

DELAWARE'S

Climate Action Plan

Public Workshop Summary Round 1: March 2020



This report was prepared by Kim Lundgren Associates, Inc. (KLA) on behalf of the Delaware Department of Natural Resources and Environmental Control.

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OVERVIEW

Over the course of 2020, the State of Delaware will be working to put together the state's first comprehensive Climate Action Plan. The Plan will outline how the State will drive reductions of the greenhouse gas emissions that cause climate change and better prepare Delaware for its many impacts, from increasing temperatures to sunny day flooding and sea level rise. Developed hand-in-hand with residents, business leaders, and local governments, the Plan will contain strategies that fit the unique needs and desires of Delaware's constituents.

As part of the Climate Action Plan development process, the State of Delaware, through the Department of Natural Resources and Environmental Control (DNREC) Division of Climate, Coastal, & Energy (DCCE), is engaging a wide range of audiences to share their ideas and priorities as it relates to climate change and the opportunities and barriers to climate action. As part of this engagement effort, DNREC hosted a series of three public workshops in March 2020 to learn of Delawareans' experience with climate impacts and to gather input on how the State can best address the causes and consequences of climate change in the areas of energy, transportation, and resilience.

The workshops were held on consecutive nights (March 3-5), with one workshop in each of the three counties:

TUESDAY, MARCH 3

4:30 — 7:30 p.m.

CHEER Community Center
20520 Sand Hill Road
Georgetown, DE

WEDNESDAY, MARCH 4

4:30 — 7:30 p.m.

Wilmington Public Library
10 East 10th Street
Wilmington, DE

THURSDAY, MARCH 5

4:30 — 7:30 p.m.

Del Tech Del-One Conference Center
100 Campus Drive
Dover, DE

Over 250 Delawareans participated in the workshops.

A key objective of these workshops was to educate the Delaware community about climate change and the opportunities for them to be a part of the solution and support state level policies. As such, the workshops were carefully crafted to allow Delawareans to familiarize themselves with the connections between the causes and consequences of climate change; such a design was intended to help workshop participants provide more informed and directed thoughts on the state's ability to implement climate action.

The State of Delaware is committed to using feedback from the public workshops to inform the final Climate Action Plan. This report summarizes the feedback from all three nights.



A full house at the Wilmington Public Library.

BY THE NUMBERS

People signed in, by location	256 people (76 Sussex, 118 New Castle, 62 Kent)
Total number of climate action ideas provided by participants	870 solutions
Total number of ideas/concerns about the causes and consequences of climate change	315 ideas
Total video stories shared	33 stories
Location-specific "Social Pinpoint" comments	65 comments

THE APPROACH

Each workshop consisted of two components: (1) an open house-style session with information booths, and (2) facilitated discussions in small breakout groups. The workshop followed the below agenda.

AGENDA

4:30 - 5:30 pm	Open House and Networking
5:30 - 5:45 pm	Welcome & Introduction
5:45 - 5:50 pm	Opening Polling
5:50 - 6:00 pm	Overview Presentation
6:00 - 7:10 pm	Small Breakout Groups
7:10 - 7:15 pm	Closing Polling
7:15 - 7:30 pm	Wrap-Up

Materials used in both the open house and discussion group portions of the workshop can be found in Appendix 3.

Part 1: Open House

The first hour of the workshop provided opportunities for participants to explore interactive stations with information on the causes and consequences of climate change, specifically in Delaware. Below are descriptions of the open house stations and a summary of the results.

Climate Change 101 Boards

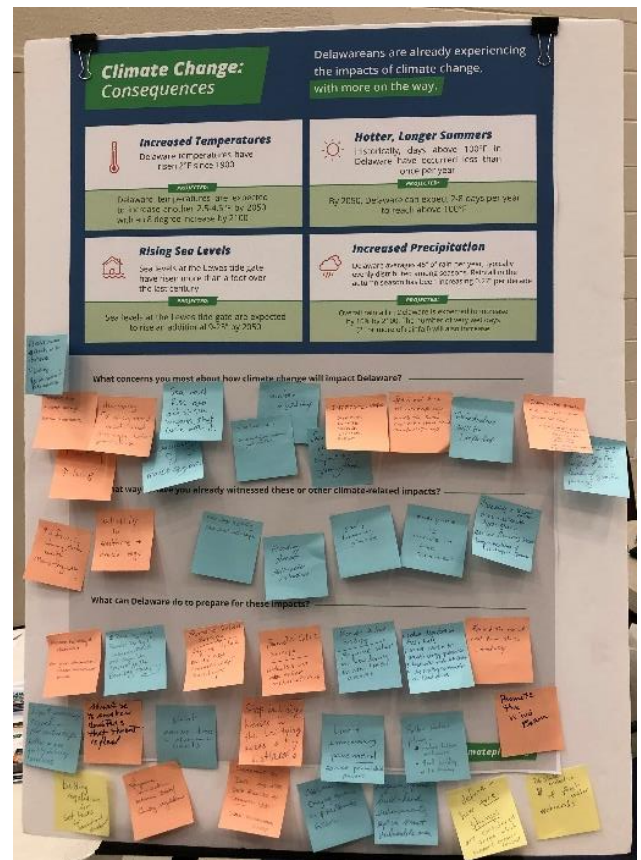
Each workshop featured two interactive posters intended to educate participants on the causes and consequences of climate change, collect data about participants' experience with climate impacts, and generate ideas for climate action. All comments provided on the Climate Change 101 Boards can be found in Appendix 4.

Visitors to the Climate Change Consequences Board reported concerns about a variety of climate impacts:

- **Sea level rise** was the most frequently cited impact.
- Participants expressed concern over **coastal flooding** and **beach erosion**.
- Delawareans are also experiencing longer **heat waves**, more **intense storms**, and **less predictable weather**.
- Participants noted concern for **biodiversity and habitat loss**.
- When asked how to better prepare for these impacts, popular responses included **restricting development in coastal areas**, incorporating **green infrastructure** solutions, **protecting wetlands**, expanding the **tree canopy**, and transitioning to **renewable energy**.

Visitors to the Climate Change Causes Board provided ideas for how to reduce greenhouse gas emissions at both the individual and state levels:

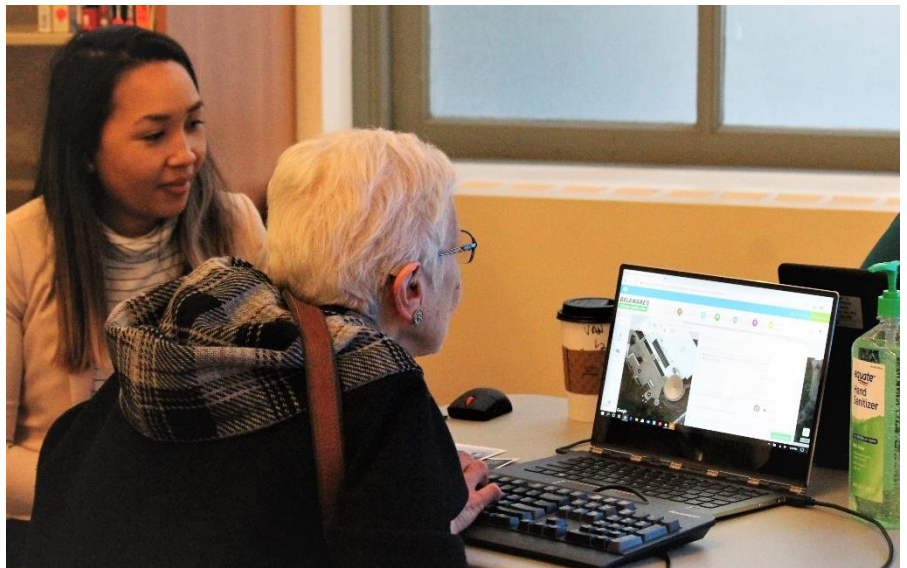
- On an individual level, solutions included **reducing plane and car travel**, eating a **plant-based diet**, installing **solar and geothermal systems**, and **weatherizing homes**.
- When asked what the State of Delaware could do to reduce its greenhouse gas emissions, participants suggested improving how residents get around—creating more **walkable and bikeable neighborhoods**, increasing **public transportation** service, and investing in a **light rail** system. Equally represented were ideas about cleaner and more efficient energy systems—investing in **offshore wind** and **utility-scale solar** projects, establishing rebates and tax incentives for **renewable energy** and **energy efficient systems**, and providing education on reducing energy use. There were also numerous calls to expand **recycling and composting programs**.



Participants' contributions to the Climate 101 boards.

Social Pinpoint

In order to identify areas affected by climate impacts, visitors to the Social Pinpoint station could make comments on an online map that were linked to a specific location. Comments touched on the transportation system, agriculture, tourism resources, flooding, street trees, and other suggestions to boost Delaware's resilience to climate change. The ability to tag specific locations allowed participants to identify especially flood prone areas or suggest locations for electric vehicle stations, additional bus stops, and bike lanes. Social Pinpoint participants could also "like" a comment left by a previous person. All Social Pinpoint data can be found in Appendix 6.



A workshop participant identifies a location of concern with Social Pinpoint.

Social Vulnerability Maps



A workshop participant engages with a social vulnerability map.

A county-specific social vulnerability map was on display at each workshop to provide information on socioeconomic status, household composition/disability, race/ethnicity/language, and housing/transportation vulnerabilities at the census tract level. The data was pulled from the Center for Disease Control's Social Vulnerability Index. Visit svi.cdc.gov for more details. Discussions at these maps helped provide social context for the discussion groups later in the evening and encouraged participants to keep equity top-of-mind throughout the night. Visitors to these maps were encouraged to consider the intersection of social vulnerability and climate vulnerability.

Video Storytelling

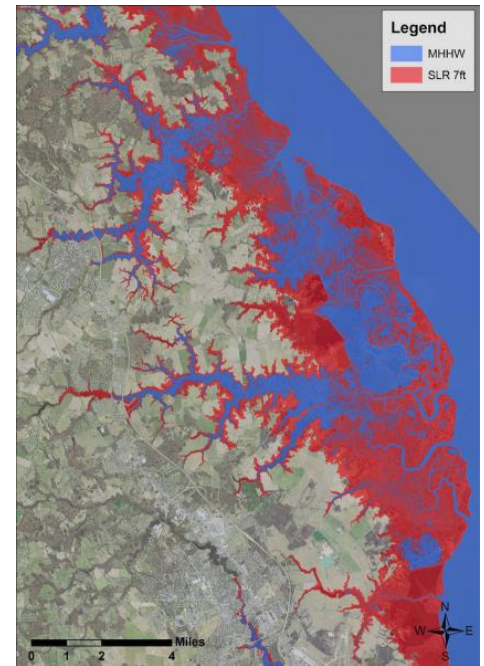
Participants who were willing to be recorded could share their concerns about climate change and recount experiences in which they had been affected by its impacts firsthand.



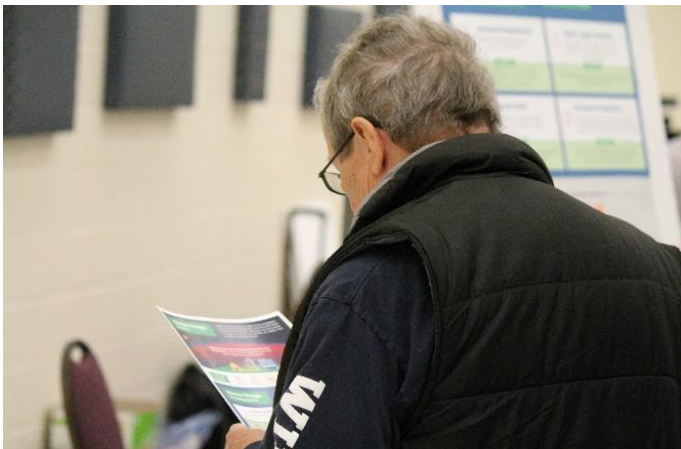
DNREC staff preps a participant for video storytelling.

Sea Level Rise and Inundation Mapping

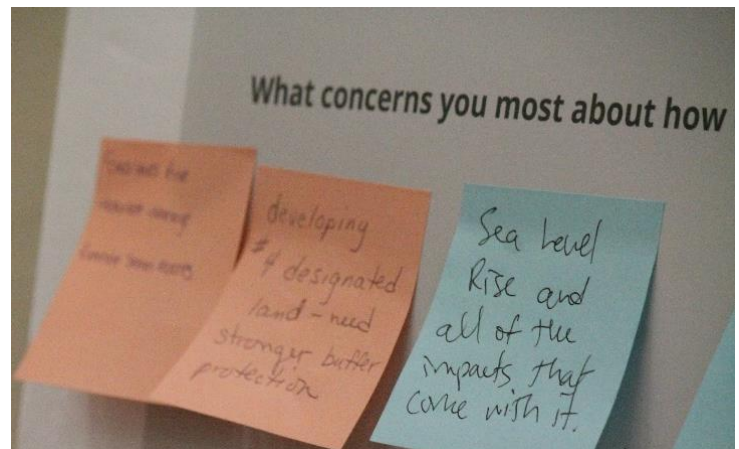
Workshop attendees were given the opportunity to engage with a series of interactive coastal inundation maps for Delaware, corresponding to water surfaces from the mean higher-high water level (MHHW) to 7 feet above MHHW, in 1-foot increments. Attendees could pan and zoom to look at specific coastal areas in Delaware or search for locations by address. The maps were developed jointly by the Delaware Geological Survey, DNREC, Delaware Department of Transportation, and the U.S. Geological Survey using Hurricane Sandy Supplemental Relief Funds. More information on these maps can be found at <https://www.dgs.udel.edu/projects/coastal-inundation-maps-delaware>.



Projected sea level rise map.



A participant learns more about climate change in Delaware.



Captured climate concerns.



Participants engage in conversation during the open house.



DNREC staff welcome participants to the workshop.

Part 2: Breakout Groups

The remaining two hours of the workshops consisted of a presentation on the causes and consequences of climate change and facilitated discussions on strategies for helping Delaware become more climate-ready in the areas of energy, transportation, and resilience.

Presentation and Polling

The presentation kicked off with interactive polling to gauge the audience's existing knowledge and concerns around climate change. Susan Love (Administrator of the Climate & Sustainability Programs Section, DNREC DCCE) then delivered the rest of the presentation that focused on Delaware's greenhouse gas emissions sources and climate impacts affecting the state. Ms. Love also reviewed some of the efforts the State already has underway to support the goals of the Climate Action Plan. The presentation slides can be found on the project website (declimateplan.org) and in Appendix 1. Polling results are also available on the project website and in Appendix 2.

Breakout Groups

The majority of the meeting was reserved for the participants to share their ideas and engage in dialogue with each other through facilitated, small group discussions. Each group was tasked with brainstorming potential climate solutions in three categories: **Energy**, **Transportation**, and **Resilience**. For each topic, the facilitator briefly shared best practices that could be implemented by individuals, businesses, and governments. Participants were then invited to come up with their own climate solutions. From there, the group voted on their favorite proposed solutions and dove into a more in-depth conversation about the barriers, opportunities, equity considerations, and partners/resources that would be relevant when implementing their top actions. All participant ideas were carefully recorded on a large poster with sticky notes, ensuring all ideas could be given equal weight and consideration. At each of the three workshops, there were between 8 and 13 breakout groups (of up to 9 people each), facilitated by members of the consulting team and DNREC staff.



Attendees at the Wilmington workshop vote on their favorite proposed transportation solutions.



Workshop participants discuss resiliency solutions.



Workshop participants record their own ideas to improve Delaware's transportation system.

WHAT WE HEARD

After compiling the input from the breakout groups from each of the three workshops, the data was analyzed to pull out common themes and ideas, which are detailed below. To best assess the ideas received, ideas were categorized into different types of actions and tallied across each county. Common themes that emerged across all three focus areas and counties included the need for better coordination among departments, cities, counties, and the State, particularly related to issues of land use planning, building code and infrastructure design requirements, and transportation planning. In fact, land use planning, zoning, and regulations were popular action types across all three focus areas. Another important common theme was education and awareness across all three areas, counties, and related to numerous action areas.

All ideas generated in the breakout groups can be found in Appendix 5. Specific breakdowns of how often ideas generated in the breakout groups fell into specific topic areas can also be found in Appendix 5.

Energy

Discussions around energy focused on making existing buildings more energy efficient, expanding renewable energy, and increasing access to education programs and technology that reduce energy use. Renewable energy action ideas, which included solar, offshore wind, and numerous recommendations to increase the Renewable Portfolio Standard, were most popular across all three counties, representing 38% of ideas. Energy efficiency strategies were also popular in Kent (25% of ideas) and New Castle (16%), and had some traction in Sussex as well (8%). The need for education and skills training was frequently mentioned, particularly in Sussex County workshop (12%). Green building design standards/requirements were also frequently mentioned, particularly in Kent and New Castle workshops. Electric vehicles came up too, with additional traction in the Transportation discussion, further described in the next section.

New Ideas	Barriers	Opportunities	Equity Considerations	Partners/Resources
<ul style="list-style-type: none"> • Carbon tax/fee • Customer Choice electricity options, including an 100% renewable energy option • Electric vehicles • Energy audits • Energy storage • Increase the State's Renewable Portfolio Standard (RPS)—community solar, rooftop solar, offshore wind • Nuclear energy • Industrial and commercial energy efficiency upgrades • Microgrids • More efficient HVAC systems (electric, geothermal, heat pumps) • Old building retrofits • Smart tech (smart thermostats, light sensors) • Stricter building codes/standards (e.g. LEED, Net Zero Energy) 	<ul style="list-style-type: none"> • Difficulty of changing habits • Gathering community buy in • Lack of political will • Limited funding for incentives/rebates • Objection to blocked views • Power of fossil fuel interests • Restrictions on solar installation • Upfront investment required for homeowners 	<ul style="list-style-type: none"> • Education built into K-12 curriculum • Education on beneficial returns on investment • Redeveloping brownfield sites for renewable energy generation • Renewable energy job creation • Tax credits/incentives for renewable energy and energy efficient systems • Technological advances 	<ul style="list-style-type: none"> • Access to audits and retrofits for renters and low-income residents • Access to renewable energy • Accessible communications • Potential for energy efficiency upgrades to increase cost of affordable housing 	<ul style="list-style-type: none"> • Colleges and universities • Delmarva Power • Developers • Energize Delaware • Housing managers • Model programs from other states • Neighborhood Associations • Non-profits and local organizations

Transportation

When brainstorming ways to make Delaware's transportation system more efficient, many participants brought up the need for high density development; improved public transit options; accessibility to electric vehicles and charging stations; and more walkable, bikeable communities. Strategies related to land use planning, transit-oriented development, and improving pedestrian and bicycle infrastructure were among the most popular across all three counties, representing 18% of total ideas. Also popular, particularly in Sussex County workshop, were ideas around expansion and improved coordination/connections for transit services, especially bus connections. Related to that, light rail expansion was popular, particularly in Kent County (representing 15% of ideas there). Electric vehicles were a popular point of discussion as well, with fairly equal attention given to incentives/rebates for individual purchase of EVs as well as the need to increase EV charging infrastructure, and electrifying buses and vehicle fleets. Other ideas included promoting more bike shares, rentals, and supporting bike lanes, promoting telecommuting options among businesses, and strategies around signal timing and traffic flow to reduce congestion and idling times.

New Ideas	Barriers	Opportunities	Equity Considerations	Partners/Resources
<ul style="list-style-type: none"> • Anti-idling enforcement • Electric bike share • Electric school buses and public transit buses • Electric vehicle rebates and tax credits • Encouraging development around transit hubs • Encouraging people to drive less • Expanded bus and train service • Gas tax • High occupancy vehicle lanes • Higher density, mixed-use development • Improved pedestrian and biker safety • More bike paths and lanes • More electric vehicle charging stations • More local shuttles • State-wide light rail system 	<ul style="list-style-type: none"> • A deeply ingrained culture of driving • Current lack of connectivity of communities • Difficulty of passing legislation • High costs of infrastructure upgrades • Lack of grid preparedness for shift to electric vehicles • Limited range of electric vehicles • Prohibitive cost of electric vehicles • Unsafe walking and biking conditions • Urban sprawl 	<ul style="list-style-type: none"> • Bike safety education • Carpools and carshares • Electric vehicle pilot programs • First/last mile improvements (multimodal connectivity) • Inefficient car buyback programs • More telecommuting options and flexible work schedules • Real-time public transit app • Seasonal beach shuttles • Technological advancements • Zoning code revisions 	<ul style="list-style-type: none"> • Accessibility of transit to disabled, chronically ill, and senior residents • Ensure low-income residents have access to healthcare, groceries, and basic needs • Ensure low-income residents have access to public transit • Gentrification and displacement • Prohibitive cost of electric vehicles • Subsidized and free public transit 	<ul style="list-style-type: none"> • Businesses • Car dealerships • City, County, State, and Regional planners • DART • Delaware Department of Transportation • Delmarva • Models from other states • Regional Greenhouse Gas Initiative (RGGI) • Safe Routes to School • Transportation Climate Initiative (TCI) • Utilities • VW Settlement money

Resilience

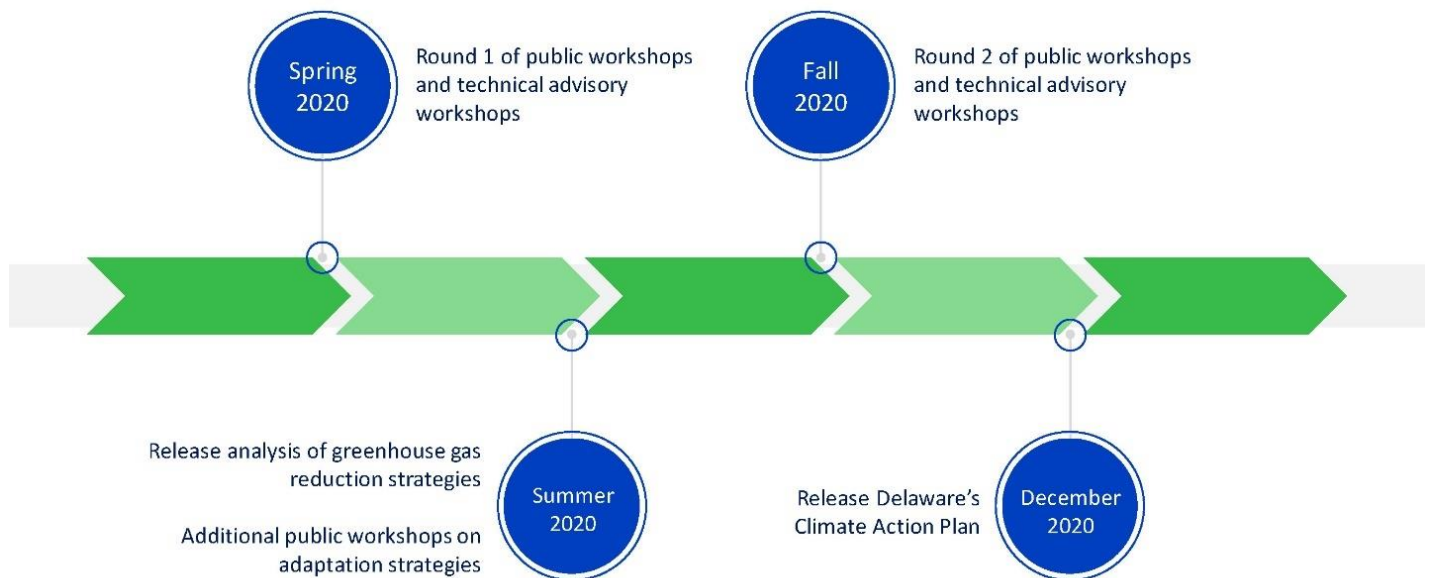
Discussions around resilience focused on adapting to sea level rise, alleviating flooding, emergency preparedness planning, and habitat restoration. The most common ideas (33% overall) were around building code, zoning, and land use/siting decisions. Such ideas included restrictions on developing in floodplains as well as a few suggestions for planning for managed retreat. Land use regulation types of actions represented 41% of ideas generated in Sussex County workshop, 26% in Kent, and 33% in New Castle. There were also many suggestions related to infrastructure upgrades to reduce flooding impacts. This was particularly popular in Kent County workshop (21%). Two other key areas raised included broader education and training around climate change (20%) as well as development of detailed vulnerability assessments as well as emergency response and preparedness plans (18%). There was also some emphasis placed on nature-based solutions (living shorelines, protecting and enhancing wetlands, marshes, etc.), particularly in Sussex County (16%) and New Castle (8%).

New Ideas	Barriers	Opportunities	Equity Considerations	Partners/Resources
<ul style="list-style-type: none"> • City and County resiliency and adaptation plans • Discouraging practice of high maintenance landscapes • Generators in community and public safety buildings • Green infrastructure solutions • Managed retreat • Preparedness campaigns • Preparing emergency shelters and evacuation plans • Prohibiting development in flood-prone areas • Remediation of road areas especially prone to flooding • Resilient design guidelines • Stormwater management plans • Supporting local agriculture, farmers markets, and community gardens • Tree canopy restoration • Underground utility lines • Vulnerability assessments of critical infrastructure • Wetland and coastal restoration 	<ul style="list-style-type: none"> • Climate denial • Development pressures • Focus on economic growth over climate resilience • Invasive species • Lack of education on the topic • Limited communication channels • Outdated FEMA maps • Private property rights • Suburban sprawl 	<ul style="list-style-type: none"> • Community unity and empowerment • Demonstration projects • Education for developers • Establishing Resilience Hubs • Incorporating climate education into K-12 curriculum • Job creation • Point of sale resiliency • Preparedness trainings • Reducing impervious surfaces • Community unity and empowerment 	<ul style="list-style-type: none"> • Access to open space and healthy food • Availability of resources to renters versus homeowners • Distribution of resources and assessments • Evacuation of senior, ill, disabled and low-income residents • Flood insurance for low-income residents • Potentially displacing people and communities • Taking away property value 	<ul style="list-style-type: none"> • Community centers • Environmental non-profits • Faith-based organizations • Federal Emergency Management Agency • First responders • Other state's resiliency planning projects • Pre-Disaster Mitigation Grants (Delaware Emergency Management Agency) • Schools • Youth groups

ONGOING ENGAGEMENT

Round 1 was just the start of the conversations on climate planning in Delaware. The State is committed to continuing conversations with the broader community online and in-person. As public health guidance allows, the State will host a second series of public workshops this summer focused on adaptation strategies. A third round of public workshops, currently slated for the fall, will account for feedback from both the first- and second-round workshops (along with greenhouse gas modeling efforts currently underway) to gather input on the implementation of proposed statewide climate actions. Equitable engagement is central to these processes and efforts will be made to engage a diverse audience through measures such as providing translation services at all public meetings.

PROJECT TIMELINE



Online Engagement

To complement the in-person workshops, the State launched an online survey on the project website (declimateplan.org) to run through March and April 2020. The survey was designed to allow people (particularly those unable to attend one of the in-person workshops) an opportunity to provide similar feedback as what was shared at the workshops. For instance:

- The survey assessed baseline climate interest and knowledge, much like the polling at the in-person workshops.
- The survey asked participants to indicate their level of support for energy, transportation, and resilience solutions—mimicking the workshop breakout groups.

Results of the online survey can be found in Appendix 7.

Website

Launched just before the public workshops, the project website (declimateplan.org) hosts information about the climate action planning process. The website includes general information about the plan, ways to get involved in the planning process, and a portal through which to contact DNREC with additional comments or feedback.

APPENDICES

APPENDIX 1. Presentation Given at the Public Workshops



OVERVIEW	GOALS FOR THIS SESSION
<p>Over the course of 2020, Delawareans will help shape a Climate Action Plan to minimize the greenhouse gas emissions that cause climate change and maximize our resilience to the impacts we're already experiencing.</p> <p>As climate change threatens our daily lives and economy in Delaware's coastal towns, urban areas, and vibrant farms, it's time for us to act together.</p>	<ul style="list-style-type: none"><li data-bbox="743 1161 1284 1270">Gain a greater understanding of climate change and how it impacts Delaware<li data-bbox="743 1302 1284 1411">Learn about the State's Climate Action Plan process and actions to date<li data-bbox="743 1434 1284 1543">Share climate change concerns<li data-bbox="743 1575 1284 1684">Suggest solutions for consideration

AGENDA

4:30 - 5:30 pm	Open House and Networking
5:30 - 5:45 pm	Welcome & Introduction
5:45 - 5:50 pm	Opening Polling
5:50 - 6:00 pm	Overview Presentation
6:00 - 7:10 pm	Small Breakout Groups
7:10 - 7:15 pm	Closing Polling
7:15 - 7:30 pm	Wrap-Up

Welcome and Introduction

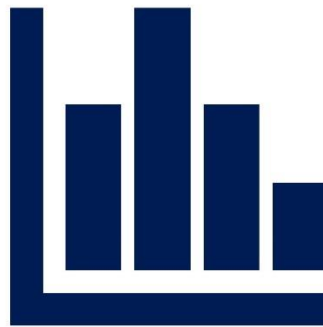
- Purpose of this public workshop
- What you can expect from tonight
- How your input will be used in the climate planning process
- How to continue providing your input throughout the year



Blackbird Creek Reserve, Smyrna, DE

Source: DNREC

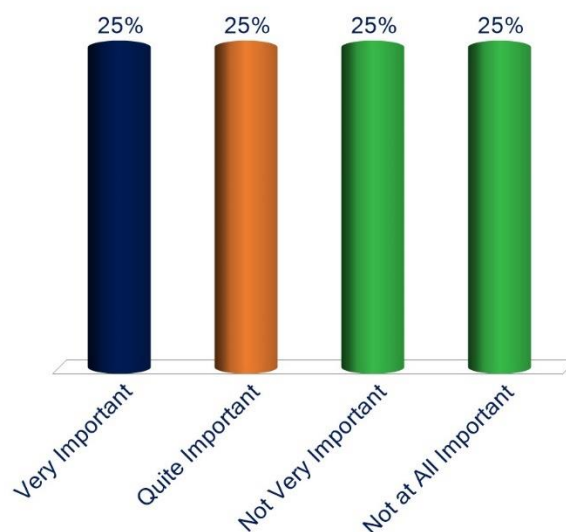
Keypad Polling



Note: The following slides display placeholder data and do not represent the actual results of the polling. See Appendix 2 for the results of the polling questions by county.

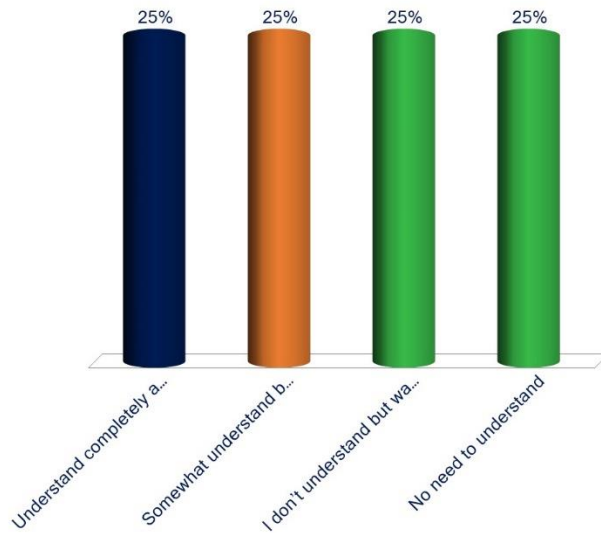
How important is the issue of climate change to you personally? *Choose 1.*

- A. Very Important
- B. Quite Important
- C. Not Very Important
- D. Not at All Important



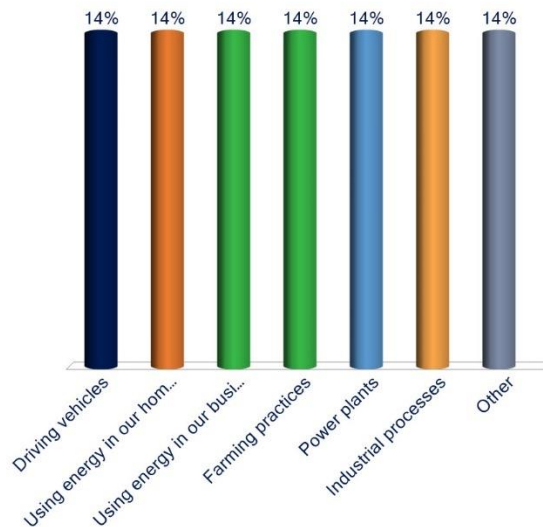
How well do you think you understand the causes of climate change? *Choose 1.*

- A. Understand completely and minimizing my impact
- B. Somewhat understand but not sure what we can do about it
- C. I don't understand but want to learn more
- D. No need to understand



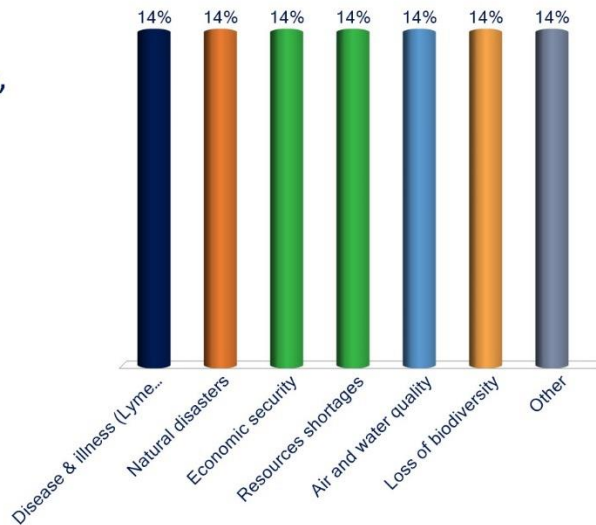
Which of the following do you think contributes most to GHG emissions and climate change in Delaware?

