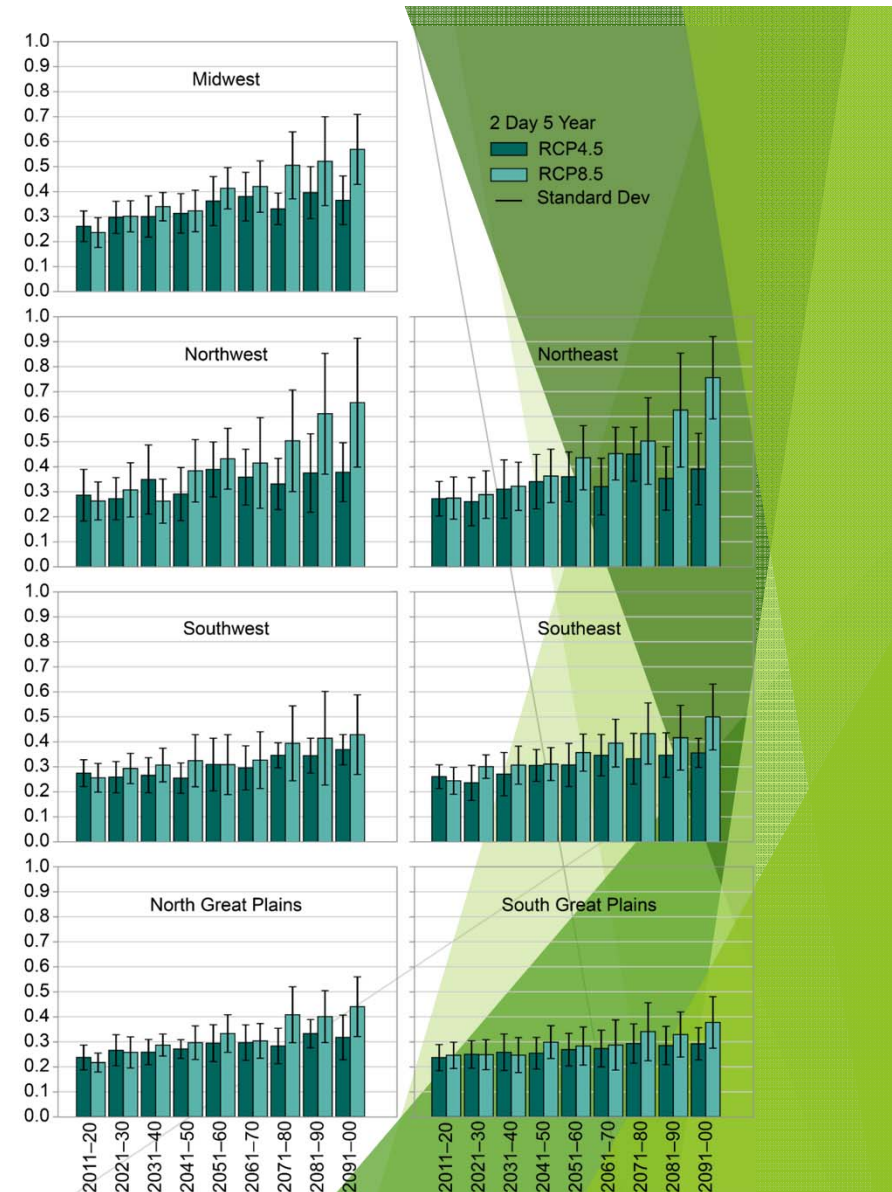
Climate change is contributing to the migration of Central American refugees