- A. Driving vehicles
- B. Using energy in our homes
- C. Using energy in our businesses
- D. Farming practices
- E. Power plants
- F. Industrial processes
- G. Other



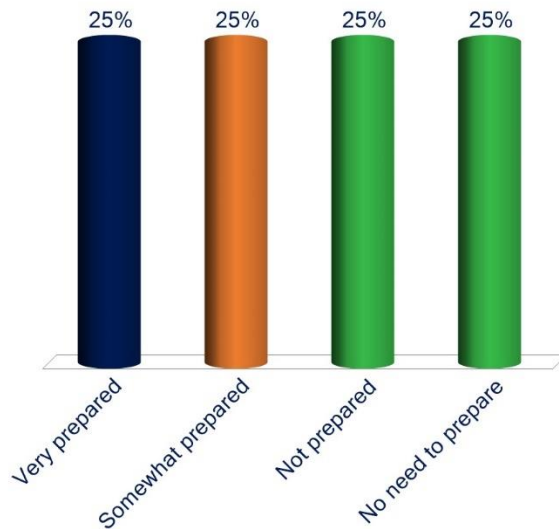
What issues are of most concern to you related to impacts of climate change? *Choose 2.*

- A. Disease & illness (Lyme disease, EEE, etc.)
- B. Natural disasters
- C. Economic security
- D. Resources shortages
- E. Air and water quality
- F. Loss of biodiversity
- G. Other



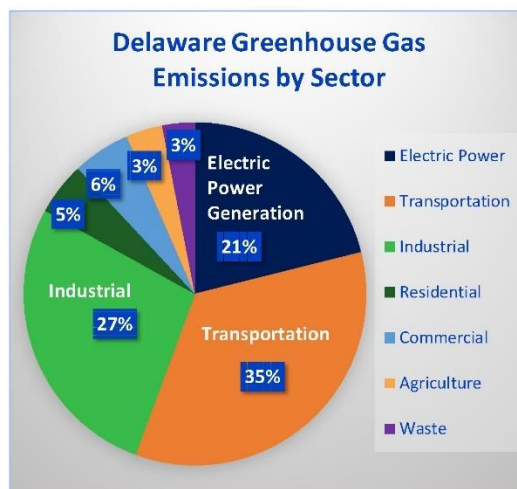
How prepared do you feel that you and/or your family are for the impacts of climate change? *Choose 1*

- A. Very prepared
- B. Somewhat prepared
- C. Not prepared
- D. No need to prepare



Greenhouse Gases

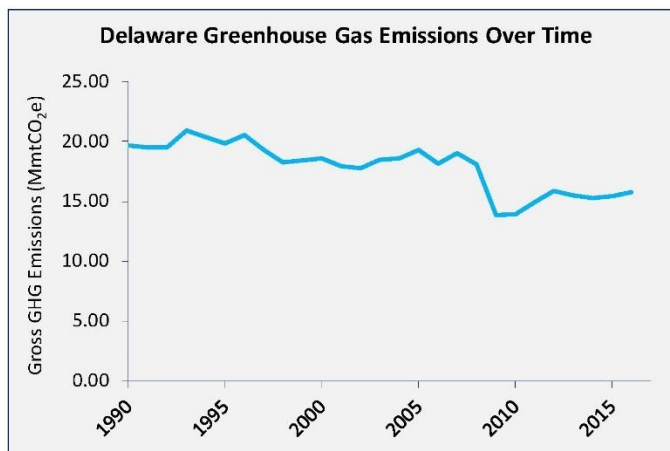
- Greenhouse gases (GHG) are vapors in the atmosphere that trap heat around the earth (like carbon dioxide)
- Since the mid-1800s, humans have released a significant amount of GHGs into the atmosphere
- In the U.S., most GHGs come from burning fossil fuels for electricity, heat, and transportation
- An increased amount of GHGs in the atmosphere has led to rising temperatures and other long-term changes in the climate



Source: Delaware 2016 Greenhouse Gas Inventory

Greenhouse Gases in Delaware

- Delaware's primary sources of GHGs are from transportation (35%), electric power generation (21%), and industrial (27%)
- Delaware has made a commitment to reduce GHG emissions by 26% below 2005 levels by 2025
- So far, Delaware has reduced GHG emissions by about 18%, the state is looking for solutions to ensure it meets its goal



Source: Delaware 2016 GHG Inventory

INCREASED TEMPERATURE

- Number of extremely hot days (over 95°F) are expected to increase
- Annual and seasonal temperatures in Delaware have already increased by 2°F since 1900
- Will threaten public health by worsening air quality and increasing risk of illnesses caused by heat and air pollution



A section of Delaware Route 1 near Milford was damaged by a “road heaving” incident that caused the roadway to buckle. Asphalt surfaces and other materials can be damaged during heat waves.

Source: DelDOT

SEA-LEVEL RISE

- By 2050, sea levels could rise by almost 2 feet
- Will harm soil and groundwater quality in coastal regions
- Will result in more erosion of beaches, roads, and other infrastructure in low-lying areas



Coastal Route 9 has experienced flooding from higher tide elevations from sea-level rise.

Source: DNREC

EXTREME PRECIPITATION

- Average precipitation is expected to increase by about 10% by 2100
- Heavy rainstorms are expected to become more frequent and more intense
- Extreme rainfall events affect agriculture by destroying crops, damaging farm facilities, and increasing crop disease pressure

In April and May 2018, rain destroyed several high dollar crops and threatened the yield of many others. The Secretary of Agriculture Michael T. Scuse made a request for an emergency disaster declaration to USDA's Farm Service Agency (FSA) State Service Center.

Source: Delaware.gov



DELAWARE'S **Climate Action Plan**

Delaware's Climate Action Plan will protect and strengthen:

- Our agricultural and tourism economies
- The natural places we enjoy for recreation
- Our infrastructure
- The health of our residents and visitors
- Access to clean energy and transportation for all Delawareans

The plan will consider solutions in a variety of areas, including:

Renewable Energy
(wind and solar)

Agriculture and
Conservation

Energy Efficiency and Industrial
Refrigerants

Support for local communities
(technical assistance, grant funding)

Clean Transportation
(public transit, electric vehicles)

Partnerships with other states

PROJECT TIMELINE



MAKE YOUR **VOICE HEARD**

› The success of this plan depends on public involvement.

In person



Attend a public meeting.

Online



Visit declimateplan.org.
Engage online.

Word of Mouth



Tell your family, friends, neighbors, and coworkers.

Small Group Breakouts



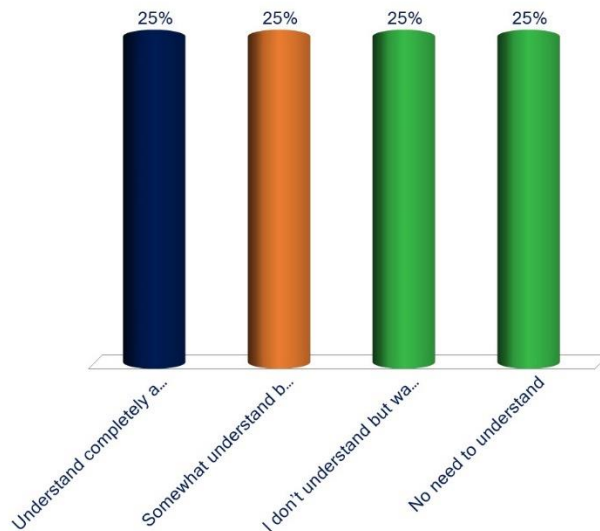
Meeting Ground Rules

- Have One Conversation at a Time (at each table)
- Share Air Time so All Can Participate
- Be Purposeful and to the Point
- Stay Curious and Open to the Perspectives of Others
- Share Reasons Behind Questions and Statements



How well do you think you understand the causes of climate change? *Choose 1.*

- A. Understand completely and minimizing my impact
- B. Somewhat understand but not sure what we can do about it
- C. I don't understand but want to learn more
- D. No need to understand



MAKE YOUR VOICE HEARD

› The success of this plan depends on public involvement.

In person



Attend a public meeting.

Online



Visit declimateplan.org.
Engage online.

Word of Mouth



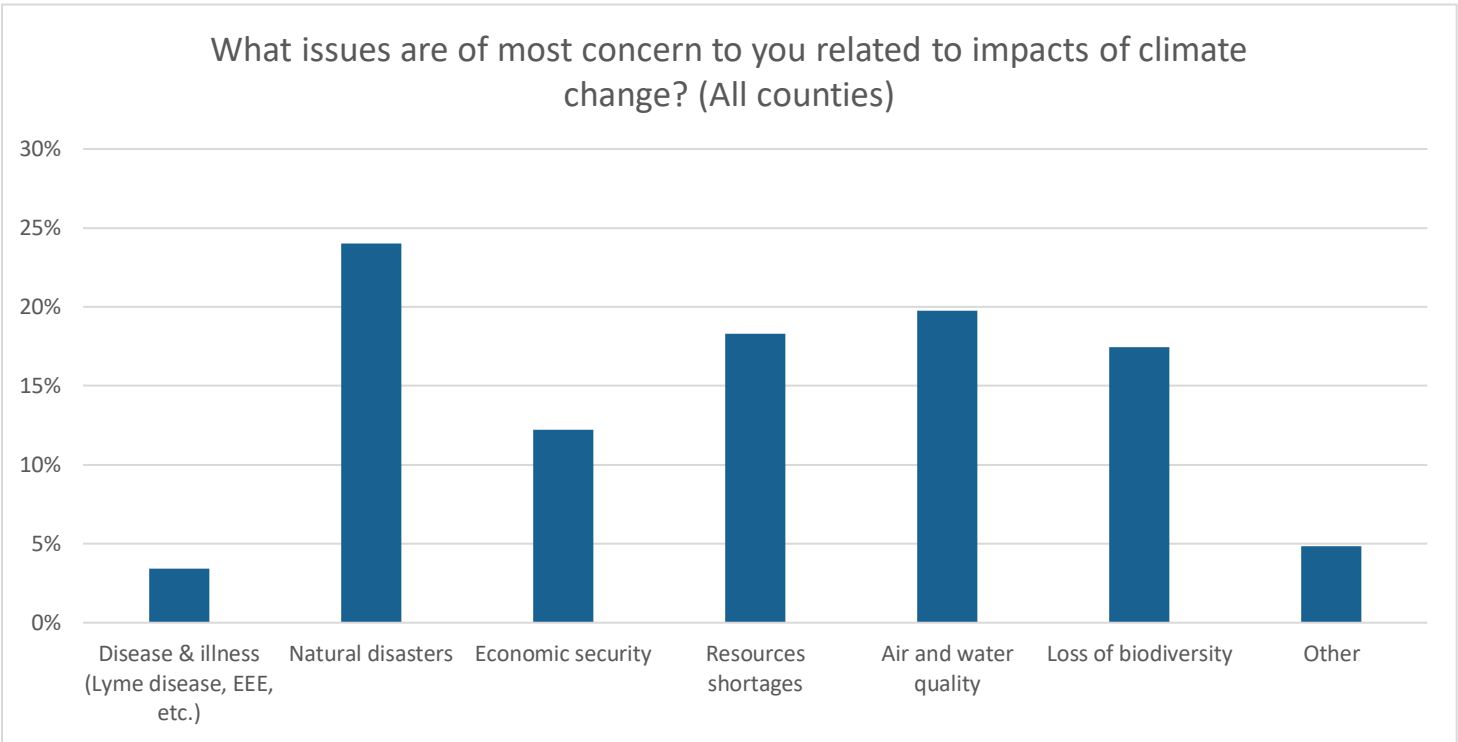
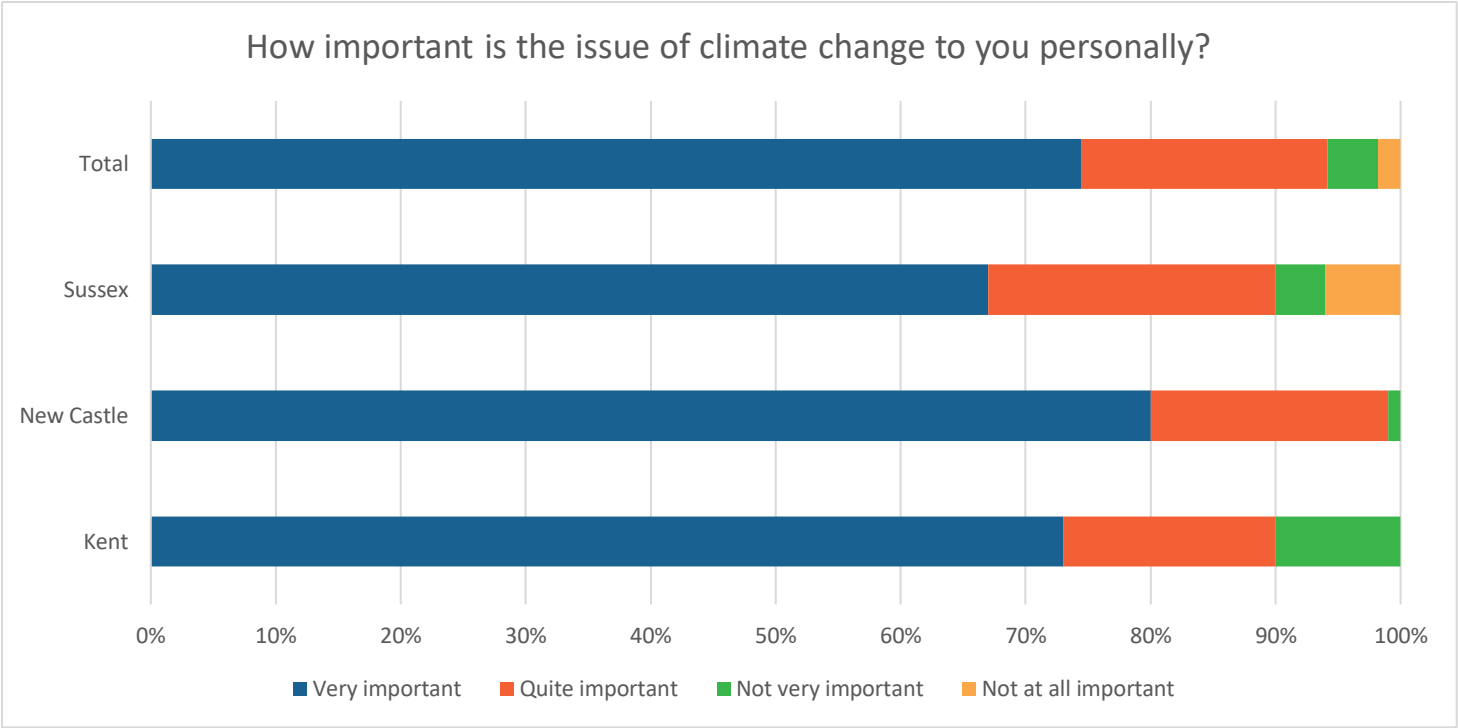
Tell your family, friends, neighbors, and coworkers.

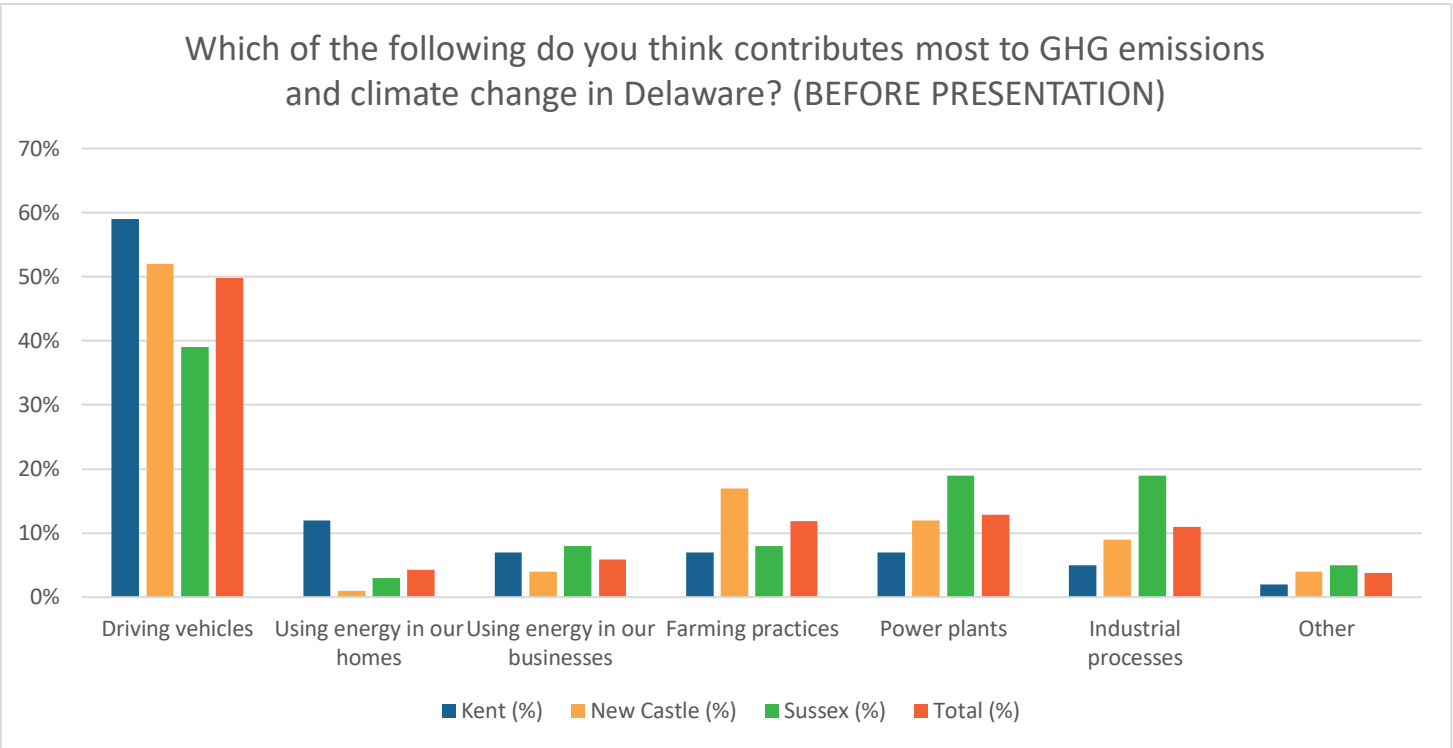


THANK YOU

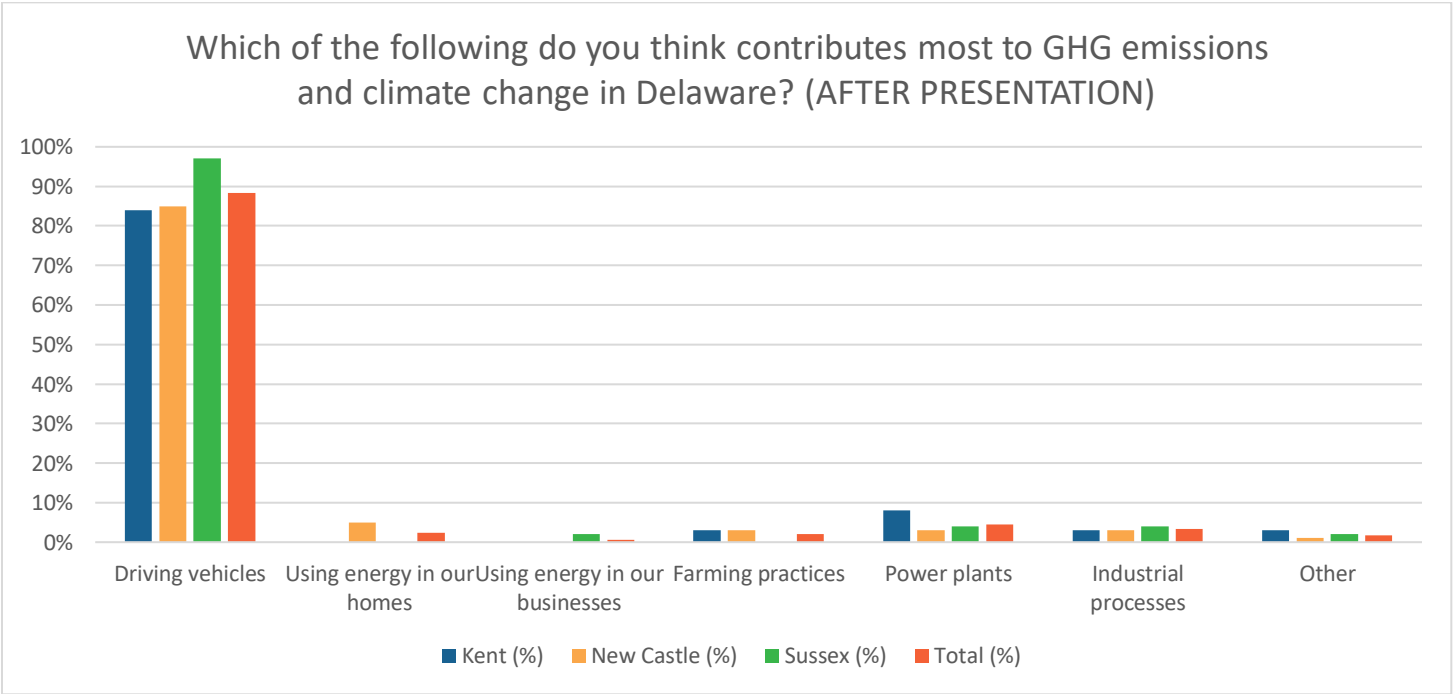
DELAWARE'S
Climate Action Plan

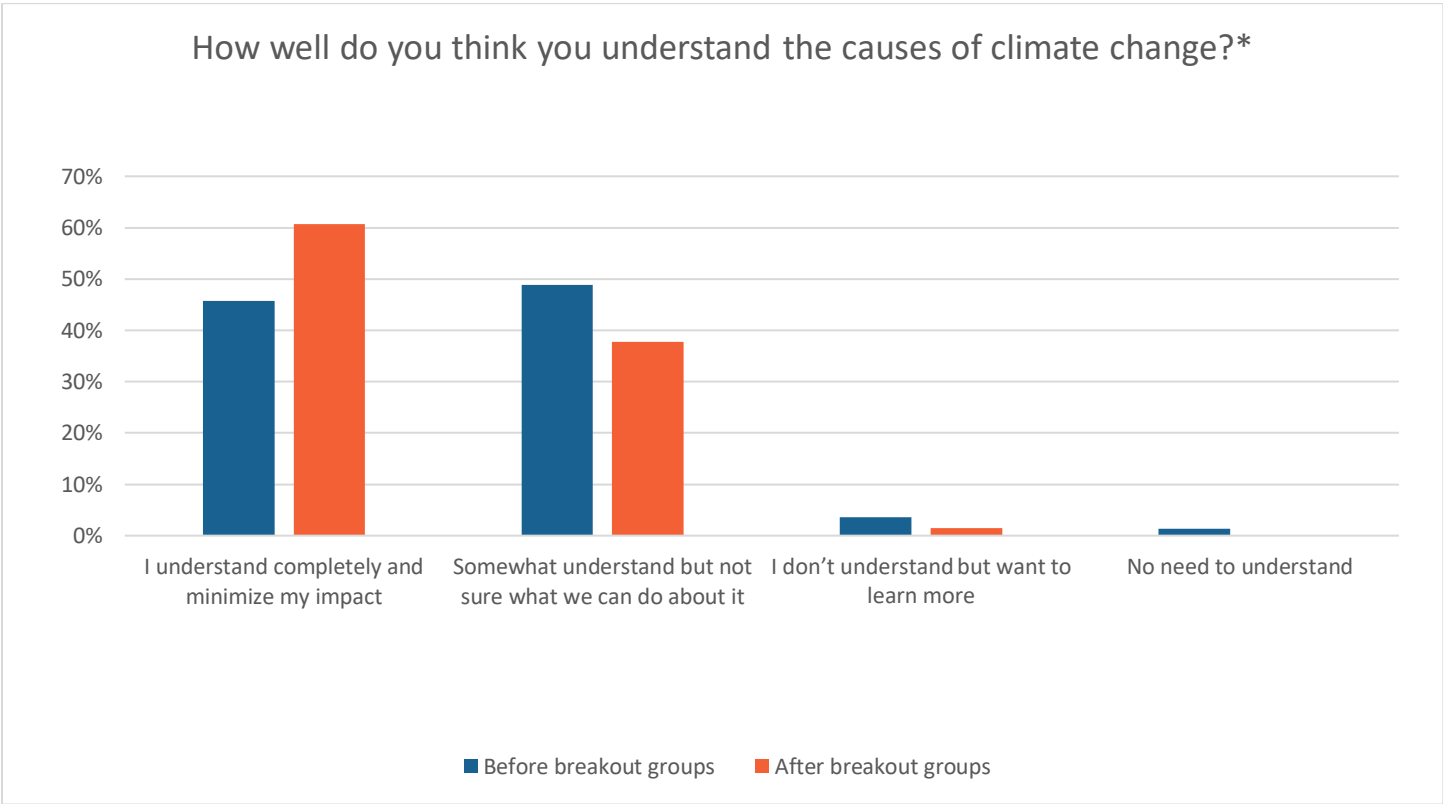
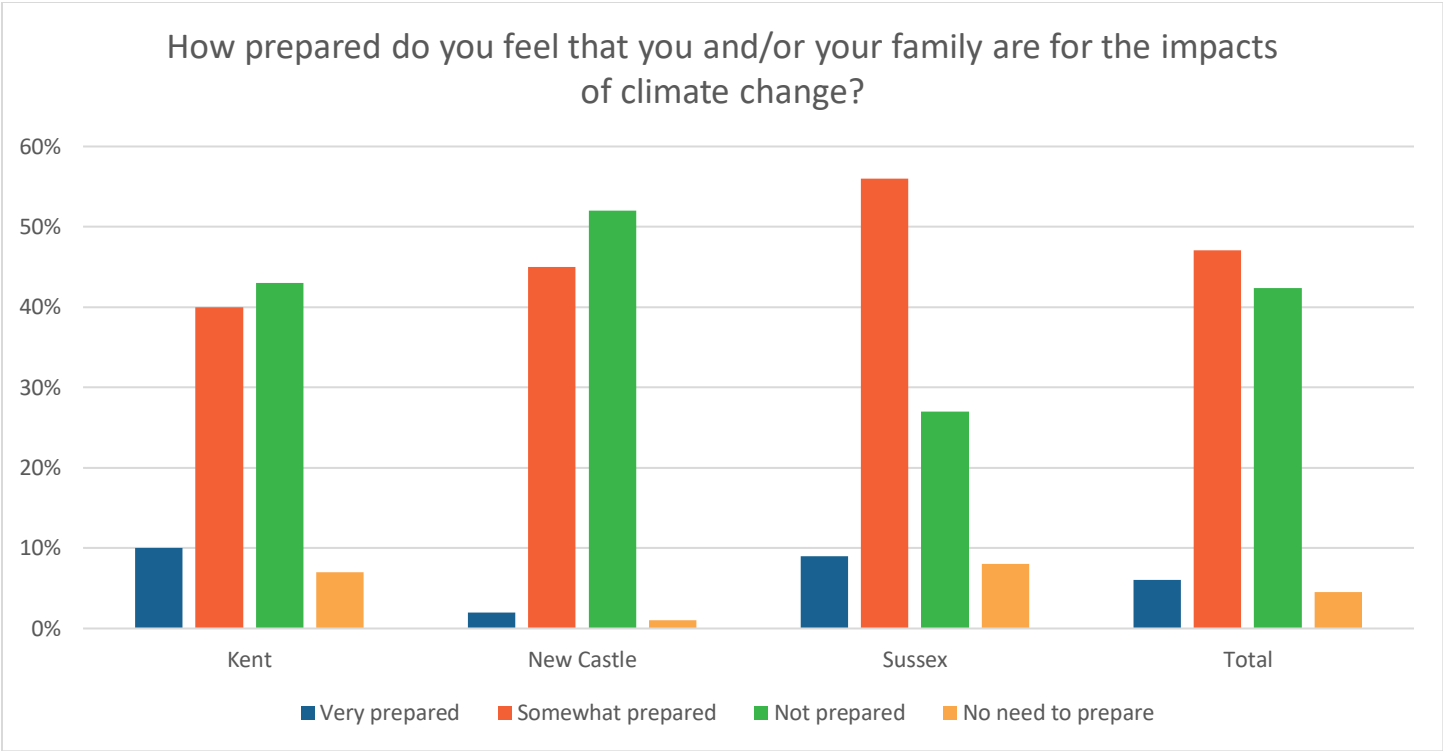
APPENDIX 2. Presentation Polling Results





Note: The correct answer is Driving Vehicles. The above graph shows the responses from the beginning of the presentation. The below graph shows the responses after the results of Delaware’s greenhouse gas analysis were shared in the rest of the presentation.





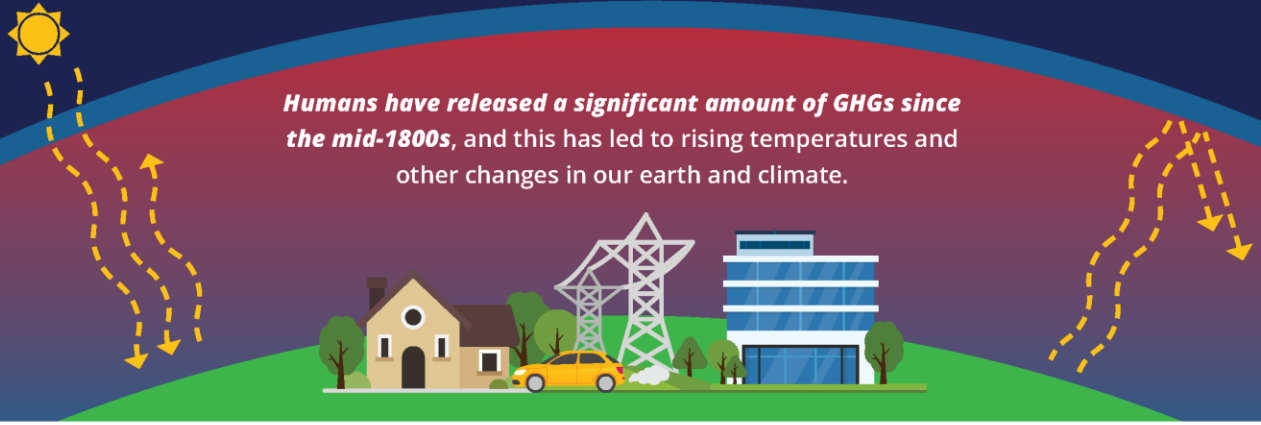
*This question was asked both before and after the breakout groups to assess how participants' understanding shifted over the course of the night. This graph shows the combined responses from all three counties.

APPENDIX 3. Workshop Materials

Informational Handouts

Climate Change: Causes

Greenhouse gases (GHGs) are vapors in the atmosphere, like carbon dioxide, that trap heat around the earth. When we use fossil fuels like coal, natural gas, and oil to power our homes, businesses, and vehicles, we release even more GHGs into the atmosphere.



Sources of Emissions



Electricity



Transportation



Industrial



Buildings



Waste



Agriculture

Climate Change: Consequences

Delawareans are already experiencing the impacts of climate change, with more on the way.



Increased Temperatures

Delaware temperatures have risen 2°F since 1900

PROJECTED:

Delaware temperatures are expected to increase another 2.5-4.5°F by 2050, with an 8 degree increase by 2100



Hotter, Longer Summers

Historically, days above 100°F in Delaware have occurred less than once per year

PROJECTED:

By 2050, Delaware can expect 2-8 days per year to reach above 100°F



Rising Sea Levels

Sea levels at the Lewes tide gate have risen more than a foot over the last century

PROJECTED:

Sea levels at the Lewes tide gate are expected to rise an additional 9-23" by 2050



Increased Precipitation

Delaware averages 45" of rain per year, typically evenly distributed among seasons. Rainfall in the autumn season has been increasing 0.27" per decade

PROJECTED:

Overall rainfall in Delaware is expected to increase by 10% by 2100. The number of very wet days (2" or more of rainfall) will also increase

DELAWARE'S

Climate Action Plan

Over the course of 2020, Delawareans will help shape a Climate Action Plan to minimize the greenhouse gas emissions that cause climate change and maximize our resilience to the impacts we're already experiencing.

Climate change threatens our daily lives and economy in Delaware's coastal towns, urban areas, and vibrant farms. With 70% of Delawareans **agreeing that we should take immediate action to reduce the impacts of climate change***, the State is moving forward with Delaware's Climate Action Plan. *2019 survey supervised by the University of Delaware's Center for Political Communication

Through a participatory planning process, the State will be working to create a Plan that ensures a future for Delaware where individuals, businesses, communities, and institutions can **deal with extreme weather, harness clean energy, breathe fresh air, and live healthier lives.**



Climate Change Basics

Greenhouse gases (GHGs) are vapors in the atmosphere that trap heat around the earth (such as carbon dioxide). When we use fossil fuels like coal, natural gas, and oil to power our homes, businesses, and vehicles, we release even more GHGs into the atmosphere. Humans have released a significant amount of GHGs since the mid-1800s, and this has led to rising temperatures and other changes in our earth and climate.

How is Climate Change Impacting Delaware?



Heat waves are projected to become longer and more frequent, with 4-8 days above 100 degree F by 2050



Annual and seasonal temperatures in Delaware have already increased by 2 degrees F since 1900 and are expected to increase another 2.5-4.5 degrees by 2050.



Sea levels at the Lewes tide gate have risen more than a foot over the last century and are expected to rise an additional 9-23 inches by 2050.

Agriculture



\$8 billion per year:
The size of Delaware's agricultural economy

(University of Delaware)

Climate change can disrupt farming through crop losses, reduced yields, flood damage to facilities, delays in planting, and harm to soil and groundwater quality.

Energy Demand



With the projected increase in temperatures, the energy demand for cooling is expected to increase between 35-70 percent by mid-century. This means increasing energy costs for homeowners, businesses, and communities.

Coastal Economies



\$3.5 billion in gross domestic product in 2018

The power of Delaware's tourism industry

(Delaware Tourism Office)

Sea level rise could inundate beaches, coastal businesses, and the infrastructure that serves tourists and residents.



#DEClimatePlan | www.declimateplan.org | declimateplan@delaware.gov | @EnergyClimateDE

A Plan to Protect and Strengthen Delaware



Implementing Delaware's Climate Action Plan will protect and strengthen:

- Our agricultural and tourism economies
- The natural places we enjoy for recreation
- Our infrastructure
- The health of our residents and visitors
- Access to clean energy and transportation for all Delawareans



Delaware's Climate Action Plan will consider solutions in a variety of areas, including:

- Renewable energy (wind and solar)
- Energy efficiency and industrial refrigerants
- Clean transportation (public transit, electric vehicles)
- Agriculture and conservation
- Support for local communities (technical and planning assistance, grant funding)
- Partnerships with other states



Path to Climate Action



This will be a year-long open, transparent, and participatory process.

Round 1 public workshops and technical advisory workshops

Release analysis of GHG reduction strategies, additional public workshops on adaptation strategies

Round 2 public workshops and technical advisory workshops

Release Delaware's Climate Action Plan

2020

SPRING

SUMMER

FALL

DECEMBER

Make Your Voice Heard



Attend a public workshop.



Visit declimateplan.org. Engage online and on social media.



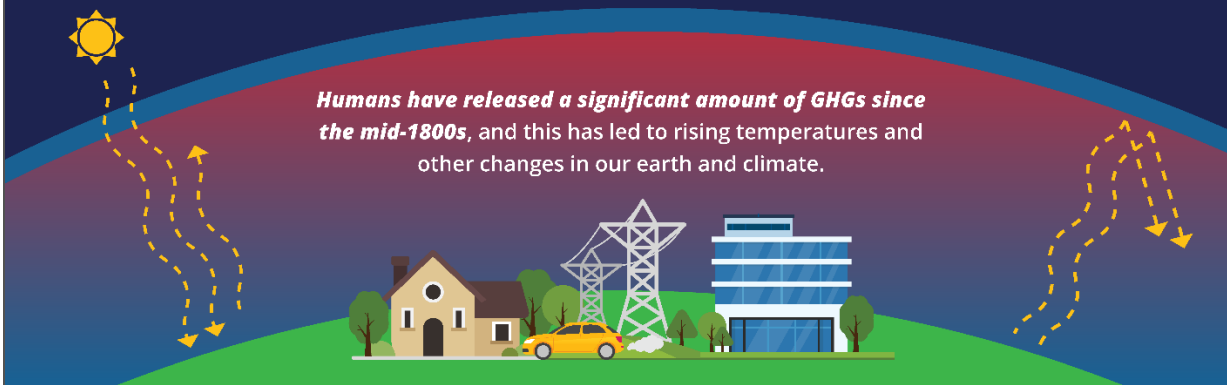
Tell your family, friends, neighbors, and coworkers.



#DEClimatePlan | www.declimateplan.org | declimateplan@delaware.gov | @EnergyClimateDE

Climate Change: Causes

Greenhouse gases (GHGs) are vapors in the atmosphere, like carbon dioxide, that trap heat around the earth. When we use fossil fuels like coal, natural gas, and oil to power our homes, businesses, and vehicles, we release even more GHGs into the atmosphere.



Sources of Emissions



Electricity



Transportation



Industrial



Buildings



Waste



Agriculture

What can Delaware do to reduce GHG emissions? _____

What actions have you taken/would you be willing to take to reduce GHG emissions? _____

What additional support would you need to take action to reduce GHG emissions? _____

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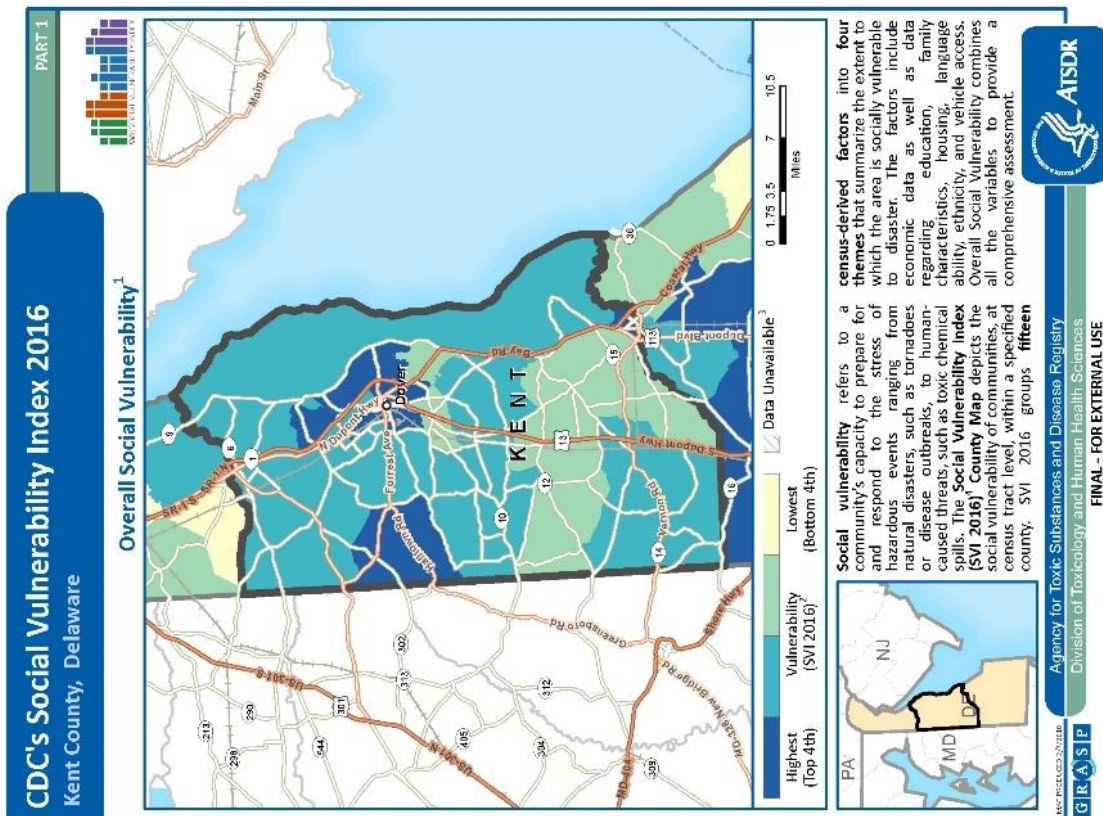
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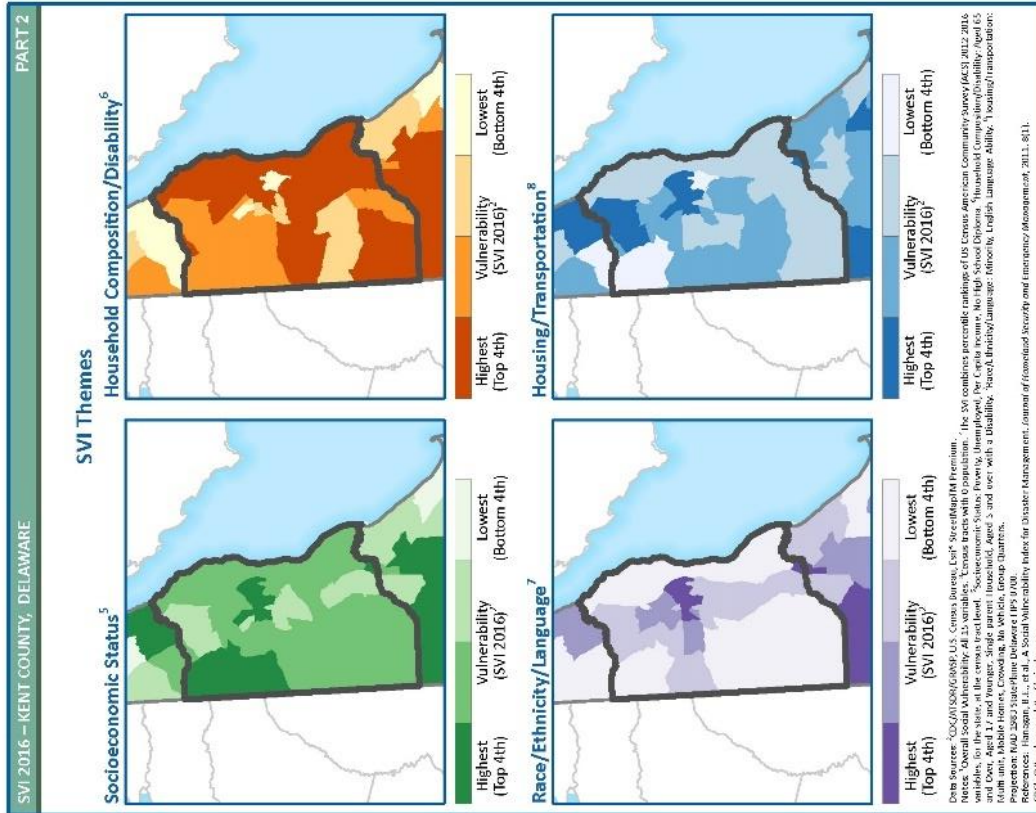
What concerns you most about how climate change will impact Delaware? _____

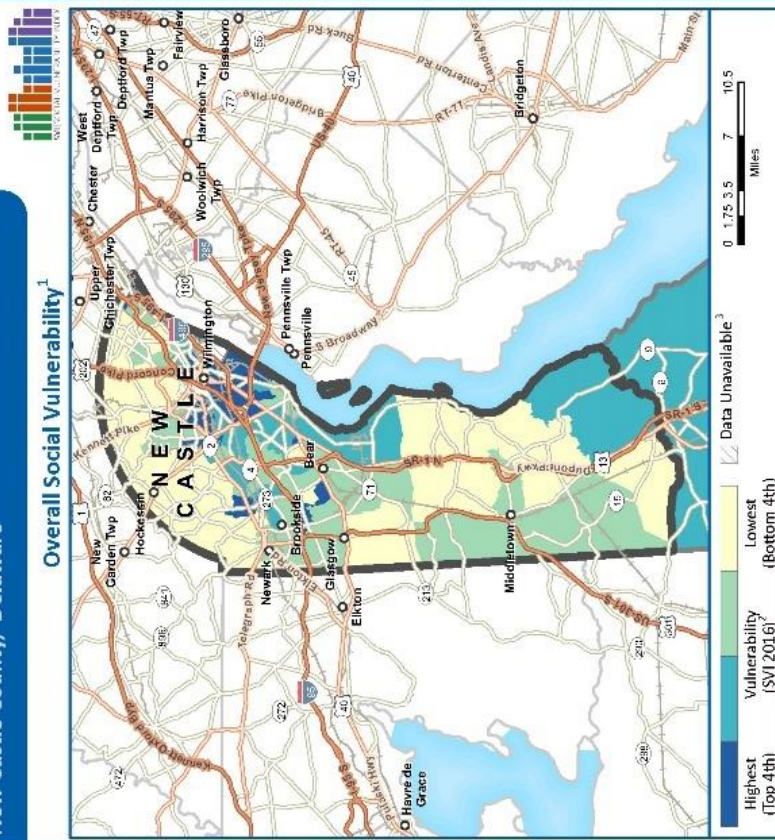
In what way(s) have you already witnessed these or other climate-related impacts? _____

What can Delaware do to prepare for these impacts? _____

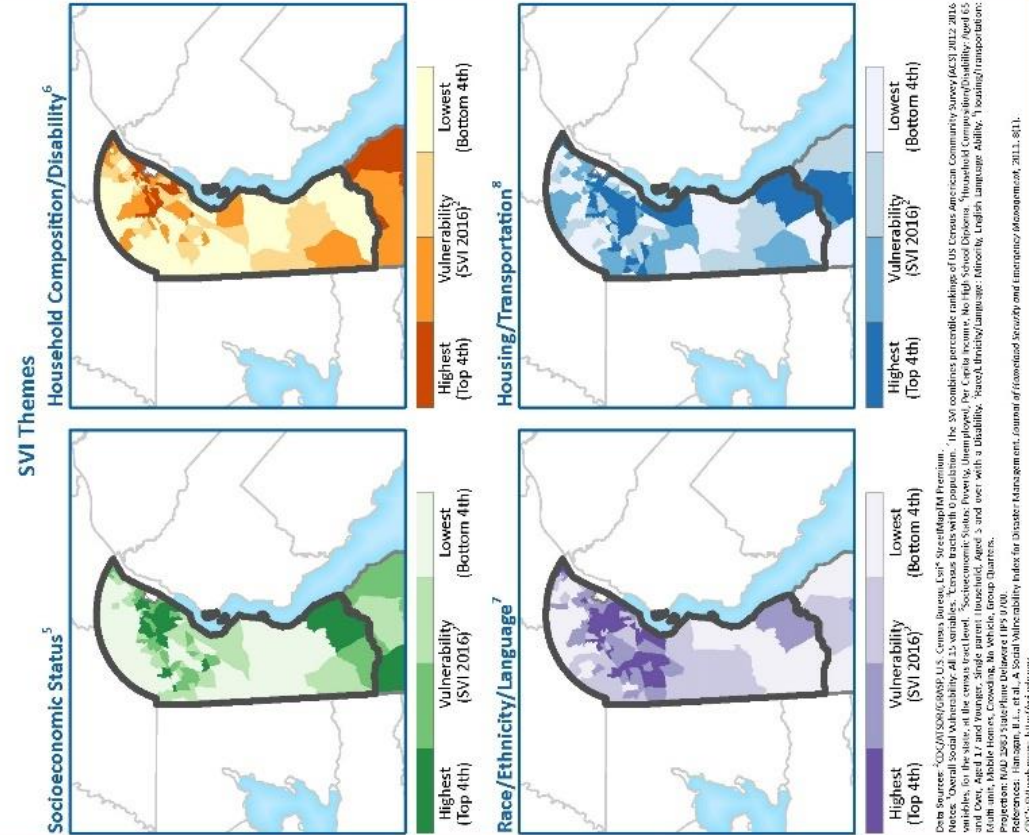


FINAL - FOR EXTERNAL USE





U.S. GOVERNMENT PRINTING OFFICE: 2012-10-10
 Agency for Toxic Substances and Disease Registry
 Division of Toxicology and Human Health Sciences
 FINAL - FOR EXTERNAL USE



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Sussex County, Delaware

PART 2





census-derived factors into four themes that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.



ences and Disease Registry
and Human Health Sciences
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ENERGY	
 <p>BEST PRACTICE EXAMPLES</p> <p>Government</p> <ul style="list-style-type: none"> •Increase renewable energy requirements for in-state generation •Update and create flexibility for building codes •Provide rebates or incentives for energy efficient upgrades <p>Business</p> <ul style="list-style-type: none"> •Purchase or install renewable energy •Get buildings LEED or ENERGY STAR certified •Commission and periodically re-tune buildings <p>Individuals</p> <ul style="list-style-type: none"> •Install solar panels on your home or property •Understand and use rebates for energy efficiency upgrades •Install smart technology in your home (e.g., programmable thermostats) 	 <p>NEW IDEAS</p>
<p>Barriers</p>	<p>Opportunities</p>
<p>Equity Considerations</p>	<p>Partners/Resources</p>



RESILIENCE



BEST PRACTICE EXAMPLES

Government

- Complete a detailed vulnerability assessment of all infrastructure located in the floodplain
- Promote green infrastructure projects to reduce flooding
- Promote community resilience hubs

Business

- Understand and assess business risks
- Assess supply chain vulnerabilities and identify alternatives

Individuals

- Develop and keep a preparedness pack
- Become trained as a Certified Emergency Response Team member

NEW IDEAS

Barriers

Opportunities

Equity Considerations

Partners/Resources



TRANSPORTATION



BEST PRACTICE EXAMPLES

Government

- Provide rebates or incentives for low emissions or electric vehicles
- Expand public transportation options
- Adopt a Zero Emissions Vehicle (ZEV) mandate

Business

- Use electric or low emissions vehicles
- Allow for telecommuting options
- Add electric vehicle charging stations to parking structures

Individuals

- Consider carpooling or using public transportation
- Walk, bike, or use other alternatives for short distance travel
- Purchase a low emitting or electric vehicle

NEW IDEAS

Barriers

Opportunities

Equity Considerations

Partners/Resources

APPENDIX 4. Climate Change 101 Poster Comments

Climate Change Causes Board

County	What can Delaware do to reduce GHG emissions?	What actions have you taken/would you be willing to take to reduce GHG emissions?	What additional support would you need to take action to reduce GHG emissions?
Kent	Carbon tax	Insulated attic and garage	New CNG fueling stations
	More incentives for people to buy electric or hybrid vehicles and install non-fossil fuel energy systems	Canvas for politicians with far more power and influence than myself who will take global steps to fix this	Climate change needs the support of the many, not the few--spread knowledge and awareness
	Solar panels on top of electric utility poles (if feasible)	Watch home use of electricity, open windows and doors during good weather	Improved walkability: bike lanes and sidewalks
	Support alternative fuels--solar and wind	Using LED and CFL lightbulb	Compost, recycle, reuse
	Elect government officials who support change and science	Solar panels	Plant trees and native vegetation
	Far more solar panels, far more wind, more geothermal!	Recycling	Flexible work schedules so I can take the bus
	More education on reducing energy use	Bike and scooter instead of drive	More EV charging stations
	Elect members into politics who are scientifically literate	Not letting the car run for long periods of time to let it warm up	A significant solar incentive supported by RGGI and SEU funds
	Higher density housing and development to increase walkability and decrease transportation emissions	We have a Prius, a hybrid van, all new windows in our home, the only geothermal system in Dover which has paid for itself, lots of trees, replace non-natives with natives	The tax breaks and credits are helpful. I'd like to see Dover add more solar, wind, and geothermal to its energy portfolio. Dover currently "makes money" off its polluting electric plant
	Private home solar panels--lots of untapped space and direct user saving and impact	Electric car	More information as to what can be done now and regionally
	Replace coal fired power plant	Support local agriculture	Account all trade activity, bring jobs back
	Increase RPS		Incorporating an acknowledgment of the causes of climate change within school curricula
	Promote EVs and build EV stations		Incorporating green energy (educational programs and green technology) into the K-12 curriculum
	ZEV for passenger vehicles, CNG for class 7 & 8 vehicles		
	DE can begin to utilize offshore wind turbines to generate electricity		
	More scientific study of GHG and resulting info to public education		
	Invest in solar energy		

County	What can Delaware do to reduce GHG emissions?	What actions have you taken/would you be willing to take to reduce GHG emissions?	What additional support would you need to take action to reduce GHG emissions?
New Castle	Improvements (and incentives) in public transportation. Perhaps a points system attached to you bus card allowing you to earn free rides	Use smart thermostats	Provide reusable and announce your plan with the (?)
	Mitigate evening ramp	Support local farmers and farmers markets	No single use plastic water bottles and state function
	More walkable neighborhoods	Minimize use of plastics	TCI
	Better public transportation	Composting	Increase renewable energy portfolio by 2035
	Encourage electric vehicles	Eliminate air travel	State/city composting facilities and/or training to support composting and decrease food waste
	More public transportation	Transition to vegetarianism	Increase expectations about RGGI
	More charging stations	Electric car	Community solar (I live in a Condo)
	Use renewable electricity sources	Plant-based diet	More/easy to access public transportation
	Support more combined heat and power installations	Walk	Give growth hormones to our measly RPS
	Deploy more class 7 + 8 CNG trucks	Drive a hybrid	Offshore wind and utility scale solar
	Increase public transportation	Eat local	Subsidized funds and incentive to use solar and drive electric cars
	TCI	Drive a hybrid	Have increased public transit opportunities. Remove density limits in inner city Newark
	Incentivize efficient energy practices from larger businesses	Eat pescatarian	Can charge info everywhere
	Delaware join the Transportation Climate Initiative (greatly increase RPS to 100% by 2050)	Limit flying	EVs (Charge stations, rebates, check out West Coast solutions)
	Expand transit system, EV infrastructure and facilities for alternative modes (like bikes)	Give up my car	More accessible electric charging stations
	Priority parking, green cars	Energize Delaware is not well managed--too hard to find, no one knows about it	Support a bill to reduce food waste in schools
	Trains: get schedules for Wilmington/Philly to reduce cars at rush hour	Eliminate food waste	
	Monetary incentives prior to purchase of alternatives not after	Drive less	
	Fewer government subsidies and tax breaks for GHG emitters and those who fund them (banks)	Plugging leaks	
	Increase public transportation (bus, train, bikes)	Work at/closer to home	

County	What can Delaware do to reduce GHG emissions?	What actions have you taken/would you be willing to take to reduce GHG emissions?	What additional support would you need to take action to reduce GHG emissions?
New Castle	Invest in light regional rail	Home energy efficiency audit	
	Raise RPS, support solar		
	Incentives for EV charging during off-peak hours		
	More charging stations		
	Improve public transit (ease of stops and use)		
	Add more electric charging stations		
	Discount registration for electric vehicles		
	Phase out HFCs and use HFOs		
Sussex	Carbon tax	Install solar panels on home	Carbon taxes
	Convert diesel heavy freight vehicles to cleaner natural gas and propane	Eat vegan	State rebates for solar
	Promote geothermal HVAC (provide rebates)	Divest all state funds from fossil fuel industries	Regulate new developments to reduce emissions from land use change
	Provide/require electric car charging station at all gas stations in DE	Subsidize clean energy industry	Allow everyone to use clotheslines
	Electric cars	Require solar on new construction	Promote the wind farm
	Solar panels	Promote solar on existing buildings (residential and businesses)	Provide more mass transit to reduce emissions
	Plant more trees	Have installed solar and geothermal	Eco-friendly utility tariffs
	Provide alternative transportation (options: make biking, walking, public transit safe and accessible)	Reduce individual emission in household, switch to plant-based diet, support clean energy, educate and inspire others to act	New home developers need to offer hybrid heating instead of single-use petroleum (propane/natural gas)
	Geothermal is an excellent way to reduce usage--make it more available	Planting native plants and trees	State industrial composting facilities Move education programs to learn new methods and support change
	Support clean energy	Have an electric car	
	Encourage state, local, and individual collaboration and action	Thermostat at 65 in winter, 78 in summer --save heat/AC	
	Change building code to require solar panels on EVERY roof	Spend tax money for open space	
	Change roadways to avoid backups and eliminate idling	Hybrid car to drive	
	Support clean/Green energy (make it accessible to Delawareans)	Solar panels	

County	What can Delaware do to reduce GHG emissions?	What actions have you taken/would you be willing to take to reduce GHG emissions?	What additional support would you need to take action to reduce GHG emissions?
Sussex	Promote waste reduction	Recycling	
	Tax incentives for installing solar geothermal, purchase of hybrid/electric cars	Always looking for ways to improve our energy efficiency	
	Buy open space for conservation	Ride a motorcycle (if you want to haul steel, buy a truck and get paid for it!)	

Climate Change Consequences Board

County	What concerns you most about how climate change will impact Delaware?	In what way(s) have you already witnessed these or other climate-related impacts?	What can Delaware do to prepare for these impacts?
Kent	Sea level rise	Drastic weather changes	Energy system resiliency
	Rising sea levels	Loss of native species	Create plans with people's agencies
	Loss of land and loss of habitats due to sea level rise	Embrace green technology and assist more residents to obtain green tech	Require municipalities to have a certain percent of their fleet to be electric
	Displacement of native species	Loss of farmland	Accelerate the transition from fossil fuels to renewable sources
	My major concern regarding climate change in DE is the potential for rising sea levels	Climate in DE alone has been abnormal in the past few years	Plant more trees, more native plants, replace lawns with trees and pollinators
	Increased flooding and more frequent severe storm events	Extreme weather, rainfall, warm winter, dry summer	Private home solar panels seem like the easiest claim of unused space and available technology
	Increasing H2O temps	More flooding	Stop building along the coast
	Water consumption due to higher temps, thus further stressing freshwater resources	Less birdsongs (yards to woods to forests) over my 50-year lifetime	Require counties and cities to write resiliency plans
	Air quality	"global weirding" weather (electrical storms, frequent tornadoes, weather with new names)	This summer is on track to being the hottest and driest on record. What steps are being taken?
	More flooding	Increased flooding	Pray
	A hotter summer		Change personal habits (EV car, native plants, solar, etc)
	Higher temps leading to freshwater scarcities		Help people out who live in vulnerable areas
	Rising water table		Reduce emissions through clean energy and energy efficiency
	Responding to disasters (hurricanes/floods)		Enforce city and town storm runoff regulations
	Lack of biodiversity		Require cities and towns to protect more trees on public land
	Sea level rise		Land use planning that takes this into effect

County	What concerns you most about how climate change will impact Delaware?	In what way(s) have you already witnessed these or other climate-related impacts?	What can Delaware do to prepare for these impacts?
Kent	Rising sea levels		Encourage municipalities to establish cooling zones in low income areas where people are most affected by the heat
	Carbon footprint		
	Ocean life biodiversity		
New Castle	Sea level rise and associated flooding	Sea level rise and attendant effects	Join the Transportation Climate Initiative and reduce GHGs
	Flash flooding of rivers	Unpredictable weather	Ecological infrastructure to increase coastal resilience (oyster beds, etc.)
	Actions in Delaware will have high costs and little effect. Delaware emission are a tiny part of the whole. Most emissions come from developing countries and increasingly rapidly.	Beach erosion	Create a legislative framework --> regulatory framework that provides greater authority to local governments enabling them to limit development in flood/SLR-vulnerable areas
	Deaths from high temp in summer among those without AC	Coastal flooding	We all need to learn to live with less energy and less "stuff"
	Sea level rise and increased salt water in ground water in Sussex	Plant community changes, warm weather and salty areas moving north	Stop building in projected flood zones, water infrastructure
	Not doing enough fast enough	More frequent extreme rainfall events	Plant more urban trees
	Sea level rise affecting coastal areas and economic, social, environmental impacts on this (are engineers and scientists considering the impacts?)	"Unseasonable" temperatures	Do a better job of planning new buildings--leave more green space
	Is infrastructure and buildings being designed to account for climate change?	More insect-borne illness	Building in the harbor area to accommodate
	Rising sea level and flooding	Sea level rise over development	Invest in coastal resilience
	Our agriculture doesn't seem to be preparing for life after fossil fuels	Stronger storms	No more building in the coastal regions due to flood
	Sea level rise is biggest concern	Flooding	Help farmers adapt to new climate
	Emerging countries are exempt from Paris Accord	Increased runoff	Require sea level rise disclosure in real estate documents
	Flooding from rains	Almost no winter	Improve stormwater management
	Sea level rise	Flooding	Encourage renewable energy
	Water quality	Water	Delmarva must live up to its mandate to get 25% renewables by 2025

County	What concerns you most about how climate change will impact Delaware?	In what way(s) have you already witnessed these or other climate-related impacts?	What can Delaware do to prepare for these impacts?
New Castle	Species loss	Animal habitats	Marsh dependent wildlife will have less habitat if we armor shorelines
	Health	Spring is earlier, no snow!	Step up the pace to renewables. 25% by 2025 is not fast enough
	Sea level rise	Shore in Sussex is washing away	
	Coastal and river flooding	Saltwater incursion into farmland	
	Sea level rise	Flooding/storms	
	Heat waves	Invasive species	
Sussex	More intense storms will disproportionately impact vulnerable populations such as low income, older adults, etc.	Ability to enforce and create regulations	Back Bay study: resolve the legal issues with USACE and sign the contract for the Back Bay study!!
	Sea level rise and impact on growing food	Flooding in Lewes/Milton	Freshwater wetlands protection
	Sea level rise, increased flooding even in good weather	More days of flooding, each event lasts longer	Require/fund bulkhead enhancements esp. in most vulnerable areas
	Water quality	More nor'easter type storms	Remote solar energy
	Sea level rise and all of the impacts that come with it	Increased flooding during storm events and more frequently	Require solar on all new commercial buildings
	Developing #4 designated land--need stronger buffer protection	Longer stretches of hot days in summer	Additional public charging station at public community facilities
	Sustainability of marsh system	Earlier flowering seasons	Plant native trees and other native plants
	Coastal habitats effect on local fisheries	Everyone is inside in the summer	Increase resiliency of infrastructure
	Flooding	Earlier flowering plants	Stop permitting construction in floodplains
	Health concerns for kids and elderly	Flooding storms, saltwater intrusion	DE state protection of freshwater wetlands
	Sea level rise will catastrophically breach the button coal ash and spread toxins throughout the bays		Better land use planning (reduce habitat destruction, avoid building at low elevations)
	Infrastructure will be impacted		Promote the wind farm
	Sea level rise		Promote solar energy
	Infrastructure (streets, water, sewer, electric, fiber)		Building regulations for setback for beachfront development
	Habitat damage		Promote solar energy
	Extreme storm events		Engagement by DWRC and other state agencies at community level (think environmental justice)
	Flooding		Reduce dependence on fossil fuels

County	What concerns you most about how climate change will impact Delaware?	In what way(s) have you already witnessed these or other climate-related impacts?	What can Delaware do to prepare for these impacts?
Sussex	Storm surge events and infrastructure vulnerabilities (e.g. damage to critical infrastructure, readiness for large-scale evacuation, natural resources impact recovery		Maintain beneficial functions of the floodplain. Limit fill. No adverse impact should be a policy in regard to development
	Increasing temperatures		Rebates on solar installations
	Rising taxes to mitigate impacts and lack of good planning		Use green infrastructure/natural solutions when possible
			Increase subsidies for renewable energy generation
			Improve correlation between state/county regulations
			Promote more and healthy buffers to help reduce flood velocities and allow wetlands to migrate
			Require solar in new homes in non-forest areas
			Forbid the use of coal power plants immediately
			Limit unnecessary travel or plan routine trips better or use quality delivery services
			Advertise to awaken doubters that threat is real
			Limit unnecessary pavement--source permeable pavers
			Stop building houses in the low-lying areas and wetlands
			Incorporate future conditions (climate change) into local and county plans (all plans like Hazard Mitigation, Comp plans, etc.)
			Define how tree stumps are considered trees which support erosion control

APPENDIX 5. Breakout Group Ideas

As noted in the report, breakout groups were tasked with generating potential climate solutions (using sticky notes) in the categories of Energy, Transportation, and Resilience. Groups voted on which proposed solutions to discuss in greater depth, including the barriers, opportunities, equity considerations, and partners/resources for each solution. Ideas generated within each breakout group at each workshop is noted below.