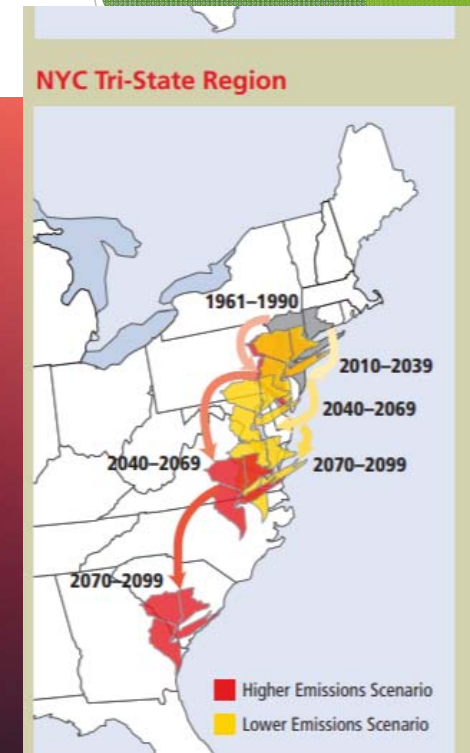
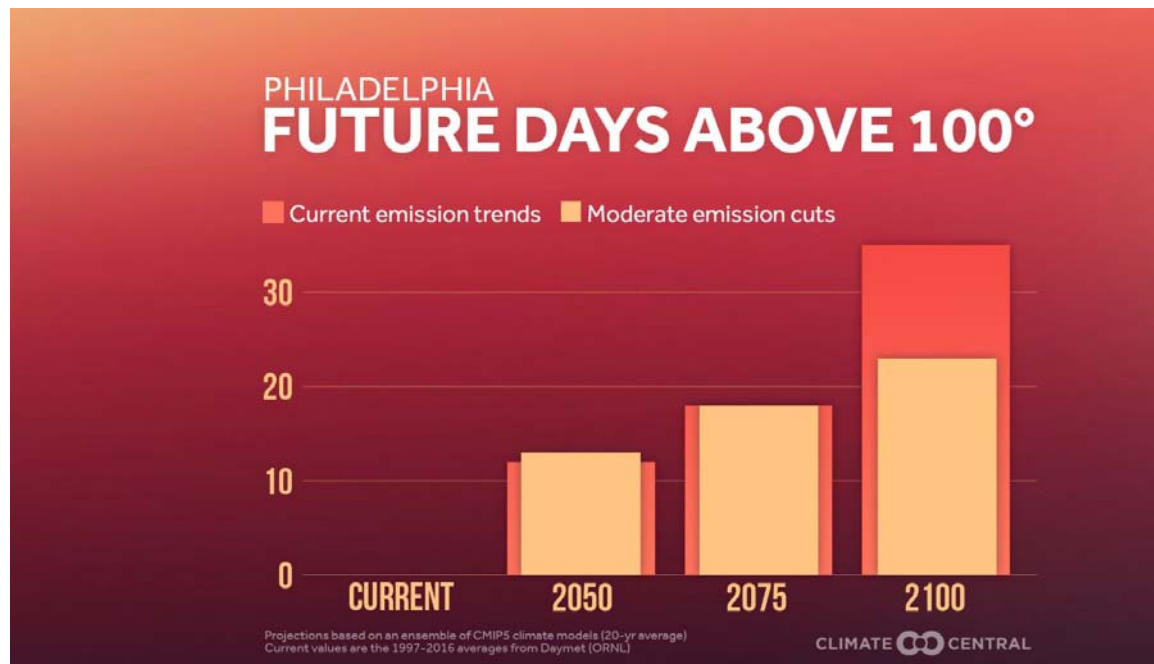
Why: Extreme Rain Events Have Increased and Will Get Worse

- ▶ Northeast has seen a 20% increase in extreme 2 day rain events since ~1900 (<https://science2017.globalchange.gov/chapter/7/>)
- ▶ Our choices today can make a difference
- ▶ By 2100:
 - ▶ If we don't cut carbon emissions (RCP8.5) this goes up to an 80% increase
 - ▶ If we do cut carbon emissions (RCP4.5), we keep the increase to 40%
- ▶ See PBS NOVA documentary on extreme weather: <https://video.why.org/video/decoding-the-weather-machine-vqghot/>

Note: 2 Day 5 Year means that the odds of a certain amount of rain in 2 days is historically 1/20 for any given year.