Note: Values in the “Table” column below indicate the breakout groups at a given workshop. Pre-numbered tables were set up for breakout groups at each workshop. However, not all tables were used at each workshop, due to varying attendance numbers. As such, data is only reported for the numbered tables that were actually used for breakout groups that discussed the topic in question. Any cell in the “Table” column that includes “?” indicates that the sticky note on which that data was written was accidentally separated from its corresponding breakout group.

Energy

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 3	Methane gas-- collection to energy		Upfront cost		NIMBY/EJ considerations	Colleges/universities (esp. tech)
	Use more geothermal systems		Proper testing of the technology needed; One-size fits all mentality won't work in DE (e.g. geothermal easy, less costly in Kent/Sussex, not so much in NCC/ Hockessin area)		Where are they being located? who gets to test tech?	
	Traveling wave reactor technology research/funding (nuclear)		Concerns about views, property values			
	Encourage/incentivize institutions to retrofit older buildings			Workforce training		State/govt
	Public service announcements about tax credits for solar and geothermal energy	2				
	Provide low-cost home energy audits					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 3	Small scale energy installation (e.g. water pipe turbines)					
	Buy electric vehicles					
	No offshore oil drilling					
	Public service announcements about rebates, especially about electric cars					
			Homeowner association forbids solar panel installation			
			Space/limits to the property			
				Demonstration projects		
				Tax credits or incentives		
				Reputation, good press/marketing for business		
				Education on cost-benefit ROI for renewables		
					State implementation of local solar panels with the tap money we already pay	
						Solar providers

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 4	Energy efficiency and renewable for low to moderate income households (more equitable programs)	3	May have to raise taxes; Tax credit, REQs tax liability; Cost of incentives, funding!; Education; Supporting legislation; Communication on part of government; Marketing, outreach, etc. to get people to understand benefits and how to get them	Helping a population with a large fraction of discretionary income on energy; Educating the public; Marketing through energy bills; Educate the youth, incorporate green energy into K-12 education system; Empowerment grant through SEU	Create funding so homeowners don't have to put up money up front--hardship for low income; Why are they? where are they? willing to work with us?; Involvement in whole process up front "with the community"; Messaging and communication--different for all populations	Other states to learn how to put things in place; VT Efficiency Vermont; Interfaith Light & Power; Faith-based climate activists; D.E. Sustainability Energy Utility (DESEU)
	Individuals: Install geothermal heat pumps; install on demand water heater	2				
	Higher building energy performance standards	2				
	Community solar--make it easier for neighborhoods to install	2				
	Energy efficiency resources	1				
	Provide services directly (as opposed to rebates)					
	More charging stations					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 5	Rebates for weather proofing homes; provide more subsidies for low income families to weatherize homes	5	Comfort needs; People caring/motivation; Product obsolescence built in	Long term cost savings and education around this; Plug in tracker of energy use; Federal funding; technology to make it easy to be energy efficient; Pro- mote low cost practices and sustainability (unplug, run fan, open window); Educating homeowners on what to and resources for doing this; Educating spread out--residents and rural; Education; Build to environmental conditions	Cost	Housing managers, apt managers, university housing managers; Delaware electric co-op/ programs
	Develop more community solar fields	4	Solar problem--selling back electricity is not viable	Solar on parking or in road rights of way; Combining with ag (e.g. chicken roofs); Federal funding; Neighborhood/ community solar might have better buy in; Senator/ legislative leadership; More economical to have fields	Costs; Gather data on solar payback equity	Transportation departments; State energy non-profits
	New homes being built should be built FOR efficiency (before AC and heat, homes were built for their environment)	3				
	Energy audits on all state, county, federal buildings and their properties to find opportunities/projects/plans	1				
	All new home construction be ALL electric	1				
	Stop daylight saving time changes					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 6	All housing communities should go green; incentives would be a tax break for rebates for development corporations	4	Expenses; show possibility of growth; Cost; Cost to the building; Public acceptance; We like doing things as incentive programs, but that often isn't very stable for a workforce (they can have unpredictable demand or sunset); training people already in workforce; Higher cost affects sales		Incentive programs and tax rebates tend to get used mostly by the relatively rich--can also miss landlords/ renters; Include all sections of housing (low-income, new developments, etc.)	Building developers, Energize Delaware, DT+CC, Del State University, Trade schools
	Funding and training for a skilled workforce to increase market adoption and reduce costs for energy efficiency/renewable measures across all sectors	3				
	Make all new buildings net zero ready	3				
	Need for less speed: lack of enforcement of existing speed limits encourages speeding; lowering all posted speed limits by 5 mph would significantly reduce CO2 if enforced	2				
	Improvement of transmission systems; inform all of personal gains of more efficient energy use; Improve building efficiency	1				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 6	Green roofs and albedo waste as energy use (e.g. plastic bags)					
	Smart grid and smart appliance use					
	Incentives for electric vehicles					
	More electric public transport					
	No impact week					
	Colleges/university LEED buildings					
	Enforce building code enforcement and training					
	Competition between dorms and groups in colleges and housing to see who could reduce to zero emissions					
	Encourage solar panel installation on commercial buildings and above parking lots					
	Mandatory or incentivized solar on new homes (like California)					
			People who don't believe in climate change; companies may push back	Set the trend for our countries and by the standard for companies will get a green credit and be entered to win a green award; More eco-tourism could bring more revenue to our state		
				Start training and awareness in public school		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 6				Could change way trades are organized then cross train		
				Collaborating leads to innovate creative approaches		
Kent 8	Food waste energy, compost waste energy, reusing trash, wind, solar, more storage			Ideal location at Wilmington port where landfill and power plant already exist for infrastructure		Legislature education on waste to energy
	Green building design (e.g. passive solar heating to reduce energy needs)				Need for education for low-income residents	
	Wind turbines					
	Changing tax laws for energy production					
	Require some solar on all new residence and building construction					
	Incentivize low mileage or EV with vehicle registration costs					
	Promote local tourism to reduce air travel use					
	Solar					
	Use more solar panels					
			Laws and bills			
			Money; information; public perception			
				Incorporate into education curriculum from elementary through college level		
				Low-income energy assistance and energy efficiency (SEU)		
					Affordability of energy (e.g. solar Reverse Robin Hood)	

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 11	More industrial EE, streamline process		Cost to achieve goals (EE)	Incentives for technology and R&D for industrial; Use better designed industrial equipment		
	Do not go all electric		Battery technology needs to catch up; Lack of mobility and assurance for electric transportation			
	Requirement for new development with solar on buildings or homes		Potentially eliminating efficient systems (hydroponic)?			
	Aligning codes and policy with developers			How to discourage consumption and waste		
	Businesses to have automation with lights and computer equipment					
	EE in hospitals					
	Siting requirements/footprint of schools, are there design issues here?					
			How to turn off TV and reduce power			
				Match resource to best use		
						Utilities
						University
						Investment banker
Kent 12	Require all new construction to have solar	3	Politics; No trees around house to use solar panels	Solar access zoning; solar/wind job opportunities		Builder buy in to add solar
	Incentivize companies to create cleaner energy	2	Educate residents; Ruined views out to ocean for wind	Internships and opportunities with DNREC and others		Community college students; Local and county government organizations

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 12	More airline drying on clothes lines		Subdivision codes prevent clothesline installs			
	Increase the state's renewable energy portfolio				Cost for energy	Work with utilities for solar; Tesla
	Education on 3rd party energy suppliers	2				
	Expand vehicle conversion from oil to propane and natural gas	2				
	Expand on "community solar" idea--promote for PPA ideas for solar customers					
	Off-shore wind farms (incentivize); Offshore ocean wind farms (NJ to Carolinas) integrated with interstate electrical power-sharing					
	Close Indian River Power plant					
	Massive battery farm (like South Australia and California)					
	Eliminate demand charges for folks who buy solar systems					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 1	Increase RPS	6	Inertia; Prohibit HOA prohibitions on solar/renewables; Caesar Rodney Institute; Fear of increase prices; selfishness, inability to compromise	Education on decreasing cost on renewable energy; Identify future jobs vs job losses; Vote in new administration; Success stories (promote/share); Governmental investment and research	Renewables add to energy efficiency/weatherization program	Utilities; State carbon tax?
	Set net zero GHG by 2050! Measurable results with intermediate requirements		Legislators' concern for small business			Conservation--do what CA did!; Carbon tax (federal)
	New construction: add energy efficient options (i.e. window insulation)	2		Make renewable PO homes and their mortgages (incentivize)		
	Tightening building energy efficiency codes			Change building codes to support sustainability		
	Make energy efficiency rebate system simpler (direct incentive)				Sliding scale income-based incentives; Give away home smart devices	
	Education/marketing (so people understand benefits)	2				
	Support offshore wind	1				
	Reduce paperwork/simplify incentives	1				
	Reinstate solar energy incentives	1				
	Incentives/regulations for utilities to support renewables					
	Increase RPS--100% renewable--deal with the cost cap issue					
	Analyze energy use of existing public building; replace with 3D printed					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 2	All categories: Make intentional decisions about what needs to be lit up and when		Changing people's habits; Security and for lights on	Apps for metric for when lights are on or off to change habits; Motion sensor lighting		
	Renters: Encourage landlords to install solar panels outside windows		Must be a homeowner to request most subsidized energy audits		Audits not available for renters/less opportunities	
	Provide energy efficiency incentives and/or assistance for renters (esp. lower income renters)			Education at all levels		Neighborhood associations, faith-based and community orgs; Champions for education
	Sustainability business "bonuses": Government for business, business for individuals			Workforce development		
	Government: Subsidize only GHG-friendly energy generation types				Challenges for the economy to only subsidize RE	
	Landlords: Should be encouraged to install solar panels					
	Cars: Hydro install solar panels on roofs of cars to recharge					
New Castle 3	Offer energy audits for homeowners & renters	2	Education and outreach	Tax rebates for efficiency measures		Energize Delaware Delmarva Power for audits
	Vehicle to grid: Allow energy resale from solar back into grid and for grid to use e-cars for balance	4	Proliferation of EVs; Fossil fuel interests; Cost of extra special EVs/infrastructure required for vehicle to grid; Coordination of multiple levels of govt (state, city, etc.)			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 3	Require energy audit at point of purchase or rental for competition	1		Ranking of apartments/homes based on energy efficiency to incentivize upgrades; Keep a free market & bipartisan focus	EE upgrades jacking up price of affordable housing; Grants for affordable housing EE upgrades	
	Promote tax break? Common energy grids for local neighborhoods (e.g. nearby school with solar panels supplying nearby homes with power (Microgrids)	1		Promoting programs to allow consumer to choose energy supplier/type		
	Regional carbon tax				Proceeds from carbon tax → low income upgrades	TCI as example for regional carbon tax
	Mandate solar panels, EV chargers, heat pumps, efficient electric appliances in new construction	1				
	Reduce reliance on biomass/agricultural waste gas capture	1				
	Electric cars	1				
	Federal government infrastructural development (i.e. light rail)	1				
	Encourage EV use through having more charging stations					
	Combine solar job training with installation on low-income homes					
	Take energy audit for home					
	Install smart programmable thermostats					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 4	Renewable energy collaboration with PJM (manager 13 state grid)	4	Cost; Poor leadership; Hard to find out about alternative power companies; Ignorance of choices, cost, fear of change; Lies undermining and misinformation; Added cost of renewable energy generation	Establish microgrids with renewables; Community renewables; Change our private comp to public	Green jobs and justice; Job training made available to poor communities in renewables to provide jobs; Understand how power generation and transmission works--lack of general understanding	Exelon needs to use more renewables; Other states (MD, PA, NJ--all on our grid); What are micro-grids? Need to mobilize fast; DNREC; Delmarva --> EXELON; PEPCO--> EXELON; DE power doesn't just come from in our state--the grid governors, power companies' shareholders, environmental groups; Municipal services corporation (nonprofit)
	Energy generation (reduce point source emissions of CO2, NOx, SOx; carbon sequester.)	4				
	Solar farms south of NC County	2				
	All new buildings must be LEED	2				
	Improve and provide incentives for use of public transportation, esp. as this affects those who work at night and can't get a bus home	1				
	Make sure passive solar design elements are incorporated into building codes	1				
	Make charging stations available for EVs	1				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 4	Solar panels on cars					
	Reduce waste by eliminating plastics in large organizations like school and hospitals					
	Homeowner credits for low energy use--not only on peak energy days					
	Get Delmarva to list all new solar homes they install					
	DEclimateplan.org: Survey!, invite our group/earth week					
	Individuals: Buy carbon offsets when traveling					
	Govt: create legislation to ban Styrofoam					
	Buildings/construction (low impact materials, concrete with captured CO2)					
	Business--encourage restaurants to become "green certified." Tax incentives?					
	Reimburse all LEED					
	Provide more community education--speakers for neighborhood groups					
	Explore potential for geothermal energy					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 5	Do energy audits free for low income households (and fund corrections!)	2	Landlords/hesitation	Training and education on retrofitting; Green job opportunities	Educating affordable housing partners; Lack of \$ for upgrades	Habitat; Workforce development, training partners; Foundations and nonprofits
	Provide economic breaks for energy efficiency (solar panels, Elec cars)	4	Appliance obsolescence; Cost of retrofits for lower income; Cost, recovery, timeframes; Batteries and economic energy storage	Solar rebates; Repeal of HOA bans on solar; Long term decrease in cost		Non-profits working in green buildings and energy, utilities
	Incentivize solar and geothermal for heating and AC	3	Unpredictable energy demand on utilities			Homebuilders
	Home-sized wind turbines	1	Wind power impacts on birds; Appearances; Utilities opposition			
	Affordable solar panels		Initial cost of solar			
	Parking buildings should be required to have solar panels and charging stations. Parking lots to include roofs for solar panels and charging stations		More rainy days, less sun			
	Ban the plastic bag	2				Schools/partner programs like products to products
	Improve ease of participation levels in recycling programs					Universities/ education
	Fine polluters					
	Develop solar power options that work on old city houses	1				
	Tax rebates for environmental energy					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 6	Reduce energy costs for businesses and individuals by using clean energy (instead of fossil fuels)		JOHN GREEK never got his state rebate for his energy efficient furnace			Have all sides at the table to choose measures
	Encourage new businesses that do clean energy to reduce reliance from foreign countries (ex: solar panels)		Some people just hate clean air			
	Promote in-state/local power generation-- reducing transmission losses			Sussex county, rural areas, small scale coypen		
	Use more nuclear energy					
	Promote, make available home electric/ heat/air conditioning co-generation					
	Increase RPS to 100% by 2050					
	Promote, make available flex-fuel cars which can use blends of gasoline, ethanol, methanol, biofuel, natural gas, propane					
	Improve the RPS					
	Multimodal transportation					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 7	Solar farms, solar panels over parking lots	1	Community solar legislation is ineffective; Rate increase perception of renewable energy	Increase renewable energy goals--Delaware can do 100%	Options for under-served communities and non-property owners; community solar	Energy developers
	Offshore wind		No legislative organization with the mission in mind; county/ municipality/ state policy overlap/ interaction; Legislative hurdles; Public perception; Political support; Competing uses with offshore wind, birders, fishing, boating/ recreational uses; Funding	Executive order or law to lay out bidding process for offshore wind; Jobs, skilled jobs, business growth, economic growth, clean air, improved health	Are the externalities a greater cost than the cost of new energy infrastructure?; Who pays?	Energy service companies
	Building code modifications to require solar panels for new development		No central coordination among local governments; Cost not yet viable for developers	Ramp up pace for existing buildings		
	State support for distributed energy resource innovation	2	Work with DEMEC and the muni electric utilities to facilitate CHP with their footprint; Balance air quality standards for distributed generation with climate benefits			
	Change school and other state vehicles to electric		Funding for schools seeking to electrify bus fleets and update necessary infrastructure			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 7	Create and RFP for offshore wind (commercial size, low cost/ competitive bidding, bid 2021 and start building 2023	5				Copy bidding legislation for offshore wind from other states
	Support bio digestion to provide RNG	1				Dept of Ag, Del Solid Waste Authority, R&D with state colleges, utilities
	Incentives for company-deployed energy efficiency funding					Energy efficiency/ sustainability ranking for public relation perception of a company
	Electrification of state and local fleets, integrating vehicle to grid operations	2				
	State fleets: analyze range needs and buy EVs as possible	1				
	Carbon fee and dividend that partly funds resilience (support at federal level					
	Reduce food waste					
	Energy storage					
	Geothermal					
	Microgrids/resilience					
	Assist buyer process EVs					
	Design a bill to procure offshore wind					
			RPS freeze			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 7				Drastic reduction in offshore wind/solar/energy/EVs/energy efficiency		
						Local education and advocacy groups (Green Building united, Delaware Energy Service Coalition, Sierra Club, Energy and Sustainability roundtable)
New Castle 8	Retrofit buildings for efficiency					
	Govt: Support/incentives to make schools more energy/resource efficient					
	Arrange ways for students in schools where people drive to school individually to carpool					
	Including incorporating GHG and climate effects into cost-benefit by life cycle analysis in the state					
New Castle 9	Community energy project	4	Delmarva Power; upfront cost; need legislation	Local jobs!; better education of the opportunities of changing job opportunities and careers; Lots of land for solar; Reuse brownfields	Wealthier communities can afford it; Address inequity by targeting EJ community	Solar installers; Deltech; Energize Delaware; VoTech schools; DEMEC
	More trees, bush-friendly rules for properties, urban forests! Walkways	2	A lot of DE roads are private roads			
	Subsidize electric charging stations	4		Statewide policy for consistency; Recentralize power source		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 9	A better realization that renewable has to be windmills off coast	3				
	Enhance Delaware's RPS	1				
	Offshore wind regulations					
	Change impact fees to pay for renewables/EE					
			Building administrative support			
				Incentives for ag land		
				Smart grid interface		
New Castle 10	Move to minigrids and onsite power generation (e.g. fuel cells, solar) and thereby waste of energy then grid transmission		Manner of ownership, apartments/renters vs single family; Timeframe of cost investment, what incentives for renters/ low income/businesses inconvenience; tech won't solve everything			
	Peak demand reduction (smart therm, demand response, etc.)		Cost to consumer, cost-benefit, program funding, personal value for EE, education/knowledge, relate EE to reduced impact			
	Improve insulation of buildings and infrastructure in Wilmington--some homes are from 1930s and do not keep heat/AC in well			Jobs/new businesses, return on investment, comfort to homeowner; EE connected to climate change, low-hanging fruit	Identify EE value for all; Thresholds for consumption; Landlord incentives, incentives for tenants, education to low income groups to pursue EE jobs	Energize Delaware PACE program

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 10	Decrease carbon-based energy generation	1				
	Use less energy (improve efficiency of devices, personal less use, alternatives to transportation					
	Reduce consumption by individuals and businesses that enable reduction of demand for energy					
	Expand municipal solar					
	Increase density of human communities and thereby reduce demand for energy for transportation					
	Low income incentive program for retrofits					
	Upgrade the current renewable energy portfolio standard to 100% by 2035					
	Remove all state subsidies on fossil fuels					
	Creating ways of reducing large flux in energy consumption in electric plants due to solar energy usage					
	Require utilities to offer Time of Use rates					
	Ban coal					
	Incentive for renewable energy					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 10	Establish community solar for both low-income communities and others (those who can't easily install on home)					
	Allow individuals to dig geothermal wells at their personal homes					
	Invest in nuclear fusion and design of safe smaller stations					
	Get Delaware to invest in offshore wind					
	Require utilities to offer customer choice for 100% renewables					
						DelTech programs, VoTech high schools, West End neighborhood, EfficiencySmart.org, Energize DE, Delmarva Power, Energy providers, Recurve, DNREC, PSC
New Castle 11	Wind and solar development/ community solar	6	Space; initial upfront investment; push back perception of land use issues/location of installations; capitalization for cooperative solar or wind installations			Public-private partnership with business & residents; schools; state incentives municipalities - public/private - business/residential partnerships
	Provide incentives or rebates for homeowners to conduct energy (?)	3				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 11	Require all new buildings to be net-zero or net-positive energy	1				
	Expand research to make nuclear fusion a continuous process	1				
	Push info out regarding smart energy out to communities					
	De-classify natural gas produced by "Bloom Energy" as renewable for RECs					
	Have utilities co. make a clean electric					
New Castle 12	Create a "green Bank" so communities can afford projects to improve on energy efficiency	3	Lack of political will to fund another program	Involve commercial banks	Accessibility to all	Commercial banks
	Retrofit old buildings that are not EE		Limited funding available for RGGI	ROI--is long term; Validation of EE installations by Certified Auditors--homeowners object to it time consuming	Affordability of retrofit	Construction community
	Education homeowners on energy efficient homes/ appliances			Weatherization incorporated into comprehensive approach		
	Update gov. buildings			National energy code updated		
	Reduce embodied energy in buildings	1			Landlords are reluctant to invest apartment retrofits	
	Light sensors in rooms	1				
	Microgrid community/local renewable generation combined with energy storage and smart feel	2				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 12	Use CO2 energy efficient building materials	1				
	Energy Solar/wind farm on public/open spaces					
	Encourage urban agricultural gardens for green leaf veg					
	Net zero buildings energy use					
	Gas: cutoff switches; alternator switches, hydraulic electric, gas detectors, fire detectors					
New Castle 13	More wind and solar		Education on renewable energy; Solar/renewables is not a priority for the state; Political will; Hard to access solar			
	Money for low income folks to conserve energy in home and upgrade to cleaner heat			Door to door planning for energy efficient appliances; Incentives for energy audits; Radiant heating systems	Energy efficient appliance incentives	
	Demonstration houses for people to walk through and see alternatives			Shade trees		
	More efficient power transmission and local storage			Anode batteries		
	Community solar with low-income and small business carve-outs				Cooperative approaches to making it affordable; Planning ahead for high utility bills for underprivileged	Partnerships with UD/colleges

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 13	Increase renewable energy goals on a regular basis until 100% renewable					Energy conferences; Elected officials; Utility companies
	Increase energize rebates based on lower income	1				
	Lower city/town demand by adjusting policy					
	Community energy education					
	Local renewable energy generation					
	Financing mechanisms that consider utility bill payment history					
	Feed-in tariff program					
	Incentives for reducing lawn size					
	Reduce packaging					
Sussex 1	Energy - tree canopy - black asphalt (impervious surfaces)	3				
	Bioenergy using chicken droppings	2				
	Solar rebates, new development wind energy	1				
	Most of Delaware's electricity comes from out-of-state power (fast fuel) need to develop solar + wind	1				
	Beat the peak during extreme hot/cold	1				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 1	Landfill recycling	1				
	Geothermal -in municipal or large industrial buildings	1				
	New develop + wind energy					
	Energy - saving lightings					
			Cutting down trees for development	Rain gardens	Grant opportunities for low income	Sussex TAC
			Ongoing mgmt. (cutting down/mowing over new administrations	Install solar on existing paved areas - rooftops etc.	Low-income communities partnering workshops	Small landowners
			Working at cross purposes or bad decisions (e.g. tearing down trees to build a solar farm -put Solar panels on roof tops or roofs over parking lots)	Opportunity for arborists, local companies to make pervious concrete		Grant opportunities with CBT
Sussex 5	What can we do to replace Bloom Energy in Delaware -- new clean, renewable energy company -- not state subsidized	4				
	Incentives for new developments for solar installation	3				
	Energy (power gen) - nuclear (fission today evolving to fusion in future)	2				
	Use pension funds to invest in renewable energy sources	1				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 5			Funding	Job creation	Community solar or wind farm could reduce costs for individuals	Ample studies
			Home loans -school loans -home improvement loan	Replace Bloom with tidal (?) and flow to generate electric	Encourage recycling by all state entities to save money	Schools get development going in a better direction by teaching new teach/ and information
			Cut down on landfill materials by screening and or early separation of reusable materials	More wind, solar, hydro, geothermal -energy production		Teach new programs along with current school programs to get younger generation in the game faster
			Operations & maintenance	Education of younger generation		
			Legislative support			
Sussex 6	I'm a guinea pig/I'm a teacher					
	let's do individual actions----residential services					
	I want to learn how to do this. I want to be involved. water testing salt contamination					
	Get the public more involved----ask us to participate----I need to feel like I'm helping					
	statewide energy efficient appliance rebate program					
				Alternative energy corporations----allow it + make it happen		School program energy savings + wind
				Residential scale windmills/small scale		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 6				More cooperative power		
				Energy vampire education + awards for kids who reduce electricity		
				Look up Milton (town of) website. Find sustainability grant project + share it with any large entity		
Sussex 7	Require builders to install panels; create a unified building code for state		Protected interests of fossil producers/users; County and state and town coordination on building codes	More incentives to schools and individuals for renewable energy--solar panels		Builders would probably support a STATE level building code
	State taking leadership on renewable energy; green amendment	6	Lack of education and political will			HOA and community solar
	Regional planning	1				
	Agriculture solar panels land use					
			Improve ease of applying for rebates for installation of energy efficient system	Assistance for heating and cooling		
				Convert hug gov subsidies for fossil fuels to aim at developing electric vehicles		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 8	Divest pension and other funds from fossil fuel investment----- bus-divest from fossil fuel investments individuals---chase credit card for example	4	Boards have direct interest -industries are powerful -connecting to DE emissions	A lot of inertia - education/outreach - investment in green infrastructure	Return rates could decrease	Companies/mutual/ETFs to partner with
	Energy (?) conservation is just as important as renewable energy---- state should budget money to incentive	2	Cost -apathy, manpower to address	Goes rebates & incentives - videos by students/working schools	Cost for communities/population upfront	SEU -schools -libraries
	Increase rebates so the average homeowner can afford renewable energy options---- currently, too costly for most to consider	2				
	Community then coops.	1				
	Businesses: LEED certifications + new construction	1				
	Purchase power agreements for cites/citizens/ businesses to buy solar/wind NOT on the premises	1				
	Businesses: energy (?) + rate buildings	1				
	Government immediate renewable energy (?) (?) on all new vehicles/buildings					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 8	Gov't: Renewable energy requirements (e.g. solar, wind, wave)					
	Government: expand community solar to help low income communities					
Sussex 9	Solar or other alternatives be economical and alternative					
	Provide subsidies for solar panels and energy saving devices					
	Require solar					
	EV infrastructure in new construction					
	Windmills					
			Why didn't County Council include climate change in 2018 Comprehensive plan?			
Sussex 12	New construction required local power generation	1				
	Utility energy storage obligation	1				
	Community based generation	1				
	Wind energy					
	Utility based storage to get away from demand billing					
	Gov. incentives for solar					
	Power grid demand					
	Weatherization					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 12	Power grid rebound from storm					
			Utilities disincentivize local/res generation	Supporting OC wind farm	Subsidy for community solar farms	Developers - infrastructure upfront
			NIMBY	Local storage of energy from local generation	Rental issues	Municipalities
			Community buy in	Developers required to have % land saved for storage of energy	Benefits to tenant	Utility companies
				Utilities have local storage	Cost of local generation falls on builders - low income property	
				Change model of business of utilities		
				Requirements for energy efficiency need improvement		
Sussex 13	Promotion of solar farms		Cost prohibitive			
	Alternative energy options		Energy storage needs work			
	Promote energy STAR appliances, efficient HVAC systems--govt rebates					
	Cleaner practices at Millsboro/Indian River Coal plant					
	Educate builders, HOAs not to make regulations prohibiting solar, compost, etc.					
	Plant more trees					
	Energy audits					
	Flexible work hours					
	Better architectural design requirement					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 14	Educate property/(?) on solutions & initiatives	7				
	Battery storage	5				
	(?) energy (?)					
	Reward creative energy solutions					
			Defining the audience	Small state	Energy efficiency risk of black outs, which benefits medically at-risk populations	Research (?)
			Trust how it's received / who's speaking	Funding < knowledge	Efficiency saves end-users money	Utilities
			Outreach to diverse audiences	Financial benefits		Schools
			Big Brother (technology security concerns)	Advertising < social media (radio, walk into senior centers, beat peak alerts)		State
			More grants, less loans -can get if health issue	Use existing organizational outreach as a potential opportunity		County
				Research technical institutes/manufacturers		Municipalities
				\$/grant for large land (?) to REQ		Nonprofit, large employer organizations
Sussex 15	Large scale solar (?) (?), no mandates needed - use industrial brown fields for small modular (?) reactors	3	Cost of building	Use new technology to further use waste (more efficient use)	Use of brownfield sites, other nuclear sites (?) decommissioned	Use existing model if used in other areas
	Build nuclear power plant	1	Handling nuclear waste	Get research for other sites to use in other places	Locate away from residents	US Dept of Energy & aware of natural (?) hazards
	Increase renewable energy requirements both business + homes					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 15	Energy savings and updates from energy efficiency key updates to help with clean (?)					
	Number of solar panels in parking lots					
	BMPs provided have all been done in DE					
	Take out: -RPS mandates have exceeded cost cap-(?) - solar is now competitive without RPS mandate -energy efficiency not already exists -building (?) already specify materials					
			Public perception	Bring technology from other sites that use modular nuclear power generators		
			Ensuring safe efficiency rts.			
Sussex ?	More credible cost, analyze products & practices	1				
Sussex ?			Cost of energy	Increase RPS	Connecting with the property owners	Energize Delaware
Sussex ?				Education on available resources	Renters can't always afford to get the efficiency updates if landlord won't	Property owners
Sussex ?				End contract with Bloom	Market forces	
Sussex ?				Rebates on renewable sources from DE		
Sussex ?				Require 2x6 -(?) walls -solar		

Transportation

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 4	Electric school and transit buses	4	Cost; Technology availability; Technical assistance necessary for technology introductions; Infrastructure	Less maintenance, less fuel costs, less impact (oils), more \$ in pocket. \$/mile is down; Reduce CO2; Pilot programs; More EVs to buy	Use lower operating costs to expand operations to more communities	Legislators; Utilities, manufacturers, other states for examples of how to do
	ZEV State	2	Technology availability; Politics; Have to go through rule making process, legislation	Less maintenance, less fuel costs, less impact (oils), more \$ in pocket. \$/mile is down; Reduce CO2; More EVs to buy	Cost savings long-term for low-income; Incentives to offset increased costs for low income residents	Legislators; Utilities, manufacturers, other states for examples of how to do
	City planning making more communities walkable/bikeable (VMT reductions)	2				
	FCEV	1				
	Include used EV credits to assess low income drivers					
	Add electric charging stations to more gas stations					
	Replace AFs, Reduce EG (biofuel blends), eliminate VMT reductions					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 5	More bike paths along roads and highways; off-road bike trails; More walkable/bikeable	3	Not enough bike/ped facilities; Safety while biking on roads; Bike trails for recreation v. transportation (meeting both needs); Lack of physical fitness; lack of culture around walking;	Creating safe areas to park and put your bike; Zoning and building: best practices to have destinations connecting between by biking and walking; Beach areas because of parking problems; Connect residential with downtown; Increase kids walking and biking to school; Education on bike/walk (e.g. safe routes, Bike/Walk America); Returning to bikeable, walkable (used to be like that); Take advantage of generational interest	Focus on recreation bike trails over necessary transportation routes; People who need to walk and bike to work-- facilities for them	Local school--for kids to bike to school (Safe Routes); Charging stations at destinations; Employers
	Increased bus service areas	1	Limited service and stops	Modal connectivity (bus to bike); Real time bus info	Access to healthcare, grocery, food, basic needs	
	Sync stop lights so there is not so much idle time at lights (e.g. Rt 13 to Norfolk, VA)	2				
	Passenger rail service between Dover and Wilmington	2				
	Many, many more charging stations for electric cars	1				
	Marketing new public transportation ideas to young working adults	1				
	Tax on gas guzzlers	1				
	State rebate on energy efficient vehicles					
	Downtown trolley for area and surrounding					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 6	Statewide light rail; more user-friendly and convenient; give a discount on bikes in June to encourage more bike use; electric cars, electrify public transportation (similar to Milwaukee)	5	Time consuming, long periods of construction, expensive; cost/funding; Time to implement or install for rail	Job creation, reduce traffic congestion; clean air, highway safety; incentive to trade in old vehicles for electric vehicles	Public transportation helps; Free public transit is a huge equity opportunity; bridge equity gaps; rural communities; access to public transport at all areas and times	Charging stations will sell new cars, should make dealers happy
	Encourage installation of new EV stations	3	Charging stations are a huge barrier right now. Public stations			
	Use technology to record fuel purchases by vehicle and tax over a pre-determined usage by category	2				
	Encourage (incentivize) bicycle use in built up environments	1				
	Better train service to Philly and Baltimore (currently low frequency)	1				
	Install infrastructure for web conferencing (work from home, web conferencing with state buildings and all large businesses)	1				
	Bike routes need a lot of work! Invite and regulate electric scooters (Lime, etc.)					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 6	Need more safe bike routes! Park and rides between counties.					
	Add infrastructure for electric vehicles to existing gas stations/parking (charging stations at gas stations)					
	Better land use planning for walkable and bikeable communities					
	Place Delaware on Zero Emission Vehicle program; make improvements to road layout and use plans to improve efficient use, i.e. no LED lights every 50 ft for each entrance to development; look into development of hydrogen fuel cells and related foot print					
	Hybrids/electric vehicles for state vehicles					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 8	Stopped/idling vehicles drive wasted fuel-- traffic light control and speed limits could significantly improve efficiency					DeIDOT traffic control/flow improvements
	Public transportation between counties such as transit from Dover to Rehoboth, etc.					Delmarva, DART
	Electric public transportation					
	Improved walkability for alternative modes of transportation (bike lanes, safe walkways, sidewalks)					
	Higher density development to increase walkability and reduce transportation needs					
	Improved incentives and housing options that encourage walking and public transportation vs suburb living					
	Change in school drop off (pick up to reduce lines of idling cars)					
	Instead of using cars, use bikes or scooters					
			Information			
			Expenses			
			Money			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 8			Perception: Is public willing to pay more for eco-friendly solutions?			
				Enhanced rebates to drive more efficient car purchases		
				Consider lower emission requirements for vehicles than federally mandated (like some other states have enacted)		
				Increase awareness of energy sources and pollution		
					Electric vehicles could be cost prohibitive	
Kent 11	Combine bus routes/options to combine schools/public transit		Safety	Make transit free, already have subsidized buses		
	Require new businesses work plans or carpooling quotas		Gas is cheap in DE		Price of gas: increasing prices affect low-income populations	
	Light rail network in state		Rail lines to be upgraded; Rail systems do not break even		Rail works better update versus downstate; Rail may be too expensive	
	Fee or tax based on engine size of MPG for cars			Scrubbers on vehicles; Clean diesel; Incentives for more fuel efficient vehicles		
	Drone delivery			Smaller EVs for delivery? Pharmacy delivery		
	Recurring costs/taxes for more powerful engines					
	Lawns are carbon sequestrants					
	Mileage based fees-state gov					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 11	DE HOV					
	Carpooling					
	Factor pollution into trade negotiations					
	Look at lower friction tires					
	R&D around algae & other biogas					
			Adequate infrastructure for electric; Cost for EVs upfront and maintenance; Limiting for long distance trips; EV might not work for trucks; Move to EV reduces DelDOT revenue, not to maintain infrastruc.	Solution to range, battery storage capacity, R&D on charging		
Kent 12	EV charging stations	2				
	State fleets use only alternative fuel vehicles	2				
	Increase the cost of gas	1				
	Subsidized electric vehicle commuter network (all day, all night, point-to-point)	1				
	Rail system from Dover to Wilm.	1				
	Require all new parking lots to install x% EV chargers	1				
	Solar power heated bus stops, safer bus stops					
	Ebikes!					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 12			Families are busy with multiple activities that are spread out			
			EVs are not readily available at car dealerships			
				Create and promote better bus rates. Create incentives		
				Employer incentives for commuters		
				ZEV mandate		
				E bike share programs, Ebike incentives		
					Reliability	
					Not allow 24% interest on old car loans	
						"Arcimoto" - Small functional, sub \$20k vehicle for first responders
Kent 13	More telecommuting options for state gov employees		Appropriate technology for telecommuting; not all types of jobs can be done off-site	Flexibility of location and hours	Telecommuting can have other benefits, (e.g. for disabled or chronically ill workers)	Telecom
	Emphasize public transportation, biking, walking in development plans				Lack of mass transit facilities in low income/disadvantaged communities	
	More bicycle friendly town planning	1				
	Coordination between local and distant bus routes	1				
	Rebates for used electric vehicles					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 13	More trains instead of buses (too much congestion)					
	Raise awareness and safety for pedestrians, cyclists					
			Urban sprawl (not walkable)			
			Lack of sidewalks			
			Lack of communication/synchronization			
			Lack of face time			
			Social isolation			
			Availability of broadband			
				"Mini" transit (vans) from/to population centers and work centers		
				Job attractiveness		
				Interest in car-free lifestyle		
New Castle 1	More transit and bike/ped friendly alternatives		Communication of opportunities	Reinstate transportation improvement development planning		
	Implement appropriate road expansion plans now! And hold developer responsible	1	Cost			
	Use VW drive smart money for charging station			Require gas stations (or new stations) to include charging stations; Provide incentives	Low income families cannot afford electric cars; More rebates for lower income to afford electric cars	Oil spill \$; VW settlement \$
	Join Transportation Climate Initiative	1		Gas tax		UK/Japan/CA climate policy organizations for their methods

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 1	Enhance connections between DE cities to enable biking and walking	1		Business partnership		
	Increase CAFE standards	1			Microloans/financing for low income	
	Electric hubs (DE ranks 24th)	5				
	CAFE standards--does CA still have? We should adapt					
New Castle 2	Go back to riding bikes	1	Changing weather for biking as a result of CC; Lack of bike parking	Education for safe driving; Electric bikes; More bike paths separated from roads; Bike safety education and infrastructure		
	Research how to encourage Wilmington and other cities' commuters to use public transport (buses). Idea like a larger commuter parking lot and frequent buses		Cost of public transit, convenience of public transit	How to incentivize buses. Commuter lots?		
	Design of Cities/ Population centers to maximize options for transport (can be complete streets, can be urbanization restrictions)		People are settled and won't/can't move	Smarter land use/redevelopment for older buildings		
	Make things local so you don't need to drive to them		Suburban sprawl; Understanding which is a better choice, Amazon delivery vs pick up			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 2	Improve affordability and accessibility (routes) for mass transit (light rail)				More affordable options for public transit	
	Raise the price of gas	1				Men stop shaking hands
	Make bus fare free for seniors and kids under 12	1				
	Teach in schools better driving practices (e.g. no excessive idling)					
	Riding bikes!					
	Hybrid and electric buses					
	Use bus to get to work					
New Castle 3	Expand hours of service for public buses (nights and weekends)	2	Lack of will; Limited density (maybe not enough to support public transit infrastructure)	Collaboration/public engagement like this; Support light rail from Wilmington to Sussex	Access to public transit--currently have to cross dangerous roads; Accessibility to stops, routes, boarding	DNREC and DeIDOT; Auto dealers; Free bus passes for employees
	Encourage walkable communities through zoning		People's need/desire for freedom/flexibility	Bike sharing		
	Move to cities or small towns where everything is walking distance		Lack of safe convenient bike paths; Lack of sense of urgency			Employer incentives for walking and biking
	Public busses and shuttles using electric	2	Grid needs to be prepared to support electrification; Don't have the infrastructure to efficiently charge electric buses			
	Gas-guzzler tax	1		Higher insurance rates for larger cars		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 3	Natural, regional, local light rail system--top priority at all levels	2				Federal grants for rail projects
	Move to electric buses	2				
	Work from home, shop online	1				
	Encourage housing development around public transport. hubs	1				
	Create petition process for on-street parking for EV chargers	1				
	Solar panel "shading" over parking areas (can support EV charging as well as buildings)					
	Four day work week!					
	Express lane/ communication between busses and lights					
	Synchronize lights on main roads					
New Castle 4	Light rail everywhere	3	Cost			
	Marine bunker fuel--regulations behind schedule	4		Education needed, coastal state priority; Biodiversity, health	Contaminated fish eaten by poor communities	
	Port operation (diesel idling, goods movements--fuel, electric forklifts, etc.)			Create dialogue and relationship with port of Wilmington as it relates to water quality and job creation		Refineries; Seafood industry; Tourist industry

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 4	Marina regulations-- personal watercraft-- fuel efficient emissions	1				Port of Wilmington' What agencies sets standards for personal watercraft emission standards?; Local towns and universities and environmental groups; DE River and Bay Author- ity; Port towns; DNREC
	DO the best practices!	1				
	Electric buses, trash trucks	1				
	Improve public transportation (expand hours for buses, hydrogen bus/van investment)	1				
	More public transportation esp. to and from job sites	1				
	Trip planning (apps?) based on minimizing GHG emissions					
	Build safer bike lanes					
	HOV lanes, the only one without traffic jams --> carpools					
	More flexible bus routes including nights					
	Improve and expand intercity train service					
	Fewer parking lots, more carpools					
	Do not go to Amazon Prime for all your needs					
	More greenways					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 5	Free bus transit; better bus and train public transportation	3	Lack of shelters; Used to convenience of the car we own; Infrastructure is built with personal auto transportation assumed	Analyze traffic flow; more shelters; Mobility on demand; Wi-Fi, bathrooms, amenities (SEPTA); Dedicated higher speed/dedicated bus/rail lines	Affordable monthly passes (fare capping)	SEPTA, DART, business community, carpool, vanpool, TDM
	More EVs and charging stations		Lack of charging stations; Home charging in urban areas	Public EV charging; EV prices coming down	Cost of EV	Business community install charging stations
	Limit entrance via personal vehicle into cities (Wilmington especially), alternate days by license plate	1		Carshare/vanshare; Eliminate or reduce business deductions (or tax credits) for fleets of cars (unless they are EV!)		
	Active transportation biking corridors, sidewalks	1		Bikeshare program; Electric bicycles		
	Improve sidewalks to encourage walkability in suburbs	2			Better street lighting for night walkers; Free buses would benefit people with fewer resources	
	Reduce sprawl, encourage land preservation	2				Local community organizations
	Install charging stations around whole state	2				
	Incentivize or disincentivize MPG car and truck purchases	2				
	Smaller buses and more frequent	1				
	Establish business and residential codes that create clusters for transportation, share energy use--geothermal					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 5	Safe, reliable, affordable, call-up transportation					
	More bike paths and reward bikers					
	Develop more bike trails in town and suburban areas					
	"Buy back" of old, polluting vehicles/ replace with more efficient (esp. for low income families)					
	Invest in more public transportation to the beaches in the summer					
New Castle 6	Encourage shorter commutes, more mixed-use, denser, urbanize					
	Attract car companies to sell EVs in DE					
	Change out DART fleet to electric					
	Build hi-speed rail from Wilmington to coast					
	Encourage (i.e. provide incentive funds from TCI or even RGGI) to develop complete communities Enterprise Districts					
	Encourage cooperation with other states on TCI regional					
	Sign onto the TCI					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 6	Put a price on carbon (TCI)					
	Promote/make available flex fuel vehicles that can use any fuel--gasoline, ethanol, methanol, natural gas, propane					
	SPRAWL costs municipalities \$--why don't they know it?					
	Provide county and municipal governments with seminars on cost/benefit analysis for residential vs open space					
	Facilitate communication between DelDOT and DNREC					
New Castle 7	State funding for more robust electric vehicle charging network		Inconsistent regional distribution of charging stations cross state; Public service commission lack of support for EV filings from utilities (including charging infrastructure); Political support, public perception	Switching to autonomous vehicle fleets that are not owned by individuals	Funding for installing public charging access--who pays?	Utilities
	Increased access to public transit, particularly in high-density areas		Proper planning of bus/mass transit routes	Reduce operating costs		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 7	Assist buyers in choice of EV options (range, charging option)--like "agric extension service"		Higher costs, lack of decision support, Charge- Point anxiety; Lack of information/ knowledge about existing incentives/ opportunities available; Power surges; Lack of public charging access; Range/charging ability/ perception		Underserved cannot afford	
	Work at home everywhere its possible (for state employees too)	1	Corporate culture and policy supports the drive-to-work constraint			
	Requirement for charging stations in residential areas		Multifamily and non-homeowner home charging			
	Electrification of public transit and state/local vehicle fleets		Refueling and recharging infrastructure; Available infrastructure and access			
	Tax on new gas powered vehicles				Low income people often can only afford older vehicles which use more gas	
	State fleets to EVs, evaluate all uses and adopt 100% of appropriate duty cycle and range needs	1				EV manufacturers/ retailers; Coordination for EV support via associations of states
	Create incentives for company service vehicles to electrify/ deploy grid-integrated systems					Electric utilities

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 7	Mass transit electrified	2				
	Tool /education/ out-reach in range/charging	1				
	Incentive for car sales people to counteract the longer time it takes to sell EVs	1				
	EV dealership education					
	Dealership training for EV deployment					
	Businesses taxed for business trips (encourage working from home/locally)					
	Invest heavily on charging stations with EV incentives					
				Class 7+8 CNG RIN's for RNG		
				Grid to vehicle		
				Clean air		
					Gas tax only on gas vehicles	
						R&D groups and universities for pilot programs
New Castle 8	Schools incentivized to decrease high school drivers (less parking permits)			Changing norms on what traveling cars mean similar concept as "flight shaming" in Europe		
	Govt: Increase gas tax with rebates based on income (more rebates for lower income)			Vehicle miles register fees instead of an annual fee. Pay per mile		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 8	Govt: Incentives to encourage car/ridesharing					
	Convert GHGs into useful chemicals					
	Govt: Consolidation of school buses					
	Find transportation options for students who go to school in Wilmington but live in farther places like Newark					
	At car dealerships or sellers inform buyers about the carbon footprint of their car					
	Make school busses electric and put solar carport on school bus parking lots					
	Businesses: More telecommuting					
	New bus system (getting more riders on the buses, current loads are very light (13%), simpler straighter lines)					
	Change language across all state websites to reflect and legitimize climate change					
	Govt: Land use/development planning to minimize sprawl					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 8	Adjust traffic signals to sense traffic flow and minimize "idling" when there is no cross traffic					
	Trackless trolleys. Build fixed routes that do not deviate and are more direct					
	Build "transit corridors" that will encourage more development and housing and frequent transit service					
	Change permitting to require a "climate assessment" in addition to an environmental assessment					
	Make more straightforward bus routes (focus on areas that need public transit)					
			No/little political will			
New Castle 9	Change driving culture	2	Cultural/preferences	Lime scooters (especially near university)		Wilmapco; DART
	Land use and zoning coordination	5	Sanctity of private property rights	Revise application for Downtown Development Districts to account for public transit		
	Parking changes and regulations (remove free parking)		Parking formulas			
	More pedestrian bike/walk friendly paths	2		Good lighting in walkways	Will make carefree culture easier for low-income	Lighting Study (IPA)

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 9	Subsidize electric charging stations	1				
	Dedicated busways on high traffic routes					
	Resolve last-mile ride problem					
	Bike parking spaces, lobby lockers, other considerations					
			Legality/federalism			
						OSPC
New Castle 10	Develop systems (development plans, codes, etc.) to promote alternative transportation systems	2	Cost to environment of new tech (lithium mining); Private capital decides modes, lack of gov policies; prioritize transit lanes; Personal value, personal cars; low density development; Lack of convenience to public transit; Loss of fuel tax; Lack of connectivity between developments; Safety for bike/ped; Cost of infrastructure (light rail)	Aging transformation use transit; Public investment benefits public and private; Buy back electricity, vehicle to grid; Trails statewide; Congestion pricing; Business incentives for remote working (tech enhancements); Increase density; Zoning for mixed use	Racism and public attitudes affect who has access to transit; Ridesharing, EV auto driving cars; How to incentivize low income EV owners	Nuvve Vehicle to grid; Bus/van manufacturers; Lyft/ Uber; DART/DeIDOT; Bus companies
	Improvements to public transport. and financial incentives to use public transportation	4				
	TOU rates: Off-peak EV charging	1				
	Website to report excessive vehicle emission like Maryland					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 10	Commit to not purchasing any more Internal Combustion Engine (ICE) government vehicles by maintaining the current fleet until cost-effective EVs are available--many already are!					
	Encourage DART's fast charging electric buses (using solar)					
	Trains					
	Public transportation and bikes					
	Reduce demand for transportation --higher density development, mixing nearby uses of land					
New Castle 11	Make public transportation more available to all locations	4	Alternative hub locations for better connectivity between lines - pushback from local property owners/businesses; cost/ personnel; time from planning to design to implementation; public opposition to transit vehicles running empty return trips; opposition from construction unions	Increase pay for bus drivers making more attractive as a job; employ 'on call' smaller vans etc. to connect to larger routes, like shared uber; job creation	All subsidies require tax revenues because what govt gives must be taken; increased taxed for those who drive non-environmentally sound vehicles	DART; State; local institutions; businesses
	Carpool lane on highways	3				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 11	Expand transit service - perhaps even free transit when/if can be shown to reduce congestion and GHG at lower cost than adding pavement	2				
	Mandate ZEV for public transportation by a target date	1				
	Bike garages/racks covered near solar panels - could double as EV charging stations	1				
	Incentives to companies that have work from home options	1				
	Personal vehicle buyback program - give people incentive to get rid of cars they currently drive; provide some sort of stipend toward purchase of low emission alternative					
	Provide tax incentives for business using ZEV for fleet/transportation					
	Around the clock utilization of public spaces, leave other spaces open					
	Bike share in urban areas and along regional trails in suburban/rural areas/small towns					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 11	Try to have needs met in your local community - less travel needed					
	Align electric vehicle station # and locations with projections and service radii					
	Mandatory dedicated bike lanes near all new or expanded motor vehicle lanes					
New Castle 12	Increase EV rebate for used EV		Limited funding; Reduced \$	Price will come down as more are purchased; Install more infrastructure as demand rises	Lack of charging infrastructure in low income neighborhood; Low income cannot afford them, used car market rebate	Federal Govt
	Complete Communities (infrastructure)	1	Cost; Housing developers, commercial developers; ROI for funding--is it worth the investment?; Land use, old infrastructure	Retail parking should require charging; Rail system on Rt 1; Change zoning code for parking requirements to require charging	Affordable housing, urban gentrification	
	Land use plan changes encouraging brown-fields development and concentration of population to establish a base for transit	1	Existing communities	Development with net zero energy		New corporate development, property owners, banks
	Govt purchase electric vehicles for their fleet		Charging stations; Lack of EV market by auto mfg	Better emission control		
	Government can do more walkable/ bikeable communities			Changing public opinion for walkable/bikeable communities	W/Bike are not built in low income areas	

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 12	Mileage based fee	2				
	Raise the gas tax	1				
	Business: Consider carbon footprint when buying goods					
	Business: Divert from fossil fuel companies					
	Business: Encourage clean commute modes for employees					
	Business: Flexible work schedules					
	Individual: Trip sharing (multiple errands in 1 trip)					
	Individual: Limit transportation choices and know the source of your purchase					
	Public transportation baseline using NG ZV even better					
	Increase low-interest auto loan for ZV for banks					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 13	Political/zoning changes to provide for more pedestrian, bicycle, and public transportation-friendly city/town centers plus connect towns with safe paths		Geography of north DE makes routes in Wester area hard; Incentives for clean transportation transitions (cars); Impacts of amazon and Uber on traffic; Not enough funding: transportation is very expensive and DE is a small state; Access and public transportation for new large industry	Markings; Incentivize Uber for EVs; Improve safety of pathways and bike lanes; Adding Delaware County to Wilmapco; Providing more bike and walk opportunities in flat areas; Signage on trail;		Partner with PA on transportation; Wilmapco, county planners, a few city planner; DART
	DART bus system scheduling and routing		DART website	Weekend and event routes; Horn Center: App contest for better website; DART website improvements		
	New funding models needed to replace gas taxes				Costs money to transition vehicles; Equity issues	
	Coordinate signals with ped/bikes and link bus/train/shuttle schedules					
	Encourage more condensed development to reduce driving					
	Regular train between Wilmington and Dover and Beaches					
	Incentives for electric bikes					
	Shelters for bus stops					
	HOV lanes					
	Convert government vehicles to electric					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 13	Raise roads up out of flood areas					
	Incentives to install vehicle charging stations					
	Provide analysis (spatial) for transportation access for low-income communities, include racial analysis					
Sussex 1	Encourage electric buses (rebates and tax incentives that do not run out)	3				
	Public transportation (park + ride)	3				
	Light rail	1				
	Electric buses	1				
	Complete streets					
			Limited bus service	Rail from Sussex on Dover north for Amtrak connect	Ability to buy cars - esp. EVs	Amazon limit truck, you uses
			Big - co. policy does not allow telecommuting - tax incentive	Corporate shuttle buses	Electric cars are very expensive, which is a barrier to ownership for low income people	
			Not enough public transportation	Encourage paddling, sailing (active marine transport) instead of engine boats		
			Recycled batteries	Less approval of gas stations - more EV charge infra		
			Cyber hacking on power grid potential	Turn parking spaces into locker rooms		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 5	Rebates for electric or low emissions construction/industrial equipment	2				
	DART service expansion	2				
	Incentivize businesses to have electric fleets	1				
	Increasing public transportation options on route 1 corridor	1				
	Increase availability of public transportation and run that transport from green energy i.e. solar					
	Until the electric power grid stops being dependent on fossil fuels... - EVs are a really BAD idea -smaller IC engines in the short term					
	Improved long distance bike trails					
			Funding	Mobility on demand	Mobility for rural population	Non-profits like CHEER
			Low population density	Higher fuel tax		Large, area employers
			Seasonal traffic	Smaller buses for transportation drivers		Hospitals + medical facilities
				Increase DMV inspections on emissions		Major shipping companies
Sussex 6	Things to boost----clean car----used market					
	Implement the CA LEV/ZEV mandate					
	Make small cars more affordable					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 6	Cross gov. + cross agency integrated assessment -transp. - drinking water integrated planning					
			There isn't anything in the state constitution that is a gran amendment	Energy efficient school buses	There's a stigma to taking the bus	Toyota + cleaner car companies
			We have good buses to Wilmington but little use actually	Better public transit (non-summer times)	Low emission vehicles are \$ for residents of DE	
			Need more transit in my area----use empty rail tracks	Grow your veggies---victory garden is a good model		
Sussex 7	Combine several parking garages with solar panels and take public transit to beach			Bethany Beach has seasonal transportation trolley		
	Convert gas station to charging				Affordability and availability	
	State lead by example: deliver best practices, accurate information and role coordinator and communicator	6				County planning
	Cooperation and planning between Ocean City MD and Delaware (MWCOG model)					MWCOG; County planning
			Lack of density			
			Lack of government leadership in this area			
			Process: EV incentives are challenging			
			More charging stations			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 8	No idling anywhere--- stop idling at schools--- not cost to state	4	Not enforceable -police might not want to, lack of manpower -data on hotspots, lack of awareness	Anti-(?) device -education/ outreach -gas usage for on/off who has the knowledge & manpower (DOT + who? +DAQ (is there video or comms?)) - on various levels dept. health PSAs -impact other people - kids to have personal air monitor	For vulnerable populations, health benefits	DOT, DAQ, public health, companies that use trucks, non-profits, education, local police & emergency departments
	Delaware needs to get a better (?) land use + development -the out of control suburban sprawl is (?) lifestyles (?) people drive too much -meanwhile towns and cities are being abandoned	4	No plan -developers financial interest - people don't want a more condensed/urban enviro	Local gov strategic planning - revitalizing rural areas - marketing as sustainable areas	Fair housing	County & (?) govs - developers -academia - federal programs -non profit/education
	Bike paths -(?) all youth to learn to ride or repair -zoning that (?) living (?)	2				
	Encourage carpooling for businesses -allow extra time for carpoolers to get to work	1				
	Rapid bus transit - especially to airports, large cities -free buses- move people	1				
	Financial incentives for low emission practices					
	(?) into bases----at least (?)% of the population					
	Add/improve bike lanes					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 8	Businesses: provide incentives to employees to ride share government: school mandates for no idling zones (parents/families + school buses) individuals: develop "family/house transportation plan"					
	Government----					
Sussex 9	Build safe bike lanes (no shoulders)	2	Not enough right-of ways for bike lanes	Bike lanes, tourism increasing		County and DeIDOT
	Increase housing density (zoning) near employment centers	2	Lack of interconnectivity between developments	Mandate interconnectivity between new HOA development	Affordable/workforce density housing	
	Promote car purchase for ride sharing	4	Ride sharing insurance			Ask an established car rental company to offer this type of service
	Expand electric transit and educate people			Mandate electrical prep for EV charging in all new construction		
	Double decker highway on routes from Nassau Acres to Rehoboth on Rt 1					
	Neighborhood amenity, online/grocery orders, shopping HOAs	2				
	Scooter with helmets					
	NYC-DC: boring company EV tunnel extension from 1-95 to the beach					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 12	More public transportation	1				
	Incentive for EV charging at locations where profit is not made					
	New gas stations required charging					
	Charging infrastructure for EV's					
	Trains/monorails					
	Congestion - gng					
	Communication about EV charging					
	Electric buses					
	Reduce registration fee for EVs					
	HOV lanes					
			Income from parking in destinations	Community owned buses to haul people	Rural access to public transportation - east west	DART
			Not walkable public transportation	Monorail		DeIDOT
				Variable tolls		Communities (?) (?) (?)
				Local communities incentive shuttle system		
				Smaller but more buses		
Sussex 13	Priority for bikes over cars, especially in congested areas			Multimodal, safe bike trails everywhere; Bikes as transportation; Require sidewalks and multimodal paths everywhere	Ensure recreation and multimodal paths in all neighborhoods	
	Reduce speed limits			Make price of transportation reflect ALL of the costs that fuel creates		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 13	Drive less			Savings on auto insurance; Seek happiness closer to home; Education kids about alternative modal options (walk, bike to school); Encourage walking not driving to bus stops; Live where you work and play		
	Drive less savings on insurance rates or something					
	Reduce speed limits					
	Provide monetary saving to people for driving less					
	Priority for bikes over cars particularly in congested areas					
	Seek happiness closer to home					
	Walking bus (done in NJ)					
	Bicycles equal freedom for younger people and non-drivers					
	Educate kids about alternate modal methods (walk, bike to school)					
	Reduce number of break points in deliveries					
	Make price of transportation fuel reflect all of the costs that the fuel creates					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 13	Need regulation of lawn care. Unmitigated gas engines in blowers, generators, mowers					
	Have more bike rental areas					
	Multi model, safe bike trails everywhere					
	Rebates for driving more efficient car (example- switching from 8 cylinder to 4)					
	More trains - nationwide hi-speed					
	Local sourcing of all aspects of our economy					
	Encourage walking not driving to bus stop					
	Bicycle has transportation					
	Work schedule					
	Mobile source ambient monitoring for emissions					
	All ages appropriate amenities within developments					
	Require sidewalks or multi modal paths everywhere					
	Reduce break in bulk points					
	Ensure adequate recreation + multi modal paths in all new development					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 13	Live where you work and play					
	More trains nationwide --high speed					
	Rebates for driving more efficient cars (e.g. converting from 8 cylinder to 4					
	Local sourcing of all aspects of our economy					
	Flexible work schedules					
	Reduce break in bulk points					
Sussex 14	Better public transportation -cost effective -convenient	4				
	Subsidize technology and training for businesses government & non profit to do more remote meeting	3				
	Further incentivize electric vehicles or better publicize current incentives	2				
	Better public transportation	2				
	Study, design & construct a statewide rail transit system					
			Funding	Master plan improvements	Reduce fares	DART
			Size of county	Expand DART bus services	Better public transportation would provide great independence for seniors and individuals with disabilities	DeIDOT

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 14			Development patterns	Expand fleet to reduce emissions	Affordability of EVs	Sussex county
			Lack of government coordination	Expand ride share	Uber license reduction of EVs	Municipalities
			lack of charging infrastructure for EVs	Workforce or limited \$ housing		senior, school >combine resources
				Water transportation		Employers large non profit
				Bicycle expansion		
Sussex 15	Would like to know what the state rebate is on electric cars	2				
	Expand rail use	1				
	When traveling, take fewer airplane flights	1				
	Take off list: 1) EV subsidies----Tesla lost \$3000 in fed. (?) credits dropped price \$3000 per vehicle 2) EVs cost \$20,000 extra, no (?) 3) no electric bikes----60% off US buses already switched to natural gas 4) biking not practical in Sussex county 5) we also have already met 26% reduction goal					
	Do away with internal combusting engine by 2025 on all vehicles					
	Increase availability of public transportation					
	Alternate fuel options?					
			Removal of old rail lines	Energy efficient railways	Expensive destination---not everyone can use	Business organizations

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 15			Access to all locations	Lower cost	Public transportation could be cheaper	Funding
			Infrastructure once at endpoint location (i.e. - beach area)	Less cars on road		Existing train line---if not yet removed
			Independent - cultural take on transportation	Avoid traffic		
			Reliable time tables?	Less pollution		
			Cost + time to implement			
			Ridership----passenger rail	Faster trip to beach - avoid car traffic	Sometimes can't connect points A to B	Transportation industry
Sussex ?	Improve public transportation	3				
Sussex ?	Insufficient road infrastructure	2				
Sussex ?	Employment opportunities near by - necessity to drive	1				
Sussex ?	Slow expanded infrastructures to (?) (?)	1				
Sussex ?	Limiting parking or increasing parking fees	1				
Sussex ?			Market forces	Increase charging stations statewide	Telecommuting isn't a possibility for all professors	DART/rideshare
Sussex ?			Biking/walking is unsafe in some places -unable to commute	Expand energy + (?) leaders (?)		Biking groups
Sussex ?			Deficient charging infrastructure			