Why: Days Above 100°F Will Increase



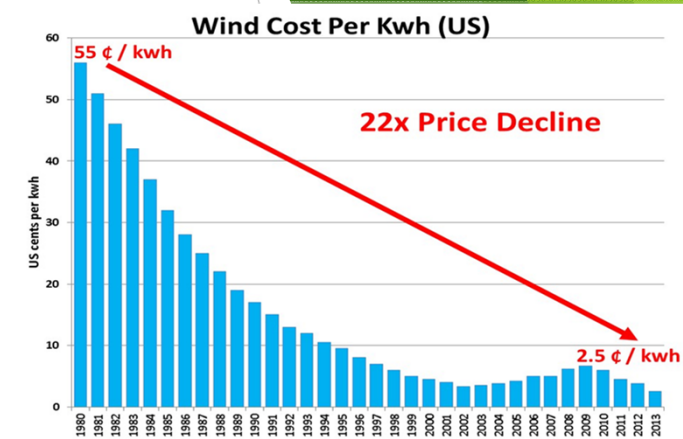
- ▶ The choices we make today to cut GHGs can make a big difference for our kids and grandkids.
 - ▶ No GHG cuts: 35 days >100, feels like Georgia
 - ▶ Moderate GHG cuts: 22 days >100, feels like southern Virginia
[See report.](#)

Why: Climate Change is going to be very, very expensive

- ▶ *"Left unchecked, climate change affects our health, infrastructure and the outdoors we love. But more importantly the report shows that global action on climate change will save lives."* —[Gina McCarthy, former EPA head](#)
- ▶ Business as usual (no change to GHG emissions) will cost the US per year by 2100 ([EPA analysis](#)):
 - ▶ 57000 extra deaths due to air pollution
 - ▶ 12000 extra deaths due to heat exposure
 - ▶ \$11,000,000,000 in crop damage
 - ▶ \$10s of Billions in extreme weather damage, costs born largely by local governments
- ▶ Moderate climate change projected to cost [Montgomery County](#) 1.9% of GDP by 2100
 - ▶ ↓ 38.1% in agriculture (food prices will soar)
 - ▶ ↑ 9.6% in energy use (cost of cooling for Township will increase)
 - ▶ ↑ 0.9% property crime and 3.1% for violent crime (increase in police costs and decreased quality of life)
 - ▶ ↑ 8.3 deaths per 100,000 (3 Cheltenham residents will die who wouldn't otherwise)

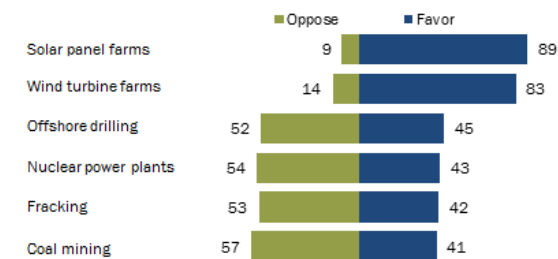
How: Set a GOAL, then make a PLAN (ie, this won't happen tomorrow)

- ▶ Cost of renewable energy is dropping rapidly to become comparable to fossil fuels
 - ▶ Philadelphia signed Power Purchase Agreement (PPA)—commit to long term contract with an energy supplier who is building a solar farm (*No cost to Philadelphia, cost/kW comparable to what they currently pay*)
- ▶ New technology like electric vehicles, more efficient solar panels, etc developing rapidly
- ▶ Public support of renewables is high (76% of Philadelphia area residents favor 100% renewable energy)
 - ▶ State and Federal policy changes can help enable the transition
 - ▶ Private investment is already enabling the transition
 - ▶ Cheltenham's commitment to GHG reduction policies (eg, Carbon Tax and Dividend (HR763), Ready for 100) will add to the public support for state/federal progress
- ▶ With a GOAL then a PLAN, Cheltenham can be ready to take advantage of these changes to move to 100% renewables