Resilience

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 4	Decentralize key services (electricity grid-->microgrids, water treatment)	4	Local ordinance/laws; Cost--lose some economies of scale; Complexity of addressing resiliency education	Pre-disaster mitigation grants (DEMA); Pilot programs; Rural communities would gain from decentralization; Educate the public to think ahead	Preparing the people who need it most; Low income programs/ starter kits/education; Route access, hospital access	University/college education, low cost future training; Martha's Vineyard's microgrid pilot; State agencies (DHSS, DEMA); Other states success, resiliency planning
	Prioritize resilience, response, and prevention programs	2				
	New approaches to building codes for vulnerable areas	1				
	Provide incentives to leave flood prone areas	1				
Kent 5	Stop issuing extensions to environmental regulations with little or no progress; Enforce environmental laws and regulations	7	Lack of enforcement; Lack of awareness; Ideas not implemented: Seaford Town purchased golf course, haven't done; Granting variances on a regular basis (e.g. stormwater); Perception that regs are bad business	Education around Zero Net Energy homes; Education for developers, builders, and homeowners; Contractor certifications and training	Getting support/funds for Zero Net Energy/Energy Efficiency homes; What is the expense of a ZNE home?	Local realty teams; Tech colleges and high schools (for training certifications)
	Education in lower schools about climate change, natural disasters and response	3	Development pressures and environmental impact (and ag)	Keep positive messaging (focus on solutions); Composting programs; Give kids agency; Rain gardens	Equal education programs in all schools	Schools; Non-profits like Nauticock Watershed Alliances Creek Watcher program. Environmental testing
	City gov providing services when disasters occur	2				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 5	Looking at buildings and infrastructure that can withstand most natural disasters					
	Fix low spots on the highways					
	Close down areas that are constantly flooded					
Kent 6	Discourage practice of high maintenance landscapes; subsidize and encourage planting native trees and shrubs	5	People love their lawns; Legislation required and many special interests will oppose; Huge educational lift (need trainers, materials, public communication, public service ads); People might be resistant to training	Native plants support healthy habitats for wildlife; Creates more jobs; Native plants require less water and pesticides or treatment to maintain; Demonstration projects to demonstrate benefits	We could provide native plans to all communities for planting	Local farmers/ landscapers/greenhouse; Senate bill 2017; Event March 24th at Dover Ag Museum
	Preparedness planning; run workshops, "survivor training" that Franklin Institute gave, invite them here	5		Run survivor training in communities--builds all kinds of community connections; Companies, residents and utilities are prepared for any disaster, leaving our state safe	More prepared individuals and communities have less impact on 1st responders during a natural disaster	
	Encourage indoor vertical farming	2				
	Require municipalities and counties to write resilience/ adaptation plans (they control most of the relevant decisions in DE!)	1				
	Microloans to fund new businesses in environmental improvements					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 6	Rural water supply is a very big risk, shocking number of people on well water					
	Encourage environmental advocacy/ education across all sectors/communities					
	Retreat. Some parts of the state are, well, kind of doomed					
	Diversify energy sources					
	Build/develop the coastal areas to be more flood resistant					
	Overfund emergency services (firefighters, EMTs, etc.)					
Kent 8	Focus on shopping local for food goods to reduce reliance on imports			Tax incentive to build variable affordable housing nearer to retail areas that aren't "farmable"		
	Target zones to avoid new construction that would be vulnerable to flooding in the future				Housing to no longer have basements and elevate above possible flooding; Displacing people and communities	Zoning commissions
	Efficiency, involving infrastructure and forming sustainability					
	Educate and help households to prepare for extreme weather, public service announcements					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 8	Assess health risks related to increase in infectious disease and pests, plan and implement appropriate public health interventions					
			Political and lobbying resistant to change			
			Need for economic growth and expansion vs. climate resilience			
					Affordability of health care, housing, food	
Kent 11	Facilities and centers for people to go during disasters			Emergency preparedness shelters and education		
	Understand conditions of protective dykes, better conditions and funding to fix and maintain			Funding focused on dykes, but also consider other benefits from recreation		
	Look more into road surfaces and coverage					
	Proper drainage to deal with flooding					
	Better standards for drainage, don't put roads and housing in recharge areas					
	Higher or greater standards for stormwater management					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 12	Engage with First State Community Action to create resilience hubs in their existing community centers		Are there ways to get to emergency shelters?	Bushoss continuity planning training; when getting a business license, one of the requirements being an online training about emergency situations	Paid firemen; paid CERT	FEMA, be a better partner
	Battery backup for residential homes			Landlord-tenant information		
	More electric fueling stations for cars	1				
	Wind: needs to be more available for the state					
	Pioneer rapid/systematic geothermal installations in housing-dense neighborhoods					
	Prepare powered generators for businesses and homes					
	Solar panels on top of electric poles (if feasible)					
	More powerlines <-> more transmission lines					
			Impassable roads in coastal floodplains			
					Grants, scholarships, and learning opportunities for college students. Internship opportunities for community college	

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Kent 13	Elevate evacuation routes		What to do with pets during evacuation?; Many miles of roadway prone to flooding and sea level rise	FEMA grants for mitigation; need for legislative support, change laws to back up, compel change	Evacuation/transport of non-owners of cars (elderly, disabled, others)	
	Flood insurance	1	Infrastructure owned and operated by many different entities		Economic support/ voucher for flood insurance for low-income people	
	Rainwater collection for flooding areas		Green infrastructure has limited effectiveness in high intensity rainfall			Foliage donated for green gardens
	Household flood mitigation and building to higher standards	1	Cost to do the assessment and modeling			
	Social and community resilience			Broaden explanation of term "resilience" to include behavior, physical structures, etc.		
	Relocating from extremely flood prone areas	1				
	Expand, emphasize durability in buildings, technology	1				
	Incorporate concepts of preparedness into daily life					
			Denial			
			Self-monitoring costs by communities			
						Church, youth groups and other community orgs

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 1	Massive restoration of forest and tree canopy for heat	2	Love of lawn, fear of trees falling; Invasive species	Control and intervention of invasive vines in forest areas; Get conservation organizations working together		Use technically competent citizens who are independent of business and governmental influences; Tom Steyer (funding)
	Protect coastal wetlands, forest for controlling flooding	5	Lack of interest; Funding	Have neighborhoods certified as wildlife habitats; National wilderness designation; Use easements, cost share program; Start with public land		
	Prohibit building in vulnerable areas	3	Population growth; Developers & business interests; Development pressure, value; Private ownership		Taking away property value	
	Create a communication plan w/ ideas & resources for resilience	1				
	Education: online assessment of impact based on address with recommendations to make improvements	1				
	Shoreline buffering with Shell front Wetland (big--aggressive)	1				
	Relocation issues--what about the people who have to move					
	Education: understand weather risks, improve gutters, maybe build raingarden					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 1	Preserve natural space esp. forests and wetlands					
	Any new roads should have permeable surfaces					
New Castle 2	Educate public on preparedness needs (e.g. "go" pack for evacuation, "stay" pack for shelter in place needs (ex--long power outage))		Accurate information on internet but if power goes out, no internet	Educate/prepare for what is essential to save; Education people on how to live without; Education about how to prepare for an emergency (on-hand, SIP, quarantine, go bags)	How to address less mobile populations; Are there communities that need help why can't afford or plan?	Communities, individuals, local governments
	Assess vulnerability of social infrastructure as well, needs for most vulnerable		Lack on consolidated community resources and owner lists; Community centers fill quickly	Design systems that are movable	Govt planning for centers in case of emergencies (on-site infrastructure); Make sure there is access to centers for less accessible populations	
	Neighborhood "block captains". Have detailed IDs (who they are) and trained in major incidents that occur		Lack of volunteers	ID by name and live on site to be on point volunteer; Jobs listed, responsibility, resources for communities; Next Door app		
	Community support groups		Privacy, diverse personalities			
	DE government--take control of land use policy out of counties and give to state		Local governments do not want to give up rights/power			
	See what places are vulnerable and be prepared for the worse, tell people		Communicate effectively, what is a real risk?			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 2	Permeable services needed	1				
	Flexible medical supply access				Limited medical supplies	
	Individuals refuse to buy a house in the 100 year floodplain					
	Know when to retreat, managed retreat					
New Castle 3	Promote educational programs to inform citizens of impacts to win support for preparedness measures	1	Education/awareness of seniors, low-income populations; Reaching all people	School curriculum; Churches, faith drivers	Making resources available in under resourced areas--include education	Community centers, libraries, schools, boy/girl scouts
	Limit building in flood plains	1	Low-income housing in more low lying areas and are unaware of not given proper attention; political will; Insurance company opposition			
				Use infrastructure of energy audits to do reassessment audits		Interfaith Power and Light
	Facilitate (intentionally) assessments in vulnerable communities	1			Renters vs homeowners vs landlords Distribution of assessments and resources;	
	Government reform: Homeowners repayment for disaster relief off of pre-existing foot print	3				Social media influencers, videos
	Develop community (local) resilience assessments	3				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 3	Yards with permeable surfaces, not concrete	2				
	Develop evacuation plans for vulnerable groups--disabled, elderly, low income	1				
	Support local agriculture and farmer's markets					
	Families have emergency preparedness plans at home					
	Distribute information about locations at risk from floods					
	Youth training programs, youth clubs, and school training					
New Castle 4	Emergency evacuation plans especially as it affects vulnerable communities		We shouldn't have communities called "poor" not integrated-- we need mixed housing; People will not want to leave	Provide funds to buy out vulnerable homes	Don't just move individuals in scattered ways-- help relocate communities; consider transportation, schools, community centers, schools	
	Establish funding for communities to improve resiliency	5	\$	Not rebuilding everything after (hurricane, flood, nor'easter)	Funding of minority groups who are in worst environment	
	Government purchase of areas too expensive to save (strip the buildings and roads and convert to wetlands)	4		Create jobs in removing vulnerable homes and building new homes		Govt funding
	Action plan for critical business, services and infrastructure in flood zones	3				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 4	Evaluate vulnerable businesses that may need to be relocated	2				
	Study/learn from countries such as the Netherlands					
				Mixed housing		
New Castle 5	Organize and prepare community emergency shelters		Denial and fear; Finding people isolated	Develop an app/notification; Canning, water in case of system failure; Churches for food and solar	People with fewer resources can't afford preparedness; Lack of access to information (esp. seniors)	Hospitals and health clinics; Police, EMS, first responders, fire; Schools; HOAs, local community groups, churches, orgs
	More local food production	1	Chicken farming restrictions	Raise bees; Community gardens/infill; Victory gardens/ education awareness; home chicken coops; School gardens		UD extension
	Eat local, small farms	1	Lack of local food production (3 days of food in supermarket)	Farm to table		
	Create volunteer "neighborhood watches" for mutual support in case of disaster (educate, plan together)	1	Not knowing neighbors, social isolation			New Castle Co. Emergency teams
	Use more wind/solar-- give rebates back to most efficient communities		Neighborhood and HOA restrictions			
	Engage community orgs to support people-- create plan to respond to problems	1		Educate for survival like we do fire drills at school; Foodbank, partner for emergency kits		Wilmington City Govt; DEMA
	Invest in more underground transmission and utility lines	2				Utilities

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 5	Avoiding/abandoning areas that have recurrent flooding	6				
	Update school teaching at all grade levels, more distance learning	1				
	High speed internet	1				
	Undergrnd. electric grid					
	Prohibit development in fragile areas, deny publicly subsidized homeowner insurance for such buildings					
				Discourage expansive lawns (regulatory education)		
				Youth engagement--youth engagement are more aware and eager		
New Castle 6	Inform potential home-buyers that there's no state help if you build in the flood zone		Rich guys who want buyouts		Provide state revenue from RGGI for poor families to move	FEMA
	Legislate against residential development in Coastal Zone			Make clear the risks of climate/SLR to coastal home purchases		
	Remove renewable portfolio standards				Save money especially for the poorest people	
	Encourage and recognize businesses that use clean renewable energy					
	Individuals: Take voluntary action to reduce environmental impact (reusable bags/compost)					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 6	Local government encourage direction of growth into growth zones					
	Encourage businesses in or near flood prone areas to build for projected future flood levels					
	Incentivize building/construction on high ground through code exceptions					
	Efficient warning system for emergencies					
	Require competitive bidding for all electric supply regardless of source					
	Withdraw from regional greenhouse gas initiative					
			Hard to implement politically			
					Windows of Hope	
					Lower income people spend more for energy, take care not to provide energy efficiency assistance	

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 7	Restrict rebuilding in high risk areas after natural disaster		Outdated FEMA maps; Uncertainty with models	Property preservation from natural disasters; Proactive planning instead of reactive planning after a natural disaster		
	State defines risk level. What RGP? What scenario?	4	Need an unacceptable economic investment on "what if" scenario (i.e. cost of remediation is projected to be cheaper than risk mitigation)			Universities; Port Authorities, conservation groups, PPP and non-profits
	Restoration of coastal ecosystems	2	Funding; Capital investment costs to prepare coastlines			
	Support more CHP at vulnerable sites		DE air quality regs vs climate benefits of CHP			
	Revise building codes to require resilience design		Political support, public perception			
	Managed retreat			We cannot afford to not be prepared. Reacting to disaster is more expensive	Ability to move (i.e. fixed income seniors); Older populations hit harder due to access to monetary resources	City of Hoboken, NJ; Other states who have already started
	Proactively prepare for EV and renewables impacts on grid through utility pilot programs and back-up batteries			EV to grid		
	Long term plan for beach communities				Rich people who own beachfront property object to offshore wind despite being a primary beneficiary	

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 7	Battery back up systems in homes, churches, community centers, shopping centers, etc.	1				
	State purchase homes within flood areas esp. in low-income neighborhoods	1				
	Tap existing well built structure to double as emergency facilities for surrounding neighborhoods					
	Buried power lines					
	Well designed risk assessment form for small businesses					
			DEMEC/muni electrics opposition to DG			
			Legal issues with taking clause and public trust doctrine			
				Healthcare emergency response		
New Castle 8	Invest in microgrids in the state			Carbon tax		
	Subsidize the composting facility			Ecosystem service market		
	Support the Build Community networks so that neighbors can develop localized emergency plans				Public restrooms and showers; Give enough/ special attention to vulnerable populations (poor, elderly, sick)--they have the least resources to adapt to disasters	Local communities and grassroots, place-based organizations

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 8	Public awareness campaign to fix recycling programs					
	Encourage restaurants to NOT throw away food					
	Develop a composting service					
	Find ways for supermarkets to giveaway (not throw away) expired food					
	Incentive the bring your own bag campaign at different places like grocery stores and make plastic bag and recycling more available					
	Adopt new building codes every 3 years when they get update, new building codes incorporate more resilience provisions					
	Set up composting collection system to encourage composting and reduce waste in landfills					
	Encouraging passive survivability in building design construction through high performance buildings					
	Community solar					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 8	Community gardens so neighbors can know one another, share ideas and foster better communication in times of need					
	Incentive battery back up, include incentives for batteries					
New Castle 9	Lists for checking on vulnerable people, ex. elders w/o good A/C	4	Skepticism of being on "a list"; unreliable volunteers	Digital capacity to register for the service; all retirees moving to DE and Sussex Co.	Intentionally targeting income and age	
	Emergency relief fund (look at Bethany Beach)	1	Communications to people who need to know			
	Parametric insurance policy sales in state	1		Who coordinate? \$?		
	A government solution to ban land to reduce development and protect sensitive lands	3				Motivate industrial leaders to unite as heroes to county both financially and leadership (go Joe!)
	Ferry for public transport when roads are flooded	1				
						Students
						Churches
						DEMA/DHSS running lists
New Castle 10	Stop building in marshes		Inability to integrate out CC knowledge into development policy	Stop developing in vulnerable areas	Threatened zones and inability to adapt to CC	
	Choose less vulnerable area for settlement/development		Cost to build; individual property rights; retrospective zoning FEMA maps look backwards only; insurance is too easy to obtain			

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 10	Improving FEMA 100 year flood estimate to account for latest estimates of sea level rise (emergency preparedness)			Work with insurance		
	Promote and enhance ecosystem health in wetlands and forests to mitigate flooding			Reforestation		
	Change cost of capital to developing in more vulnerable areas			Address cost of capital		
	Update building code to net zero					
	Discourage building in coastal zone					
	Make distributed energy storage eligible for green energy subsidies: grid services, power outage resiliency					
				New green infrastructure; large scale implementation		
New Castle 11	Local food - incentivize/expand support for community gardens & urban farming	4	Open land; anything that reduces employment opportunity (public/private) will be opposed by Governor; economic viability of farming	Empty space repurposed for raised garden beds; educating people; social organizing; providing habitat for pollinators; workforce training - jobs building raised beds	Access to green space; cost of eating healthier; local parks provide space to garden	Food Bank of DE; network of local land trusts - help farmers stay in DE
	Prohibit flood insurance for new construction in floodplain	3				
	Remove dams	1				
	(?)	1				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 11	Skill shares, low tech teaching/learning opportunities	1				
	Reuse floodplain mapping to reflect expected sea level rise xx years ahead	1				
	HAM radio operator training in community residency (?)					
	Transition streets - neighborhood organizing for resident response to emergency situations					
	Employers - provide trainings for preparedness to employees and CPR certifications/volunteer opportunities					
	Incentivize businesses to get involved and buy in and contribute any way they can financially					
	Community composting - reduce landfill contributions/methane - benefit urban agriculture					
	Native plantings					
	Toolshed/lending library/seed sharing library					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 11	Learn about your neighbors so you can help them and be helped by them					
	Decrease impervious surfaces and increase pervious surfaces particularly in floodplain					
New Castle 12	Resilience community ratings for residential areas that measure flood mitigation, emergency response	3	Equitable distribution of governmental funded protection measures		Low income cannot afford to adapt to flooding	
	Storm drains lifting up the road, more sand bags reducing river puddles	2	Neighborhoods are responsible for stormwater management		Rain gardens are expensive	
	Promote changes to building and zoning codes (no basement in future flood zones, etc.)		Real estate agents (full disclosure); Ignorance		Landlord-tenant disclosure for rental units	
	Update building infrastructure and zoning in floodplain	3	Homeowner opposition to land use change; Govt will to update codes; Developer opposition			Full disclosure of real estate, govt legislation requiring disclosure
	Understand the impacts of the changing climate--will need \$ invested by govt		Ignorance of the magnitudes			Engineers, architects, civic association
	Require each county and city to develop a resiliency plan	2		Prepare		Achievement centers, job corps, universities; City, county, state, federal government

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 12	Use a 500-year flood as the basis for flood plain zoning	2		Protect our wetlands; stormwater management		
	Required report on sustainability risk and measure places for house risk					
	More insulation, ventilation					
	Have important documents in water-proof on containers, keep cars charged/gassed up, emergency kits, etc.					
	Pumping					
	Solutions to pollution reduction					
	Businesses used to give back to their community					
	Push for PACE to increase resilience (fund new buildings to improve its resilience)					
New Castle 13	Land use planning and zoning	1	Suburban sprawl; Public views on ideal home; County/municipality making decisions	Encouraging/educating people about smart development; Creating smart/sustainable community		County/municipal land use planners
	Govt: Improve flood control by restoring and preserving natural resources/riparian barriers, no building on areas at risk for erosion, preserve and restore forests		No protection for freshwater wetlands	Native plans and grass		

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
New Castle 13	Educate business leaders on benefits of coordinating supply and distribution efforts to use more local and/or environmental practices		Developers; Distribution of services because of sprawl			Developers
	Assess higher vulnerability in poor neighborhoods				Incentives to relocate; Houses in floodplain are poorer; no money to move from houses	
	Fund preparedness packs for poor families					
	Govt: Survey water quality and sources to establish baseline and risks to drinking water; improve sources					
	Water for homeless, showers for homeless, cooling stations					
	Edu. in schools to teach individual and societal skills for handling common regional events					
	Are Civil Defense Shelters still maintained and supplied?					
	Local energy generation in case delivery from other sources is interrupted					
	Promote local/regional supply chain methods (incentives for local suppliers and manufacturers					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 1	No housing in wetlands	2				
	Changing zoning laws	2				
	Complete + enforce DNREC assessments	1				
	Government----adopt 2012 watershed (?) plan -use native species in planting -require plantings -reserve tree canopy	1				
	Businesses----use green infrastructure practices at construction sites - stop clear-cutting - buffer zones on riverbanks -native species					
	Must increase amount of buffers around wetlands despite screams of protest from developers					
			Buffer regulations currently don't look at climate change projections	P + Z agendas released 14 day prior to B meetings	Developers + land owners with lawyers vs. citizen without lawyers	Update FEMA flood maps to include future expectations for sea level rise
			Citizens not allowed in county council hearings	Public hearings for P + Z	Who is participating?	Establish citizen action committees ---need central voice
			Conflict of interest in local (?)			State of DE DNREC employees know about the complications of these issues--climate change & DNREC should allow their employees to fill council/employees

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 1			P + Z approves conditions for builders; then removes conditions without public input			Training pt. 2 + Sussex Co company
			P + Z lawyers not working for the pubic			
			Some local leaders are suspicious of climate change and drag their feet and bring up "false news" to make change harder			
			Citizens who are extremely interested are too old----horse rescue			
Sussex 5	Technical planning support for small communities for vulnerability assessments and grant applications	5	Funding to support	Job creation	Smaller communities have less resources/ staff	Pre-disaster funding; Non-profits
	Increased floodplains by limiting buildings in the floodplain or buyouts; Strengthen building codes (i.e. limit or eliminate building in floodplains; Better buffers and easements around development	6	Developers; State legislated development restrictions; Farm preservation codes	Put onus on developers; Farmland preservation added to buffer protection; Farm preservation (concentrate development); Local Association of State Floodplain Management (ASFPM) chapter	Lose home, foreclosure	
	Technical planning support for smaller companies & for vulnerability assessments or grant applications	5				

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 5	Increased flood plains by limiting building in the flood plains or buy outs	4				
	(?)(?) easements surrounding development	2				
	Smaller, "micro" power stations to improve resilience of the grid	1				
	Smaller "micro" power stations to improve resilience off the grid	1				
	Natural breakwaters to reduce storm surge					
	Drainage in beach areas					
	Natural breakwaters to reduce storms					
	Strengthen building codes i.e.. limit or eliminate building in flood plains					
	Drainage (?) near beach area					
	Storm harden critical facilities that are at risk and cannot be moved - keeps community safe during storms -i.e. sewage out of flood waters					
			Funding to support expert support	Job creation	Smaller communities have less resources/ staff	Pre-disaster funding
			Developers	Put (?) on developers	(?) homes foreclosure	Non profits
			State legislated development restrictions farm preservation codes	Farmland preservation added to buffer protection		Local government

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 5			Storms harm critical facilities that are at risk and cannot be moved.	Keep the community safe during storms: Lights on, sewage out of flood water in roads		
				Farm preservation (concentrate development)		Experts like ASFPM
				Local ASFPM (association of state floodplain management) chapter		FEMA/NFIP/ CRS
Sussex 6	Impact investing fund to encourage public and private sector capital to address the climate					
	Cross----(?)					
	Grant for electric E2 low income residents - add gas					
	Teach us about resiliency----Bethany beach is amazing - safety planning mayor of Bethany beach					
			Economic resilience - tourism areas + moving some of our economy to safer places - revitalize places 35 miles molder places/need revitalize	Not hearing enough about emergency + resilience----how can I help my block?	Open access to alternative energy cooperatives	Western Sussex chamber of commerce----water + sewer improvements----one time grant
				IMPACT investing----social develop bond----invest in bonds/returns		Milton town sustainability committee- ---15g measures we can do

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 7	Community schools as shelters	3	Communication on location of shelters and communication on emergencies			
	Identify rezone "no build" areas (predicted to flood regularly within next 5-10 years); leave open space as parks	1		Permeable pavement		Regionalization
	Rezone	2				
Sussex 9	Microgrids: localized electrical grids (ex. solar and battery and software)	2	Uninformed, head in the sand County Council; High cost in short run	Community unity and empowerment	Easier to repair; Solves problem locally; Lower cost in long run	County council, residents
	Decide if infrastructure should be rebuilt after storm		Inform County council: without proper infrastructure, people will not buy houses			
	Education opportunities			Make the climate issues in Sussex County known to surrounding areas (Philly, Baltimore, DC)		
	Track and publish all climate events-- flooding, outages, etc. (news print, TV, radio)	3				
	Require homebuyers to be aware of where home is on floodplain					
	Since low energy systems can cost \$, ask government to offer interest-free loans to homeowners (for solar, geothermal, etc.)					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 9	Climate Common: man's language the mean something					
			Where is the County Council in this group?; Transfer tax as basis for County rep	Call your County Council rep to encourage; Letters to the editor in Sussex Preps asking where is the County Council; Reming County Council that they can help save lives; Being re-elected		
				"Voicing our values", community discussions, emotional-social resilience		
				DNREC: be bold! Market the symptoms, not the solution-- get the public to reach conclusion		
Sussex 12	Land use planning + zoning for (?)	1				
	Regs + laws for building					
	Utility (?) are not eco friendly					
	Poor emergency planning b/c of poor enforcement of infrastructure regs					
			(?) space law is only so (?)(?) around community	Better planning leads to fewer trans. emissions	Compensation/ budgeted migration	DeIDOT engagement
			Lack of will to create laws to prevent development in sensitive areas	County govt. get access to data + models		Sussex govt. needs to be educated + engaged in CAP
			NIMBY	Planned migration west		Delaware state legislation

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 12			Uneven municipal reps on county council			
			Western + Sussex split - different goals for development			
Sussex 13	Lawn alternatives (no sprinklers)					
	Wetland regulations by state					
	Desalinization					
	Ensure space in landscape for wetland mitigation					
	Share more information on where the landscape with change and how					
	Managed retreat?					
	Water contamination increasing buffer zones, upgrading sewer systems					
	Increase biodiversity to allow many plant grow and increase stormwater percolation into soil					
	House in flood zones for resale: don't sell, condemn for public property					
	Encourage reusable bags at stores					
	Encourage more composting at work and at home					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 13	Encourage beekeeping					
	Allow natural habitats adapt to climate change by moving to new areas--protect natural areas and open space					
	Evaluate all vulnerable areas and make a plan					
	Require disclosures on flooding of properties when homes are sold; Flooding notice when house sells					
	Do more education to DE residents on SLR and when it will happen					
	Incentivize/encourage pervious pavement					
	Determine base flood elevation for homes					
			County gov plan, state reps			
Sussex 14	Land use master planning -transfer of development rights	3				
	Pass living shoreline requirements	1				
	Incentivize creative new "clean" industry - i.e. oyster farming					
	Vulnerability assessment on local level					
			Private property rights	Less traffic	Affordable housing + low income benefits	Sussex county

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 14			Farming community very vocal + protective	Better commutes	Floodprone vulnerable populations opp. to have a place to relocate in place	Municipalities
			Lack of understanding	Potential lower taxes -less social costs + adds value	Relocation of subsidies from poor land use	DeIDOT
			See as county-specific issue	Preserves natural landscape	DeIDOT needs overall plan on transportation resilience -ex. protecting road access	(?)/(?) community
				Improve accessibility to services		Coastal communities/low lying (?)
				Greater public engagement + organization -better policies		U.S. Army Corp. of Engineers
				Potentially more funding		
				Economic development + incentives		
Sussex 15	Limit rebuilding house etc. again & again after they are damaged due to flooding	2				
	Flooding is a concern with or without climate change -an adaption plan is the best strategy -many more people die from cold than heat					
	Use of plants to help control flooding in flood plains					
	Promote green infrastructure					

Table	New Ideas	Votes	Barriers	Opportunities	Equity Considerations	Resources/Partners
Sussex 15			People don't want to move -have to change local (?) -matching floodplain maps with existing DE's building area	Changing local (?) to promote adaptation -(?)(?) -new construction styles	Lower income areas not rebuilding -hard for lower income areas to change houses or move	Federal government construction (?) for new ideas/types
Sussex ?	Development/land use resiliency criteria for updates or new buildings	2				
Sussex ?	Incentivize green infrastructure	2				
Sussex ?	Assessment of resources to implement adaptation + (?) measures	0				
Sussex ?			Cost	Education, communication	Unable to move or buy food insurance	RASCL
Sussex ?			Misinformation	Demonstration projects	Unequal distribution of resources	Energize Delaware
Sussex ?			Funding			Federal programs
Sussex ?			Paybacks/returns are often long term while people plan for short term			Env nonprofits doing restoration

Breakdown of Ideas Generated by Topic Area

The below tables provide a breakdown of how often certain topic areas were mentioned in the ideas generated during the breakout group exercise, both overall (i.e., across all three workshops) and within each county. The tables are separated by the three categories discussed: Energy, Transportation, and Resilience.

Energy

Topic Area of Ideas Generated Within the Breakout Groups	Number of Ideas Generated Overall	Number of Ideas Generated By County			% of Total Ideas Generated Overall	% of Total Ideas Generated Within County		
		Kent	New Castle	Sussex		Kent	New Castle	Sussex
Battery storage	12	1	2	9	3%	1%	1%	8%
Carbon tax	3	0	3	0	1%	0%	1%	0%
Education/awareness	33	10	10	13	7%	9%	4%	12%
Electrification (Buildings)	3	2	1	0	1%	2%	0%	0%
Electric vehicles	35	9	25	1	8%	8%	10%	1%
Energy efficiency	75	27	39	9	16%	25%	16%	8%
Green buildings	27	9	12	6	6%	8%	5%	5%
Green bank	3	0	3	0	1%	0%	1%	0%
Green infrastructure/trees/urban agriculture	9	0	4	5	2%	0%	2%	5%
Land use/site use	3	1	2	0	1%	1%	1%	0%
Microgrid	19	0	15	4	4%	0%	6%	4%
Nuclear energy	10	1	4	5	2%	1%	2%	5%
Net zero carbon	8	4	4	0	2%	4%	2%	0%
Renewable energy	174	34	90	50	38%	32%	38%	45%
Smart technology	6	2	4	0	1%	2%	2%	0%
Peak demand	7	3	1	3	2%	3%	0%	3%
Transportation – Multimodal/transit	5	0	5	0	1%	0%	2%	0%
Transportation – Travel demand reduction	4	1	2	1	1%	1%	1%	1%
Waste reduction	12	0	10	2	3%	0%	4%	2%
Waste-to-energy	9	2	4	3	2%	2%	2%	3%
TOTAL	457	106	240	111				

Transportation

Topic Area of Ideas Generated Within the Breakout Groups	Number of Ideas Generated Overall	Number of Ideas Generated By County			% of Total Ideas Generated Overall	% of Total Ideas Generated Within County		
		Kent	New Castle	Sussex		Kent	New Castle	Sussex
Bikes	32	10	9	13	7%	10%	4%	9%
Electric buses	29	5	17	7	6%	5%	7%	5%
Electric vehicles	53	12	30	11	11%	12%	13%	8%
Electric vehicle infrastructure	32	13	14	5	7%	13%	6%	4%
HOV/carpool lanes	20	3	8	9	4%	3%	3%	7%
Land use/transit-oriented development/bike-pedestrian infrastructure	82	11	51	20	18%	11%	22%	14%
Reduced parking	5	0	2	3	1%	0%	1%	2%
Rail	35	15	12	8	8%	15%	5%	6%
Road infrastructure upgrades	4	0	1	3	1%	0%	0%	2%
Signal timing/traffic flow	19	6	5	8	4%	6%	2%	6%
Tax (fuel/congestion)	24	9	13	2	5%	9%	6%	1%
Telecommuting/flexible work schedules	19	3	9	7	4%	3%	4%	5%
Transit - expansion and coordination	86	10	40	36	18%	10%	17%	26%
Transportation and Climate Initiative	4	0	4	0	1%	0%	2%	0%
Vehicle efficiency	21	1	14	6	5%	1%	6%	4%
TOTAL	465	98	229	138				

Resilience

Topic Area of Ideas Generated Within the Breakout Groups	Number of Ideas Generated Overall	Number of Ideas Generated By County			% of Total Ideas Generated Overall	% of Total Ideas Generated Within County		
		Kent	New Castle	Sussex		Kent	New Castle	Sussex
Code/zoning/siting	131	22	71	38	33%	26%	33%	41%
Infrastructure	37	18	14	5	9%	21%	6%	5%
Education	77	26	31	20	20%	31%	14%	22%
Emergency response/preparedness	70	11	52	7	18%	13%	24%	8%
Energy supply	32	7	17	8	8%	8%	8%	9%
Nature-based solutions	33	0	18	15	8%	0%	8%	16%
Public health	14	1	13	0	4%	1%	6%	0%
TOTAL	394	85	216	93				

APPENDIX 6. Social Pinpoint Data

As noted in the report, visitors to the Social Pinpoint station could make comments on an online map that were linked to a specific location. Comments touched on the transportation system, agriculture, tourism resources, flooding, street trees, and other suggestions to boost Delaware's resilience to climate change. The ability to tag specific locations allowed participants to identify especially flood prone areas or suggest locations for electric vehicle stations, additional bus stops, and bike lanes. Social Pinpoint participants could also "like" a comment left by a previous person. All comments, geotags, and "like" votes provided by workshop participants are included in the table below.