Strong public support for expanding wind, solar power

% of U.S. adults who say they favor or oppose expanding each energy source



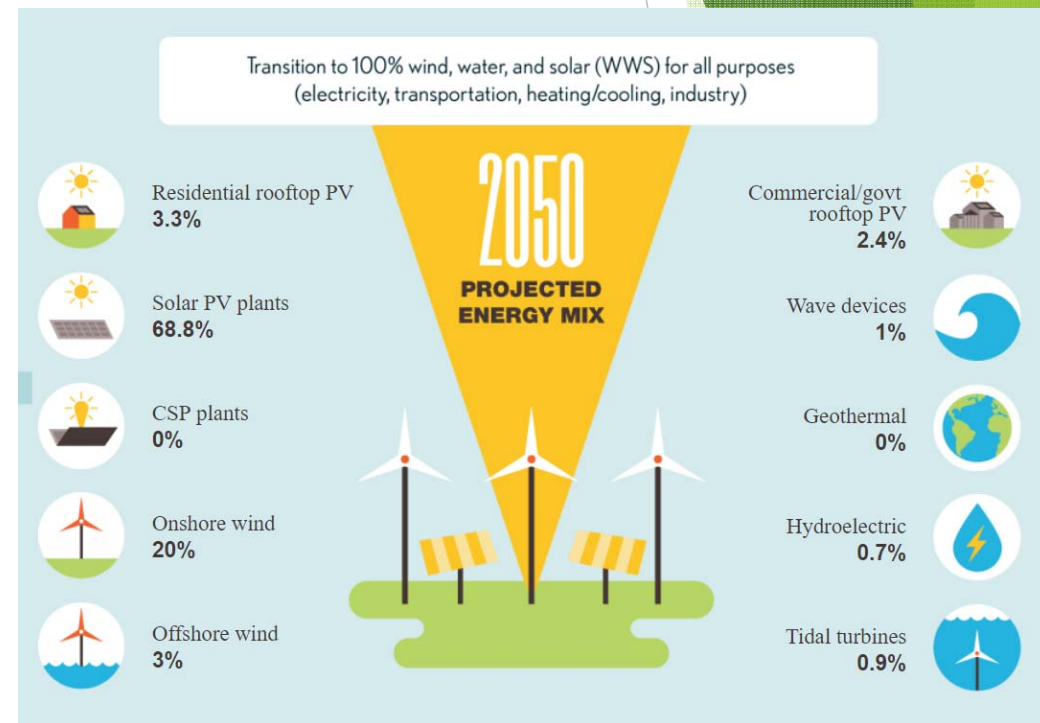
Note: Respondents who did not answer are not shown.
Source: Survey conducted May 10-June 6, 2016.
"The Politics of Climate"

PEW RESEARCH CENTER

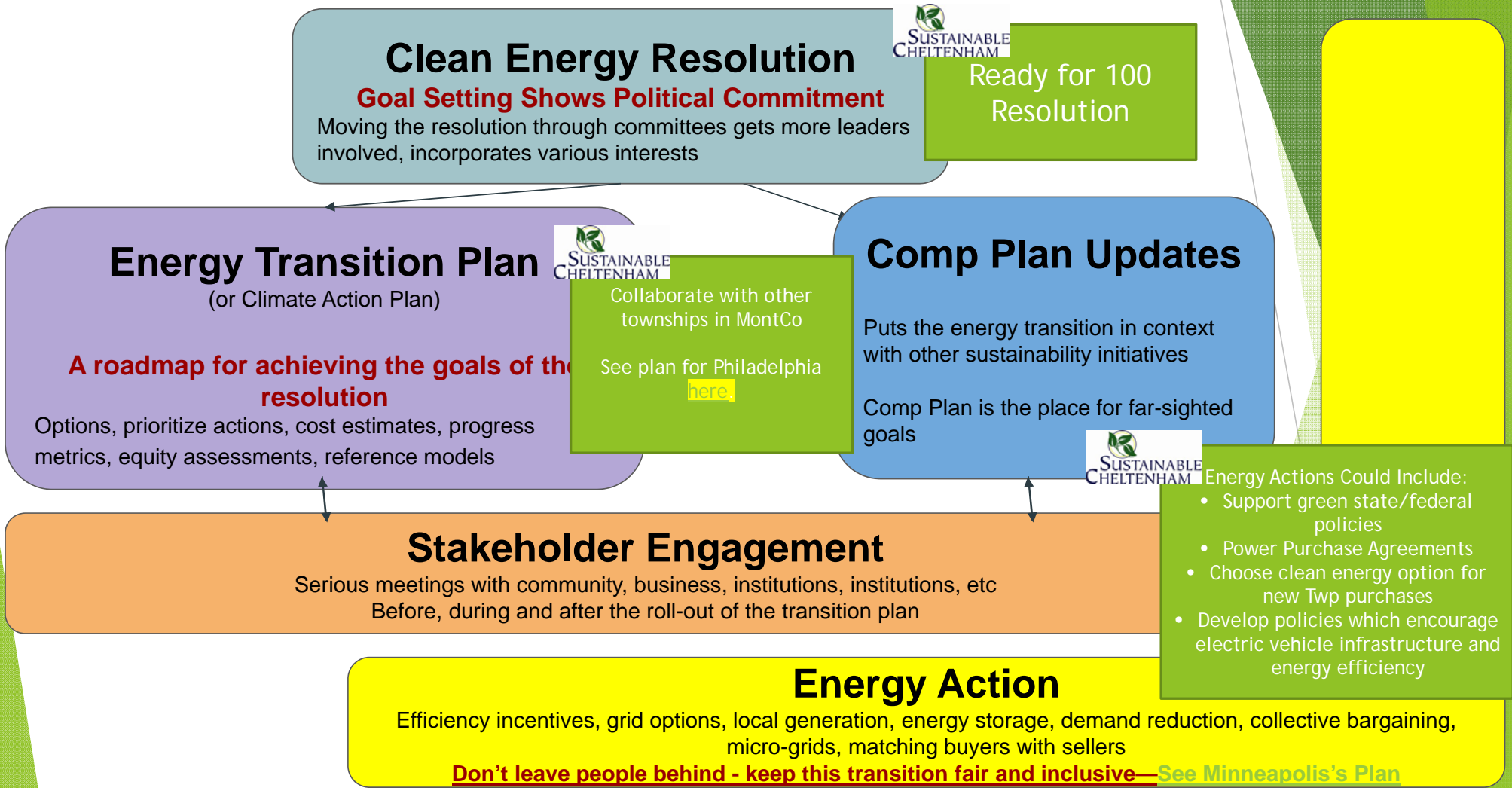
How: What 100% Renewable Energy Looks Like for PA (Solutions Project)

- ▶ Air pollution deaths avoided: 3065/year
- ▶ Avoided health costs: \$21.6B (2% of GDP)
- ▶ New jobs created: 387,124 (number of jobs where a person is employed for 40 years)
- ▶ Energy Cost 2050:
 - ▶ Business as usual: \$0.111/kWh
 - ▶ 100% Renewable: \$0.098/kWh
- ▶ Savings (energy, health, climate cost) 2050: \$12,866/person

Visit the [Solutions Project](#).