Created on	Type	Comment	"Like" Votes	Latitude	Longitude
2020-03-04 07:52:10 +1100	Ideas and Suggestions	Received a Sustainability Planning Grant		38.77577	-75.3061
2020-03-04 08:24:48 +1100	Ideas and Suggestions	1. The planning department should restrict expansion unless there is sufficient infrastructure 2. There should be more thorough evaluation of stormwater impacts on the bay. 3. The wastewater discharges from the infiltration should be monitored better by DNREC. 4. A thorough evaluation of the overall impact of the wastewater discharges should be made.	1	38.67372	-75.3696
2020-03-04 08:27:10 +1100	Transportation	Love Creek Bridge must be expanded if the Rt 24 around is to be dualized. Otherwise, the bridge will be the bottleneck.		38.70206	-75.1606
2020-03-04 08:31:12 +1100	Transportation	This notorious S-Bend on Camp Arrowhead has now become more dangerous, because the new community on the north side of this S-Bend installed a walkway between the east and west side of Camp Arrowhead to allow the communities on both sides to use the common facilities on the west side of Camp Arrowhead. People will try to cross the street to go to the pool with babies, chairs, coolers, etc. A death trap!		38.68323	-75.1612
2020-03-04 08:33:38 +1100	Flooding	The new Love Creek condo's parking lot had water in Oct. 2019 without any rain, just high tide and wind! Are we going to allow this type of housing on low lands? Why not stop approving those houses and subdivisions on wetlands and low lying areas?		38.69543	-75.1578
2020-03-04 08:38:43 +1100	Trees/Shade	Why aren't DNREC comments enforced after the PLUS applications? There are Tier 1 species living in this area with a proposal for a 351-home development. The current buffer code is not enough to prevent human and trash and pet interference to the natural species who live here.		38.70909	-75.1436

Created on	Type	Comment	"Like" Votes	Latitude	Longitude
2020-03-04 08:43:57 +1100	Ideas and Suggestions	Offshore Wind Generated electricity would clean up our air.		38.68739	-75.3755
2020-03-04 08:46:43 +1100	Trees/Shade	Along with a better tree cover, putting white roofs will help reduce the heat island effect and save summer cooling		39.71775	-75.5612
2020-03-04 08:50:48 +1100	Ideas and Suggestions	Please change the building code to require solar panels on every roof. Make geothermal more cost-effective for residential use. Include requirement in building codes. Populate the state with electric vehicle charging stations.		38.75515	-75.1712
2020-03-04 08:54:39 +1100	Ideas and Suggestions	Correlate the DNREC PLUS recommendations with the actual Land Use Decisions. At present, most of the time DNREC recommendations are ignored, to the peril of the inhabitants.		38.48101	-75.108
2020-03-04 08:57:08 +1100	Ideas and Suggestions	I am concerned about Habitat Destruction, sea level rise and climate change at the global level, country level, state level, county , town and my home on the Nanticoke HEADWATERS. What we are doing in Sussex County, is to ACCELERATE ALL THESE PROCESSES. It seems to me that our leaders, who are enshrined with developers, realators, etc, are thumbing their noses at the alarming observations. I am concerned that this workshop will go NO FURTHER THAN THE 2012 WIP plan that went NOWHERE!		38.68819	-75.383
2020-03-04 09:02:44 +1100	Flooding	My concerns for the Rt. 54 corridor from Selbyville to Fenwick Island is the development of new houses. the filling in of marshes and changes to the back bay shorelines will increase flooding in years to come. Rt. 54 should be an evacuation route. With so many people trying to exit to the West when a hurricane strikes, or a nor'easter hits and flooding with the likes of a "Sandy storm," we are endangering lives. We need a long range plan to mitigate potential flood zones along Rt. 54.		38.45762	-75.0724
2020-03-04 09:08:36 +1100	Flooding	The road is very low and floods during storms. There are times when residents get cut off and can not get out for a day or two. Raise the road or design a bridge.		38.6247	-75.1248
2020-03-04 09:16:14 +1100	Ideas and Suggestions	While DE does not have any off shore wind farm leases, the land fall for transmissions for both MD projects is in DE. I strongly urge DNREC and the governor to PLAN for where upwards of 10 transmission stations might be built rather than scattering. Orsted said that if there is a critical mass they do off shore transmission stations. Let's plan how to make renewable energy happen		38.47877	-75.0466

Created on	Type	Comment	"Like" Votes	Latitude	Longitude
2020-03-04 09:31:45 +1100	Transportation	Developing bicycle lanes and pedestrian comfort on this road could provide better access to the DART bus stop located a intersection. it may actually improve standard of living for this lower income population		38.71043	-75.5509
2020-03-04 09:32:32 +1100	Transportation	Under served population. Developing bicycle lanes and pedestrian comfort on this road could provide better access to the DART bus stop located a intersection. it may actually improve standard of living for this lower income population		38.69435	-75.5458
2020-03-04 09:33:21 +1100	Transportation	Corrected email		38.69435	-75.5458
2020-03-05 08:01:10 +1100	Flooding	For Pete's sake, don't pour any more money into development at Ft. duPont. When a big rain comes the roads are all under water. This is a horrible example of using public money to solve a climate change issue.		39.57376	-75.5959
2020-03-05 08:05:53 +1100	Ideas and Suggestions	I urge the Governor to sign the Memorandum of Understanding for the Transportation Climate Initiative. The agreement will be hugely more effective if it is adopted by the entire region. We desperately need to reduce transportation-generated carbon emissions.	1	39.15709	-75.5208
2020-03-05 08:13:12 +1100	Ideas and Suggestions	Newport and Claymont and other suitable communities should adopt Complete Communities Enterprise District designation in order to encourage public transt i, slow speeds, walkability, bikeability and get rid of some cars....biggest source of carbon dioxide emissions in the state.0		39.71373	-75.6095
2020-03-05 08:16:20 +1100	Ideas and Suggestions	Newport and Claymont and other suitable communities should adopt Complete Communities Enterprise District designation in order to encourage public transt i, slow speeds, walkability, bikeability and get rid of some cars....biggest source of carbon dioxide emissions in the state.	1	39.80062	-75.46
2020-03-05 08:20:52 +1100	Ideas and Suggestions	We need a lot more collaboration among state, county, and municipal governments in terms of improving land use to aid in mitigation..... Developing liveable, walkable, bikeable communities would reduce the need for cars and help greatly in getting rid of carbon dioxide emissions.	1	39.80094	-75.4595
2020-03-05 08:33:48 +1100	Transportation	I am interested in taking the train to Philly on a regular bases. There is not any schedule for nighttime travel from Philly to Wilm that is usable. It is time to stop doing business as usual with our public transportation.		39.7243	-75.5781
2020-03-05 08:34:47 +1100	Trees/Shade	Please don't allow the planting of any more Bradford Pears		39.69486	-75.5598
2020-03-05 08:38:48 +1100	Transportation	There should be should be car charging stations that are easy to find. We should not have to wonder how to find them. When I visit my son in OR. I can get my charge charged when I go to the library. Lets get this done.		39.73309	-75.6788

Created on	Type	Comment	"Like" Votes	Latitude	Longitude
2020-03-05 08:39:58 +1100	Transportation	1. Light rail train to connect major hubs Wilmington (colleges), Newark, Christiana Mall, Dover, beaches, etc. 2. Develop way to get to PHL from anywhere in DE. 3. More electric charging stations. Right now DE ranks 24th in # of charging stations.	1	39.71212	-75.4825
2020-03-05 08:43:15 +1100	Ideas and Suggestions	1. Replace any energy inefficient public housing with 3D printed homes to reduce energy consumption. 2. Wind power- didn't see anything in the plan. 3. Look at climate plans of other places with large coastlines, such as the UK, California and Japan. 4. Ban packaging that cannot be recycled		39.77899	-75.5118
2020-03-05 08:49:14 +1100	Flooding	While we have experienced, rainwater wash in shellpot creek to flood its boundaries in the past, We have seen greater frequency over the last two years. In fact Shellpot has flooded over its boundaries more dramatically four times between June 2019 and Dec 2019. I would estimate that the normal width of the stream is about 14 feet. However we estimated more than 60 feet wide in the most recent December flood. I think that is the highest and widest we've seen in the 33 years at the residence.		39.77356	-75.5176
2020-03-05 09:02:20 +1100	Transportation	Site of the new Claymont Transportation Center		39.80632	-75.4451
2020-03-05 09:04:08 +1100	Transportation	Offer incentives to promote transit-oriented development around the new transportation center and reduce parking minimums which would allow for greater density.		39.80632	-75.4451
2020-03-05 09:07:01 +1100	Flooding	As a member of New Castle City Council, I am concerned about the cost of maintaining and strengthening the dikes which protect our city. They need to be raised above their current levels. The cost exceeds our entire annual budget. What resources are available to help cities cover these costs?		39.65891	-75.5643
2020-03-05 09:20:21 +1100	Transportation	I hope more EV charging infrastructure is coming soon to Newark's downtown and city parks, and to Christiana Mall.		39.68044	-75.7428
2020-03-05 09:24:41 +1100	Transportation	EV charging station, along rt 72.		39.62654	-75.6481
2020-03-06 08:37:50 +1100	Transportation	Bike lanes - high traffic area with no shoulder or bike lane	1	39.10038	-75.5161
2020-03-06 08:40:54 +1100	Trees/Shade	More native plants on public properties - parks, office spaces, etc.		39.11224	-75.5361

Created on	Type	Comment	"Like" Votes	Latitude	Longitude
2020-03-06 08:42:35 +1100	Trees/Shade	Need more public parks in the Dover area.	2	39.14677	-75.5229
2020-03-06 08:46:05 +1100	Flooding	My concern would be what ordinances should County governments be looking at to address the eventual rise of sea level along our coast and the strengthening and increasing storms that we will experience as a result of climate change.		39.1436	-75.4865
2020-03-06 08:48:17 +1100	Ideas and Suggestions	Please make this information readily available on your website. It would be interesting to see the comments that may drive legislation from a County perspective.		39.15435	-75.5059
2020-03-06 08:51:48 +1100	Transportation	I would like to be able to take public transit to work, but it would take 1:45 to do that, yet only ~15 - 20 minutes to drive. I live near 202 and Naaman's, and my work is near Churchman's train station and the mall, so this should be an option. I don't take public transit b/c of this. Bike infrastructure needs to be more viable as well. E.g. if I ride my bike to the Target (2 minutes away), I feel unsafe if I take my children.		39.82572	-75.5334
2020-03-06 08:52:15 +1100	Ideas and Suggestions	In case of evacuation adequate time should be given and pets need to be included	1	39.16352	-75.5005
2020-03-06 08:57:32 +1100	Transportation	Improved/expanded public transit to expand options for lower income residents, while also allowing visitors to park their vehicles once they get to Delaware. But, the transit must be clean fueled. Similarly, public fleets and school bus fleets need to move to cleaner fuels.		38.58101	-75.1663
2020-03-06 09:02:23 +1100	Trees/Shade	The City of Dover has plans to remove a large number of mature trees, but does not seem to have plans to replace trees. In addition, hundreds of mature trees throughout Dover are being strangled by English ivy. The city needs far more street trees planted, and needs to address the invasive ivy.		39.12884	-75.5294
2020-03-06 09:07:01 +1100	Transportation	Southern Delaware needs a better transportation system. We need at least a north-south train to Lewes or more. This will allow people who commute to stay off the highways. we need upgraded bus system that is available more often to far parts of the state.		39.21842	-75.5681
2020-03-06 09:08:58 +1100	Ideas and Suggestions	Ocean life and biodiversity		39.10976	-75.3473
2020-03-06 09:10:41 +1100	Farming/Agriculture	The state needs to be more aggressive in preventing the use of damaging pesticides and herbicides. Work to keep and expand public usage areas that are preserves for wildlife and flora.		39.27585	-75.6642
2020-03-06 09:19:05 +1100	Trees/Shade	Hi I'm Tom thanks for being interested in protecting the environment		39.27144	-75.4345

Created on	Type	Comment	"Like" Votes	Latitude	Longitude
2020-03-06 09:23:33 +1100	Transportation	There is a need for improved infrastructure supporting community walkability: safe walkways, sidewalks, and bike lanes to reduce the reliance on cars for transportation and support alternative modes of transportation.		39.10617	-75.5202
2020-03-06 09:25:16 +1100	Trees/Shade	More ponds with stocked fish.		39.13399	-75.5374
2020-03-06 09:32:03 +1100	Trees/Shade	I couldn't agree more! I think that we need more public parks that feel safe. Also, I feel like fishing should be prohibited at Silver Lake park. I think that park needs better maintenance and upkeep. The parking lot in particular is falling apart. The water in the park always looks dirty. I always see trash and waste near the water. I feel bad for the animals in that park. As a tax payer I would expect better maintenance of such parks. Especially those in the capital of the state. Thank you.		39.14677	-75.5229
2020-03-06 09:34:17 +1100	Ideas and Suggestions	please black out all uninhabitable areas in the state--bays, rivers, state parks. Currently, the physical maps do not black out these areas and so the impression is that some areas, esp. in Sussex County, various social vulnerability areas look better or have a lower vulnerability than is actually the case. And by black out I mean BLACK OUT.		39.14484	-75.4173
2020-03-06 11:00:39 +1100	Flooding	This frequently floods from a storm drain. It is a low lying area and this may be tide/sea level related.		39.73488	-75.5626
2020-03-06 11:04:19 +1100	Flooding	Frequent Flooding - we should daylight Tar Ditch (the buried stream's name)		39.15299	-75.5233
2020-03-06 11:06:13 +1100	Flooding	This often floods. It makes White House Beach an island during high tide events.		38.61925	-75.1334
2020-03-06 11:07:26 +1100	Flooding	Sunny day flooding limits access to Woodland Beach.		39.32065	-75.4808
2020-03-06 11:08:25 +1100	Flooding	South Bowers very frequently floods and is inaccessible due to sea level rise.		39.04373	-75.3936
2020-03-06 11:09:37 +1100	Flooding	This subdivision was built too close to a wetland and now this neighborhood has water very close to its homes.		38.99937	-75.4563
2020-03-06 11:11:00 +1100	Tourism Resources	Abbot's Mill is a tourism resource that offers environmental education and tours.		38.88579	-75.4759
2020-03-06 11:12:28 +1100	Tourism Resources	The Milford Riverwalk is a tourism resource that allows people to explore the river on foot and by kayak.		38.91273	-75.428
2020-03-06 11:13:57 +1100	Tourism Resources	Goat Island is a park that offers walking trails around the island and scenic views of the Mispillion River.		38.91517	-75.4182

Created on	Type	Comment	"Like" Votes	Latitude	Longitude
2020-03-06 11:15:28 +1100	Trees/Shade	There are trees here but could be more.		39.16114	-75.5184
2020-03-06 11:17:46 +1100	Tourism Resources	There is a kayak launch-type dock here, but it could be nicer. DNREC (property owner) should invest in more launches so people can use kayaks more.		39.15498	-75.5183
2020-03-06 11:18:46 +1100	Farming/Agriculture	Milford Community Garden		38.92166	-75.4291
2020-03-06 11:24:03 +1100	Farming/Agriculture	City of Dover needs a Community Garden and has a tight knit community that could benefit from it and help manage it.		39.16375	-75.5316
2020-03-06 11:26:13 +1100	Ideas and Suggestions	The City should have a climate resiliency plan to offer cooling stations in severe heat.		39.15857	-75.5235
2020-03-06 11:30:25 +1100	Ideas and Suggestions	City is planning to close its power generation facilities over time and should consider building a renewable resource to replace them. Also power should remain municipal.		39.16001	-75.5248

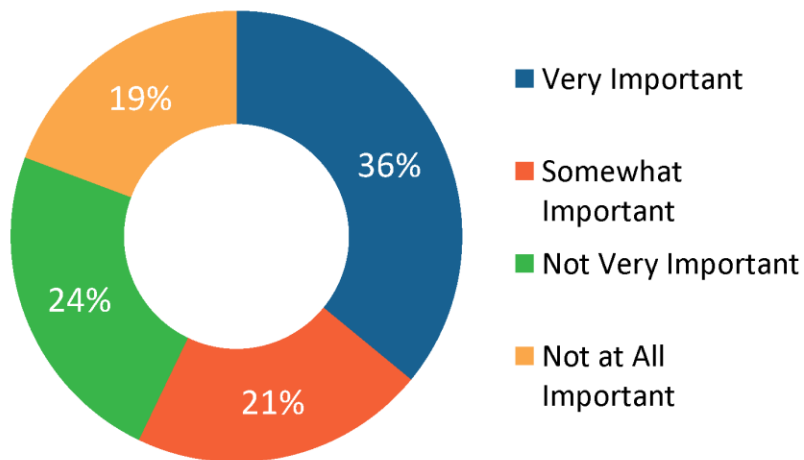
DELAWARE'S

Climate Action Plan

MetroQuest Survey Results

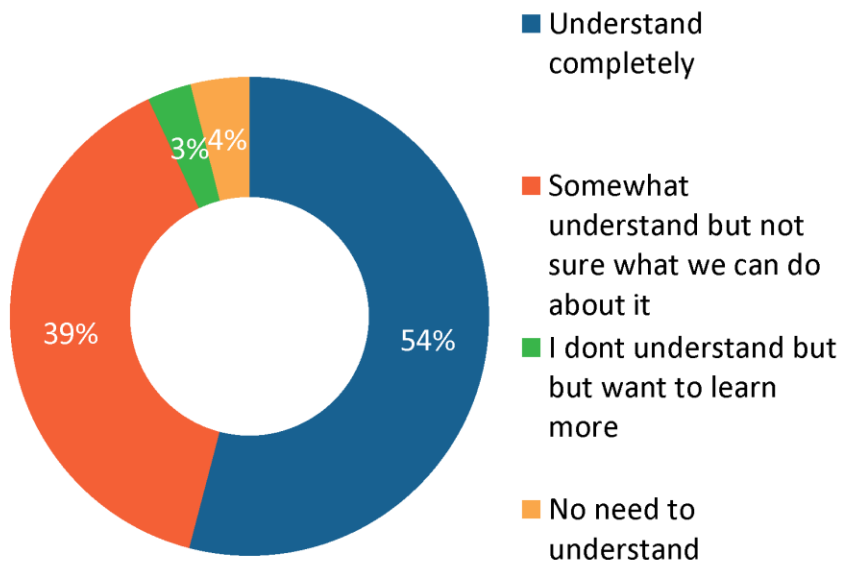
PRIORITIES

How important is the issue of climate change to you personally?



The results from the survey differed from the results of the public workshops. At the workshops 74% chose "very important" and 2% chose "not at all important."

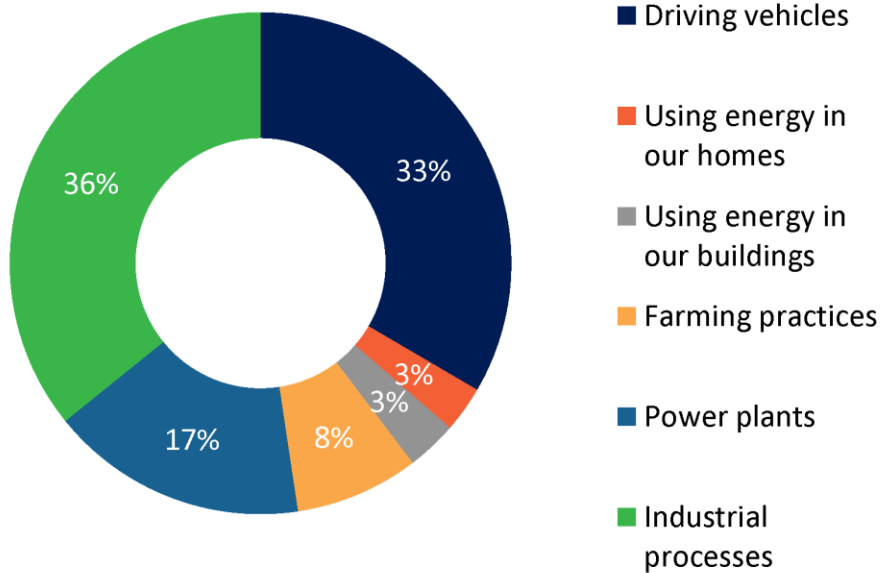
How well do you think you understand the causes of climate change?



The level of perceived understanding at the public workshops differed slightly from the survey responses. At the workshops, 46% felt they "understand completely", 2% felt there is "no need to understand."

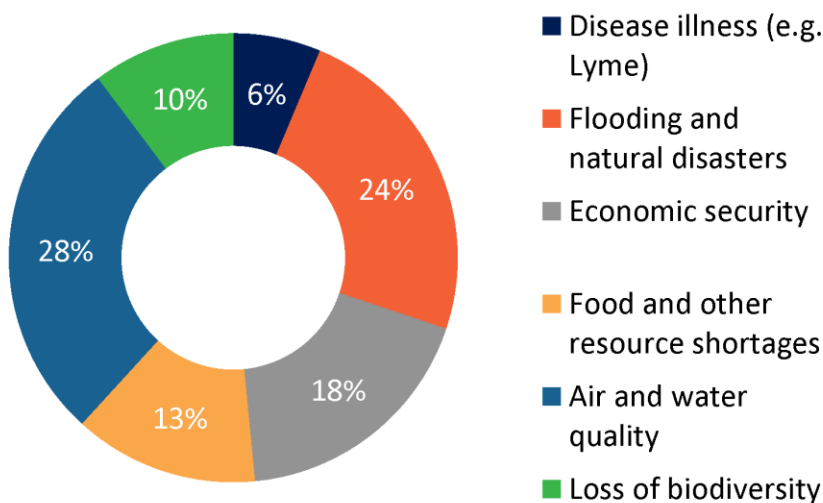
PRIORITIES

Which of the following do you think contributes most to greenhouse gas emissions and climate change?



A higher percentage of participants at the workshops knew what contributes most to Delaware's GHG emissions. At the workshop, 50% correctly selected "driving vehicles."

What issues are of most concern to you related to the impacts of climate change?



Participants at the workshops had similar concerns to survey respondents. At the workshops, natural disaster was the top concern (24%) followed by air and water quality (19%).

YOUR THOUGHTS—ENERGY

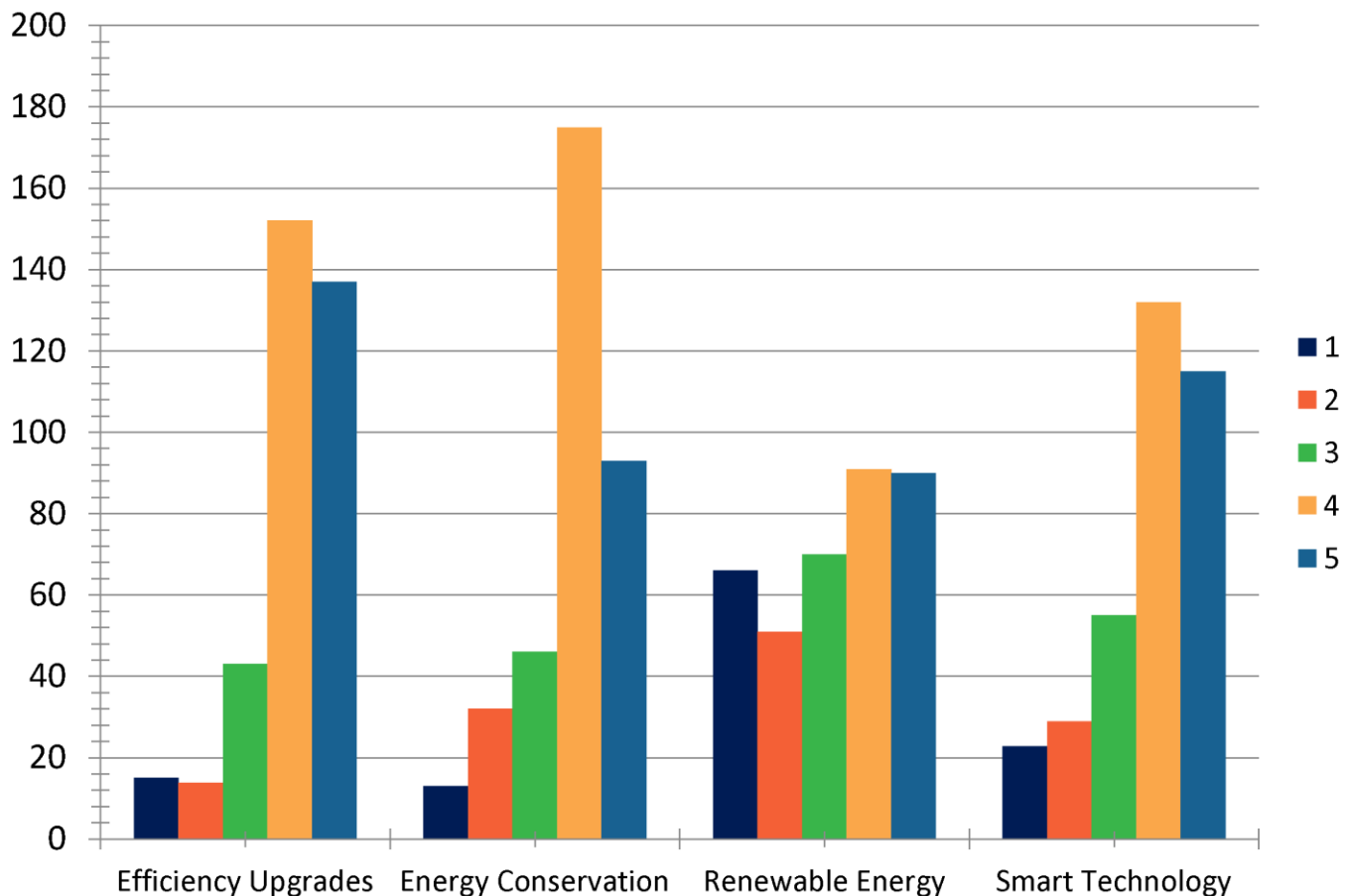
Energy Upgrades: I have made or would be willing to make energy efficiency upgrades in my home (e.g., better insulation, ENERGY STAR appliances).

Energy Conservation: I always unplug and/or turn off devices and heating/cooling when not using them.

Renewable Energy: I have or would be willing to install solar panels on my home.

Smart Technology: I have installed smart technology in my home (i.e. programmable thermostat) that allows me to control heating/cooling.

1—Strongly Disagree 2—Disagree 3—Neutral 4—Agree 5—Strongly Agree



YOUR THOUGHTS—ENERGY

Below is a summary of all the comments received on the Energy questions (continued on the following slide).

Efficiency Upgrades <i>(Indicate any support (incentives, technical assistance, etc.) you would require to take this action.)</i>	Energy Conservation <i>(Indicate any support (incentives, technical assistance, etc.) you would require to take this action.)</i>
<p>Opportunities</p> <ul style="list-style-type: none"> • Willing to upgrade as budget allows • Want technical assistance • Would with tax break or incentive • Want information about economic benefits • Will upgrade when a replacement is needed • Would do if it saved money • Have already done • Want more funding for Energize Delaware • Want resources for older homes and low-income communities • Landlord discounts to include renters <p>Barriers</p> <ul style="list-style-type: none"> • Do not own home • Concerned about emissions of producing new products • Do not want help from government • Do not want efficiency standards to be mandated • Cost of upgrades 	<p>Opportunities</p> <ul style="list-style-type: none"> • Always turn off lights • Would like a guide on best practices • Want switches on outlet plates to turn off rather than needing to unplug • Want discounted smart surge protector • Eye catching public education • I do to reduce energy bill • Motion sensors • Would like incentives to do this <p>Barriers</p> <ul style="list-style-type: none"> • Harder to remember to unplug electronics • Extreme heat increasing energy A/C demand • Often forget to unplug/turn off appliances • Do not care about reducing energy use • Safety of having lights on • Want to be able to use resources as desired without government intervention • Do not want to be required to take these actions

YOUR THOUGHTS—ENERGY

Renewable Energy *(Indicate any support (incentives, technical assistance, etc.) you would require to take this action.)*

Opportunities

- Support for a community solar project
- Want information on the economic benefits
- Want information about trusted installers
- Need a significant subsidy or incentive
- Already have solar or a very efficient home

Barriers

- Cost
- Property is too shady
- Cannot install as a renter
- Cannot install on an apartment, townhouse, or condo
- Too unsightly
- Too long of a payback period
- Do not support government subsidies or incentives
- Too much maintenance

Smart Technology *(Indicate any support (incentives, technical assistance, etc.) you would require to take this action.)*

Opportunities

- Would like to be able to connect thermostat to phone
- Motivated to save money
- Will upgrade as there is a need for replacement
- Eager to save energy
- Need information about how to operate this technology
- Want incentives for low income residents
- Already have
- Working toward getting smart tech

Barriers

- Do not want to be forced to make changes
- Not motivated to do this to reduce energy use
- Privacy concerns
- Not needed to save energy
- Opposed to “smart” technology
- Cannot make these upgrades in a rental

The comments received about energy through the survey were fairly consistent with what we heard at the public workshops. From both sources, there were many comments expressing enthusiasm for saving energy and money, concern over the costs of making upgrades, and frustration about not being able to make upgrades on a condo or rental property. A main difference between the survey and public survey results was that the survey had more respondents expressing considerable opposition to government assistance or interference.

YOUR THOUGHTS—TRANSPORTATION

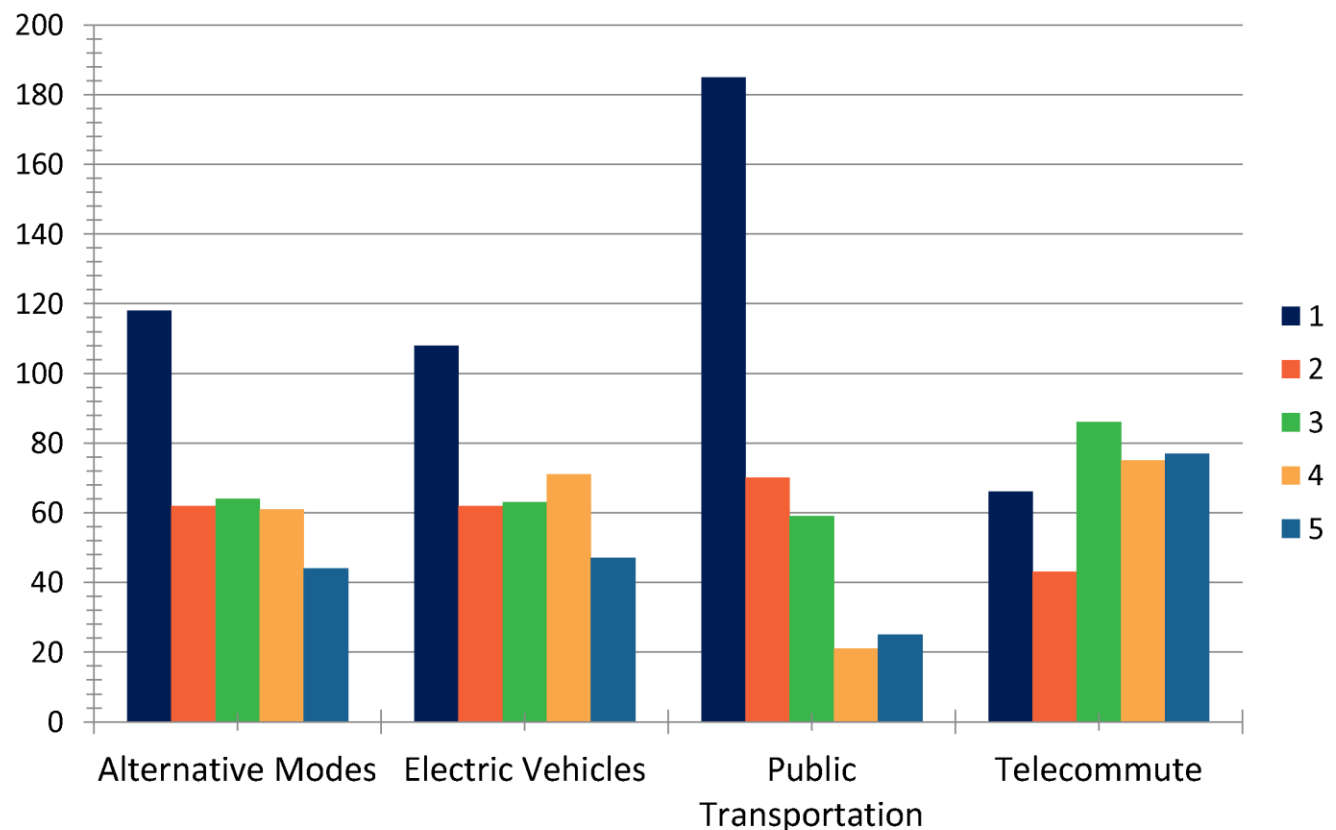
Alternative Modes: I would be willing to walk/bike to work at least 4 times per month.

Electric Vehicles: I already own or would be willing to purchase/lease a pure electric vehicle for my next car.

Public Transportation: I often (at least 4 times per month) use public transit to commute to work.

Telecommute: I currently have the option from my employer to telecommute/work from home at least one day per week.

1—Strongly Disagree 2—Disagree 3—Neutral 4—Agree 5—Strongly Agree



YOUR THOUGHTS—TRANSPORTATION

Below is a summary of the comments received on the Transportation questions (continued on the following slide).