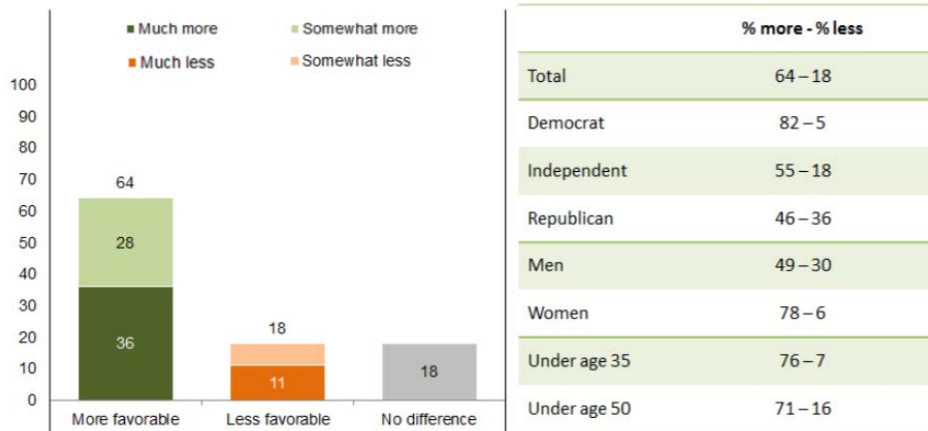
How: Sierra Club's 5 Steps (for Cheltenham)



Strong Public Support Statewide: Sierra Club Commissioned GQR Survey in Pennsylvania

Figure 2: Voters feel more favorable toward elected official supporting clean energy

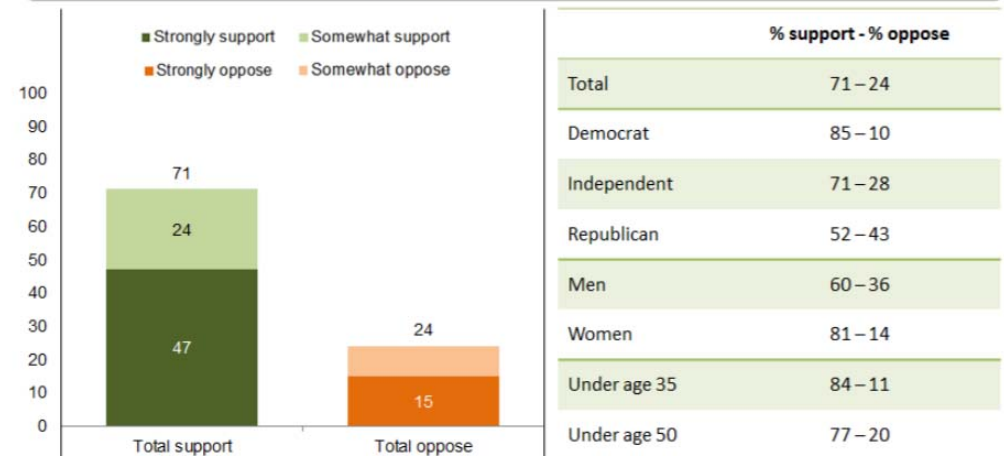
If you knew that one of your local elected officials supported the goal of generating 100% of Pennsylvania's electricity using clean, renewable energy sources, would you be more or less favorable toward that official, or would it make no difference?



Just over half of voters are optimistic about Pennsylvania's ability to meet this goal, with 53 percent saying they believe this goal is realistic. This belief is higher among voters of color (61 percent), voters under 35 (63 percent) and Democratic women (73 percent). Hearing that over 50 cities across the country have already adopted this goal, including 3 in their own state, motivates some voters, as the share saying this goal is realistic grows to 61 percent.

Figure 1: Broad support for setting goal of 100% renewable energy by 2030

Some people have proposed that Pennsylvania should set the goal of generating 100% of its electricity using clean, renewable energy sources like wind and solar by 2030. Does that sound like something you would support or oppose?



¹ On behalf of the Sierra Club, GQR conducted a survey among 500 registered voters in Pennsylvania from December 13–17, 2017 using live interviewers. Thirty-one percent of interviews were conducted on cell phones. The data are subject to a margin of error of +/- 4.4 percentage points at the 95 percent confidence interval. Margin of error is higher among subgroups.

[See survey results.](#) Support is even higher in Philadelphia area.