Alternative Modes <i>(Indicate in the Optional Comments any barriers that currently exist to taking this action.)</i>	Electric Vehicles <i>(Indicate in the Optional Comments any support (incentives, technical assistance, etc.) you would require to take this action.)</i>
<p>Opportunities</p> <ul style="list-style-type: none"> • Want more bike lanes and trails • Would bike if there were shower facilities at work • Zoning reforms to promote mixed-used development • Would consider if employer provided bikes <p>Barriers</p> <ul style="list-style-type: none"> • Live too far from work • Disability rules out biking • Need my car for work • Too much sprawl for people to live close to work • More likely to be feasible for higher income residents • Unsafe biking and walking conditions 	<p>Opportunities</p> <ul style="list-style-type: none"> • Want more information about EV infrastructure • Want more information about the technology • Already have a hybrid • Can't afford but looking to by the most energy efficient car possible • Desire for the manufacturing of EVs to be less carbon-intensive • Want incentives for low-income residents • Would buy a used electric car • Waiting to need a new car, then will go electric • Want investment in sustainable batteries <p>Barriers</p> <ul style="list-style-type: none"> • Limited range • Waiting for technology to advance • Cost • Do not support government subsidies • Concerned they are not really reducing emissions if charged by nonrenewable energy sources • Added cost of home electrical adjustments • Too long of a pay off period • No electric options in the desired style of car • Do not want computer-operated car

YOUR THOUGHTS—TRANSPORTATION

Public Transportation *(Indicate any support (incentives, more or different routes, etc.) you would require to take this action.)*

Opportunities

- Want smaller, electric buses
- Would like to see more trains and buses powered by clean energy
- Would support the DC commuter train coming through Newark
- Want to see subsidies for low income residents
- Would use if system was improved

Barriers

- No public transportation options between home and work
- Retired—do not need
- Limited options for disabled residents
- Inaccessible public transit options
- Takes too long
- Not enough routes or connections
- Safety concerns
- Especially limited options in southern Delaware
- No interest in using public transportation
- Not enough density to make public transportation feasible
- Public health concerns on public transportation
- Need a car for work

Telecommute *(Indicate if you do or would take this option if offered.)*

Opportunities

- Would work from home if employer allowed it
- Would sometime work from home if allowed
- Great option for those with disabilities
- Most of job could be done from home
- Expanded work from home policies after COVID-19 ramifications
- COVID-19 ramifications showing this is a possibility
- Win-win for employees and environment
- Tax credits for employers offering this option
- Believe employer would offer this option if it were supported state-wide

Barriers

- Work requires being in person
- Allowed but looked down upon by supervisor without specific reason to work from home
- Important to spend time with team
- Less productive at home

Both survey and workshop comments revealed major barriers to expanding public transportation, including sprawl and a lack of service. Survey respondents were especially enthusiastic about telecommuting options, perhaps due to the coronavirus crisis. Barriers to using alternative modes of transportation and purchasing electric vehicles were consistent across all the survey and workshops.

YOUR THOUGHTS—RESILIENCE

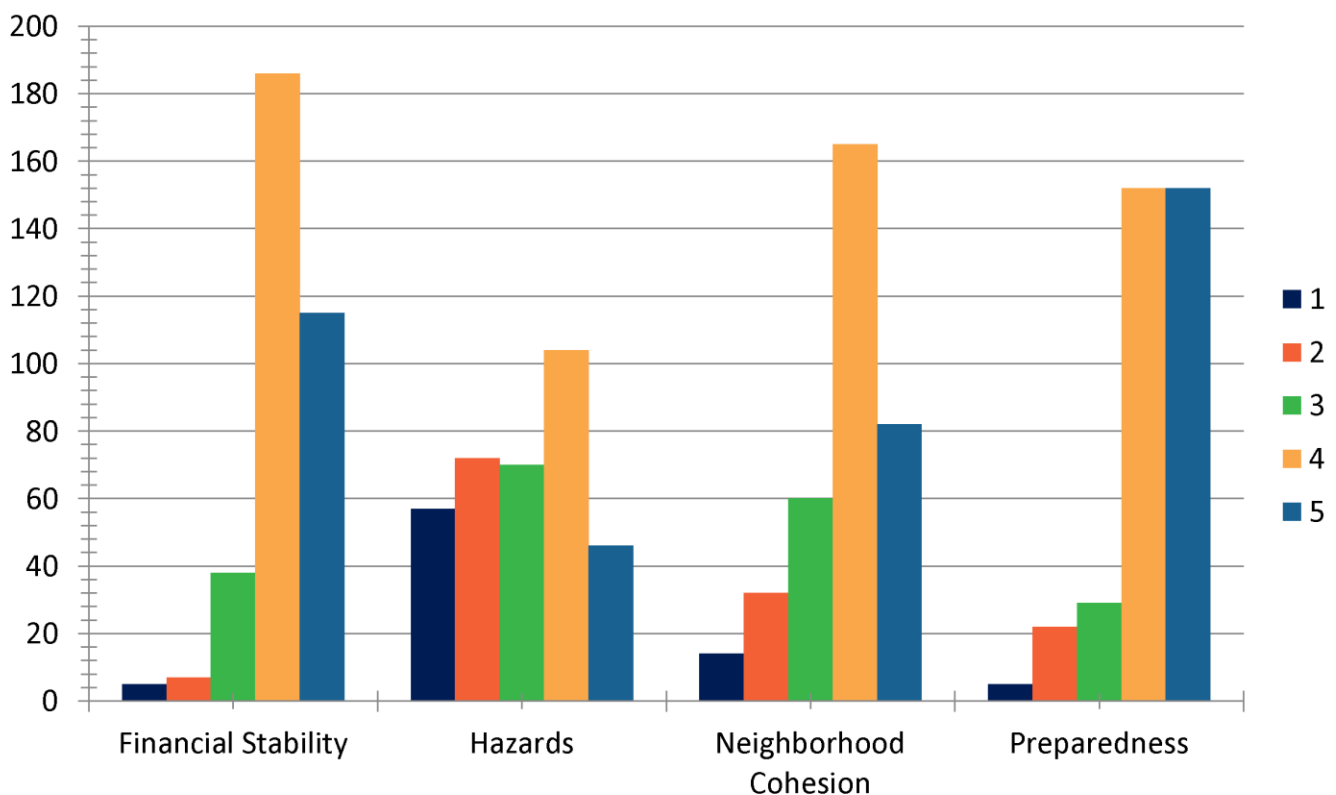
Financial Stability: I understand how a person's financial stability contributes to community resilience.

Hazards: I have been impacted by intense storms, extreme heat, or flooding in the past.

Neighborhood Cohesion: I know my neighbors and feel comfortable going to them for help in the case of an extreme event situation.

Preparedness: I would be able to meet my basic needs if a storm caused me to be confined to my home without power for up to 72 hours.

1—Strongly Disagree 2—Disagree 3—Neutral 4—Agree 5—Strongly Agree



YOUR THOUGHTS—RESILIENCE

Below is a summary of the comments received on the Resilience questions (continued on the following slide).

Financial Stability <i>(No direct call for comments.)</i>	Hazards <i>(Please indicate how and to what extent you have been impacted by these hazards.)</i>
<ul style="list-style-type: none"> • There are less tangible assets than financial stability to lean on • Unessential workers are in great distress due to COVID-19 • Very aware, concerned about impact of COVID-19 • Peoples choices lead to financial stability, government should not redistribute wealth • Disagree—poor communities can be very strong • Need to ensure low income populations do not bear the greatest burdens • Investment in education will help • Financial stability increases ability to repair damages, order supplies, relocate to higher/cooler area 	<p>Impacts</p> <ul style="list-style-type: none"> • Flooded basement • Loss of trees • Increased tidal flooding • More hurricanes • Severe snowstorms • Damage to home/car • Needed to find alternate route to work • More money spent on cooling home • Power outages <p>Objections</p> <ul style="list-style-type: none"> • Changes are natural occurrences, not manmade • Only very minor impacts • Impacts are nothing new • Impacts have not gotten more severe

YOUR THOUGHTS—RESILIENCE

Neighborhood Cohesion *(No direct call for comments.)*

Signs of cohesion

- Cohesive neighborhoods that offer support as needed
- Neighbors work together
- Provide assistance and reach out to neighbors in times of need
- Have a couple neighbors to reach out to
- Essential that we build cohesion as more disaster play out

Lack of cohesion

- Do not know neighbors very well
- Not as much cohesion as I would like
- Limited cohesion in condominium

Preparedness *(Please indicate any support or resources you would require to be able to do this.)*

Signs of preparedness

- Have necessary shelter
- Could get creative with providing food
- Have food stocked up and a disaster plan
- Feel prepared and experienced
- Prepared and do not want help from the government
- Have a generator and water tank
- Do not need outside assistance

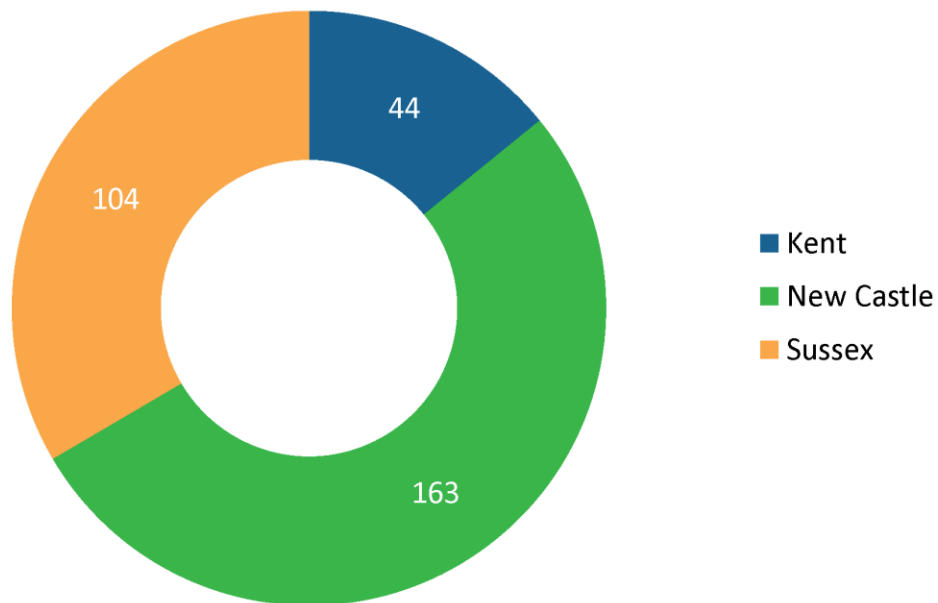
Lack of preparedness

- Elderly and no where to go for relief from heat
- Access to water is the biggest issue
- Would not be able to stay warm or cook food without power in the winter
- Switching to electric appliances is increasing vulnerability to power outages
- Need more space to store non-perishable food
- Would benefit from a generator
- Want better evacuation route
- Would not have enough water

While there was a great deal of overlap for comments about resilience from the survey and the workshops, the survey responses had a larger number of comments expressing the opinion that climate change is a natural phenomenon and that the government does not have a role in interfering. Similarities between the two forms of input included noticing more intense storms and power outages, a mixed feeling of neighborhood cohesion, and the need for more personal preparedness measures.

DEMOGRAPHICS

Which county do you live in?

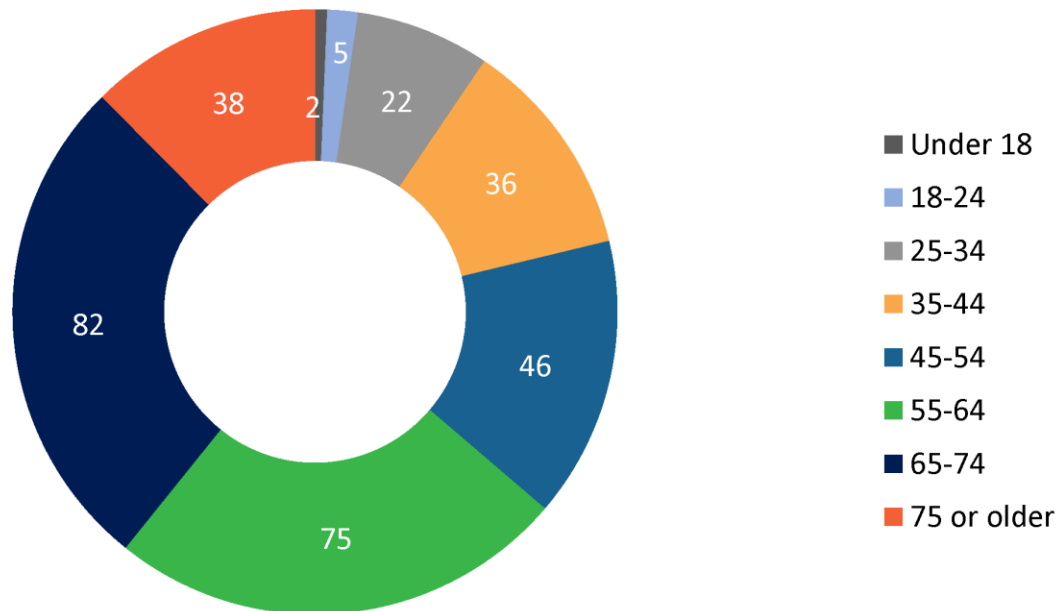


What zip code do you live in? (Top 20 displayed)

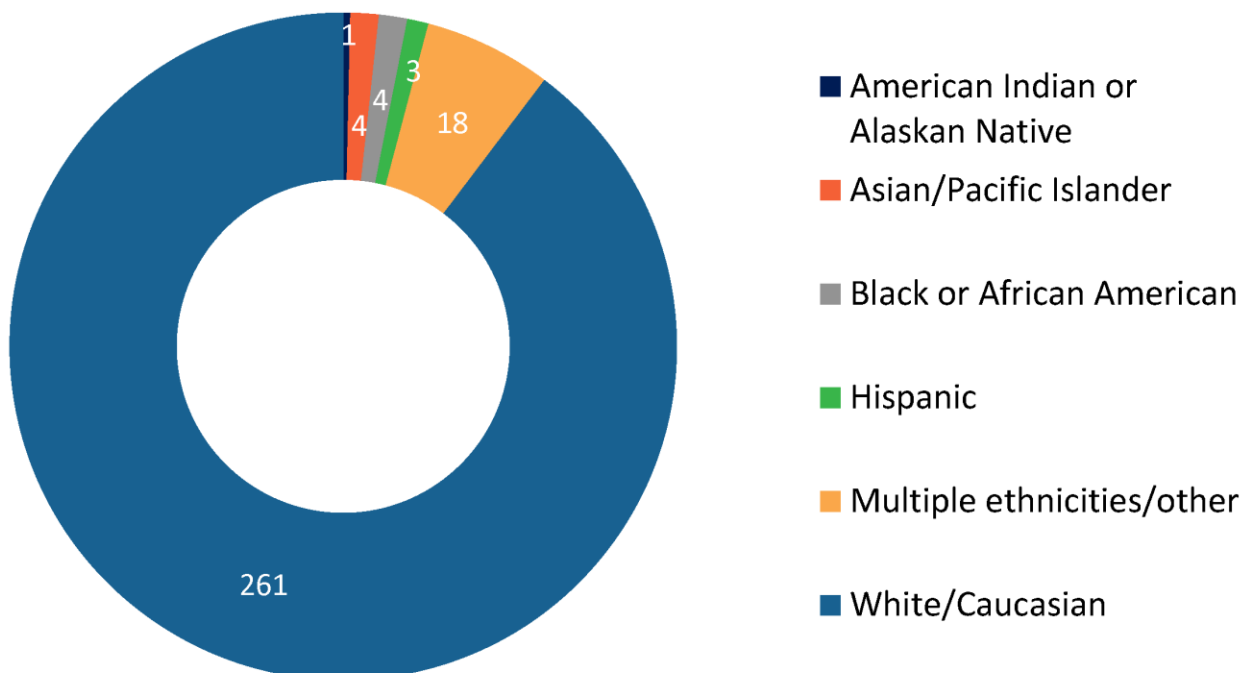
Zip code	Count	Zip code	Count
19711	23	19713	9
19958	18	19904	9
19709	15	19934	9
19803	15	19963	8
19707	14	19971	8
19808	14	19701	6
19930	13	19720	6
19970	13	19734	6
19810	11	19805	6
19806	10	19901	6

DEMOGRAPHICS

What is your age?



With which ethnicity do you most identify?



Survey Instrument

Delaware's Climate Action Plan

Progress

WELCOME

Delaware's Climate Action Plan

Over the course of 2020, the State of Delaware will be engaging residents and businesses to shape a Climate Action Plan aimed at minimizing the greenhouse gas emissions that cause climate change and maximizing our resilience to climate impacts.

Please take a moment to tell us what you think and help us better understand issues that are important to you. We appreciate your valuable input!

Begin

MetroQuest

2 PRIORITIES

3 YOUR THOUGHTS

4 THANK YOU

This site provides an opportunity to engage in this process to share your concerns about and ideas for solutions to climate change.

DELAWARE'S Climate Action Plan

Delaware's Climate Action Plan

Progress

WELCOME

Delaware's Climate Action Plan

Over the course of 2020, the State of Delaware will be engaging residents and businesses to shape a Climate Action Plan aimed at minimizing the greenhouse gas emissions that cause climate change and maximizing our resilience to climate impacts.

Begin

2 PRIORITIES

3 YOUR THOUGHTS

4 THANK YOU

This site provides an opportunity to engage in this process to share your concerns about and ideas for solutions to climate change.

DELAWARE'S Climate Action Plan

WELCOME

2

Setting a Climate Baseline

3

4

YOUR THOUGHTS

THANK YOU

Importance

Knowledge

Emissions

Impacts

Climate Change - Importance

How important is the issue of climate change to you personally?

Setting a Climate Baseline

What to do

We are already seeing the impacts of climate change. Tell us about your priorities, concerns, and knowledge to help guide the climate action planning process.

→ Please answer the survey questions.

Start

Next

WELCOME

2

Setting a Climate Baseline

3

4

YOUR THOUGHTS

THANK YOU

Importance

Knowledge

Emissions

Impacts

Climate Change - Importance

How important is the issue of climate change to you personally?

☐ Very Important
 ☐ Somewhat Important
 ☐ Not Very Important
 ☐ Not at All Important

Next

WELCOME

2 Setting a Climate Baseline

What to do

Next Task

3

4

PRIORITIES

YOUR THOUGHTS

THANK YOU

Importance

Knowledge

Emissions

Impacts

Climate Change - Knowledge

How well do you think you understand the causes of climate change?

☐ Understand completely

☐ Somewhat understand but not sure what we can do about it

☐ I don't understand but want to learn more

☐ No need to understand

Next

WELCOME

2 Setting a Climate Baseline

What to do

Next Task

3

4

PRIORITIES

YOUR THOUGHTS

THANK YOU

Importance

Knowledge

Emissions

Impacts

Climate Change - Emissions

Which of the following do you think contributes most to greenhouse gas emissions and climate change?

☐ Driving vehicles

☐ Using energy in our homes

☐ Using energy in our businesses

☐ Farming practices

☐ Power plants

☐ Industrial processes

Next

WELCOME

2

Setting a Climate Baseline

What to do

Next Task

3

4

THANK YOU

Importance

Knowledge

Emissions

Impacts

Climate Change - Impacts

What issues are of most concern to you related to the impacts of climate change?

- ☐ Disease & illness (e.g., Lyme disease)
- ☐ Flooding and natural disasters
- ☐ Economic security
- ☐ Food and other resource shortages
- ☐ Air and water quality
- ☐ Loss of biodiversity

Next

YOUR THOUGHTS

WELCOME

3

Do You Agree or Disagree?

4

THANK YOU

Energy

Transportation

Resilience

How closely do you agree or disagree?

Renewable Energy

Efficiency Upgrades

Energy Conservation

Smart Technology

Strongly Agree

Do You Agree or Disagree?

What to do

Please provide your opinion based on the text provided.

you agree with this direction?

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

Indicate how much you agree or disagree with at least 5 items.

Optional Comment

Done

More

Previous

Optional Comment

Next

WELCOME

PRIORITIES

3 Do You Agree or Disagree?

What to do

Next Task

4 THANK YOU

Energy

Transportation

Resilience

How closely do you agree or disagree?

Renewable Energy

Efficiency Upgrades

Energy Conservation

Smart Technology



Renewable Energy
I have or would be willing to install solar panels on my home.
Indicate in the Optional Comments any support (incentives, technical assistance, etc.) you would require to take this action.

Do you agree with this direction?

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

Previous

Optional Comment

Next

WELCOME

PRIORITIES

3 Do You Agree or Disagree?

What to do

Next Task

4 THANK YOU

Energy

Transportation

Resilience

How closely do you agree or disagree?

Renewable Energy

Efficiency Upgrades

Energy Conservation

Smart Technology



Efficiency Upgrades
I have made or would be willing to make energy efficiency upgrades in my home (e.g., better insulation, ENERGY STAR appliances).
Indicate in the Optional Comments any support (incentives, technical assistance, etc.) you would require to take this action.

Do you agree with this direction?

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

Previous

Optional Comment

Next

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience

How closely do you agree or disagree?

Renewable Energy

Efficiency Upgrades

Energy Conservation

Smart Technology



Energy Conservation

I always unplug and/or turn off devices and heating/cooling when not using them.

Indicate in the Optional Comments any support (incentives, technical assistance, etc.) you would require to take this action.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

Previous
Optional Comment
Next

4

THANK YOU

?

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience


How closely do you agree or disagree?

Renewable Energy

Efficiency Upgrades

Energy Conservation

Smart Technology



Smart Technology

I have installed smart technology in my home (i.e. programmable thermostat) that allows me to control heating/cooling.

Indicate in the Optional Comments any support (incentives, technical assistance, etc.) you would require to take this action.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

Previous
Optional Comment
Next

4

THANK YOU

?

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy

Transportation

Resilience

How closely do you agree or disagree?

Public Transportation



Public Transportation

I often (at least 4 times per month) use public transit to commute to work.

Indicate in the Optional Comments any support (incentives, more or different routes, etc.) you would require to take this action.

Do you agree with this direction?

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

Previous

Optional Comment

Next

4

THANK YOU

!

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy

Transportation

Resilience

How closely do you agree or disagree?

Public Transportation



Alternative Modes

I would be willing to walk/bike to work at least 4 times per month.

Indicate in the Optional Comments any barriers that currently exist to taking this action.

Do you agree with this direction?

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

Previous

Optional Comment

Next

4

THANK YOU

!

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience

How closely do you agree or disagree?

Public Transportation

Alternative Modes

Telecommute

Electric Vehicles



Telecommute

I currently have the option from my employer to telecommute/work from home at least one day per week.

Indicate in the Optional Comments if you do or would take this option if offered.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

Previous
Optional Comment
Next

THANK YOU

4

?

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience

How closely do you agree or disagree?

Public Transportation

Alternative Modes

Telecommute

Electric Vehicles



Electric Vehicles

I already own or would be willing to purchase/lease a pure electric vehicle for my next car.

Indicate in the Optional Comments any support (incentives, technical assistance, etc.) you would require to take this action.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

Previous
Optional Comment
Next

THANK YOU

4

?

WELCOME

PRIORITIES

YOUR THOUGHTS


?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience

How closely do you agree or disagree?

Preparedness



Preparedness

I would be able to meet my basic needs if a storm caused me to be confined to my home without power for up to 72 hours.

Please indicate in the Optional Comments section any support or resources you would require to be able to do this.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

Previous
Optional Comment
Next

THANK YOU

4

?

WELCOME

PRIORITIES

YOUR THOUGHTS


?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience

How closely do you agree or disagree?

Hazards



Hazards

I have been impacted by intense storms, extreme heat, or flooding in the past.

Please indicate in the Optional Comments section how and to what extent you have been impacted by these hazards.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

Previous
Optional Comment
Next

THANK YOU

4

?

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience


How closely do you agree or disagree?

Preparedness

Hazards

Neighborhood Cohesion

Financial Stability



Neighborhood Cohesion

I know my neighbors and feel comfortable going to them for help in the case of an extreme event situation.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

4

THANK YOU

M

Previous
Optional Comment
Next

WELCOME

PRIORITIES

YOUR THOUGHTS

?

3 Do You Agree or Disagree?

Energy
Transportation
Resilience


How closely do you agree or disagree?

Preparedness

Hazards

Neighborhood Cohesion

Financial Stability



Financial Stability

I understand how a person's financial stability contributes to community resilience.

Do you agree with this direction?

Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

4

THANK YOU

M

Previous
Optional Comment
Next

4 Wrap up

WELCOME

PRIORITIES

YOUR THOUGHTS

THANK YOU

Final Questions (Optional)

Which county do you live in?

Select...

What zip code do you live in?

Type...

What is your age?

Select...

With which ethnicity do you most identify?

Select...

Email (if you would like to stay updated)

Type...

Submit Final Questions

Equitable Engagement

We are committed to an equitable process. By filling out the information on this page, we can ensure we are reaching everyone in our state.

<https://declimateplan.org/>**DELAWARE'S**
Climate Action PlanWrap up
What to do

- Thank you for your input so far! It has been recorded.
- Please answer a few optional questions. This helps us understand your input better.
- Your private information will be kept private.
- Use the sharing tools (on the right) to spread the word!

Start

4 Wrap up

WELCOME

PRIORITIES

YOUR THOUGHTS

THANK YOU

Final Questions (Optional)

Which county do you live in?

Select...

Select...

Kent

New Castle

Sussex

Select...

With which ethnicity do you most identify?

Select...

Email (if you would like to stay updated)

Type...

Submit Final Questions

Skip

Equitable Engagement

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<https://declimateplan.org/>**DELAWARE'S**
Climate Action Plan

What to do

WELCOME

PRIORITIES

YOUR THOUGHTS

4 THANK YOU

What to do

Final Questions (Optional)

Which county do you live in?

Select...

What zip code do you live in?

Type...

 50

What is your age?

Select...

What ethnicity do you most identify?

Select...

Under 18

18-24

25-34

35-44

45-54

55-64

65-74

75 or older

Submit Final Questions

Skip

Equitable Engagement

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<https://declimateplan.org/>

DELAWARE'S
Climate Action Plan

WELCOME

PRIORITIES

YOUR THOUGHTS

4 THANK YOU

What to do

Final Questions (Optional)

Which county do you live in?

Select...

What zip code do you live in?

Type...

 50

What is your age?

Select...

With which ethnicity do you most identify?

Select...

Select...

American Indian or Alaskan Native

Asian/Pacific Islander

Black or African American

Hispanic

White/Caucasian

Multiple ethnicities/other

Skip

Equitable Engagement

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<https://declimateplan.org/>

DELAWARE'S
Climate Action Plan

Detailed Survey Results

Note: The results reported below simply represent the opinions of the **426 people** who responded to the survey; the results are not necessarily representative of the Delaware population as a whole.

Survey Page #1: PRIORITIES

1. How important is the issue of climate change to you personally?

Response Options	Number of Responses	Percent of Total Responses
Very Important	151	36%
Somewhat Important	89	21%
Not Very Important	99	24%
Not at All Important	81	19%
TOTAL	420	

2. How well do you think you understand the causes of climate change?

Response Options	Number of Responses	Percent of Total Responses
Understand completely	219	54%
Somewhat understand but not sure what we can do about it	158	39%
I don't understand but want to learn more	12	3%
No need to understand	16	4%
TOTAL	405	

3. Which of the following do you think contributes most to greenhouse gas emissions and climate change?

Response Options	Number of Responses	Percent of Total Responses
Driving vehicles	113	33%
Using energy in our homes	10	3%
Using energy in our businesses	11	3%
Farming practices	27	8%
Power plants	56	17%
Industrial processes	121	36%
TOTAL	338	

4. What issues are of most concern to you related to the impacts of climate change?

Response Options	Number of Responses*	Percent of Total Responses*
Disease & illness (e.g., Lyme disease)	29	6%
Flooding and natural disasters	109	24%
Economic security	84	18%
Resources shortages	61	13%
Air and water quality	128	28%
Loss of biodiversity	47	10%
TOTAL	458	

* Respondents could select up to two responses but were not specifically prompted to do so

Survey Page #2: YOUR THOUGHTS

5. **Energy – Renewable Energy:** I have or would be willing to install solar panels on my home. *Indicate in the Optional Comments section any support (incentives, technical assistance, etc.) you would require to take this action.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	90	24%
Agree	91	25%
Neutral	70	19%
Disagree	51	14%
Strongly Disagree	66	18%
TOTAL	368	

Optional Comments:

More information needed on whether individual homes will receive economic benefits as more homeowners do solar and the value of solar generated power goes down due to increased supply
My property is too shady for solar, but I support a community solar project.
Don't have solar now but would consider
Cost dependent " No more than a new car"
We already use geothermal
I have 22 solar panels on my house
I rent, so I don't have the option to choose solar panels.
I will not sell the power back to Delmarva unless there is no cap on the amount I can sell back.
I live in an apartment, so it might not work for those who don't live in individual houses.
I live in a very wooded area. Very shaded
I would be delighted to but don't believe we can afford to.
Certainly, financial incentives help.
The concern is that they will make a resale of our home difficult.
Need community solar option - tree cover makes my home unsuitable for solar panels
Not feasible however because of tree cover and relatively low demand
We'd love to. We don't have room in our budget currently even with incentives.
I rent an apartment and do not have the ability to take this action myself.
They are always changing and not up to par just yet
If costs come down to \$5000 to purchase and install
BUT I live in a townhouse condo HOA and do not own my roof AND as an old geezer of 77 I am not sure I can get back an investment before I die HENCE I want to know what commercial electricity provider in Delaware I can switch too in order to get more power from solar and wind.
It is my understanding that subsidies will be ending or have ended. The economics and payback need to make some sense
I do not think Solar is developed enough for the general consumer. I am more than willing to invest in solar if it was economically beneficial. In evaluation of my sun exposure, it would be a larger cost than benefit.
I would be willing if cost were not prohibitive
Live in a townhouse don't think solar would help me personally
Live in a townhouse don't think solar would help me personally but if I lived in a single family home and there were incentives and help I'd put up some panels
Subsidy through local regulated utility similar to what was provided to my parents' home in Baltimore through BGE
No. They are the most unsightly thing I've ever seen. Work on making them smaller and better looking and maybe I would consider it one day.
Would appreciate an ongoing generous tax incentive.

I have had an analysis but sadly our home is unsuited to capture of solar energy. We did switch to an option for renewable energy resources from our power company
My house is heavily shaded otherwise I would have solar panels
I would love to, but my house is in the woods, so community solar would be a better fit in my case.
Would like tax credits or subsidies for purchase and install of panels.
Until the technology is improved and made more attractive, I will not install them on my house
Retrofit with solar is expensive and problematic.
I don't think our roof is situated in the right orientation.
Not until efficiency increases to justify cost benefit analysis and payback period
I have a fairly new well designed home that is very energy efficient. residential solar is a longish payback
But I do not agree with providing financial incentives as this is only a help to people who already have substantial disposable income. It disproportionately hurts people who are less well off financially.
I'm okay with solar panels and renewable energy, but don't believe there should be government mandates or incentives associated.
Not happening unless you pay for material and labor.
I've researched it and its very costly and the ROI is too long.
Not cost effective
If solar panels were economically and environmentally feasible without subsidies, I would readily use them. Right now, the hidden costs (subsidies) and environmental impact (manufacturing costs and end-of-life disposal problems) far outweigh any benefits that I see.
Only if affordable
Depends how much it costs
I would like some type of incentive to help pay for this
If 1. It made economic sense 2. Rate structures were updated properly 3. Grid stability and harmonics were not impacted
With incentives (to keep cost down)
Needs to have proper economic incentive/financing to make feasible
For off grid use
Photovoltaic cells are highly inefficient and a waste of money
It just seems so expensive to install them or I would gladly do so
Do not agree with government subsidies. If renewables are not ready for prime time, more research is necessary till economically feasible
This is a very biased survey
I plan to install solar panels, but I should not be penalized by the utility in the form of higher fees and rates
It doesn't work without getting someone else to pay for it.
I note you do not mention offshore windmills. I am glad as I am staunchly opposed. These are among GNF most expensive sources of energy and irretrievably damage the beauty and serenity of our shoreline.
I've been told this isn't possible for me because I have an old mobile home.
Solar energy is a non-dispatchable energy source. This means it must be tended by an equal amount of reliable dispatchable energy, generally this is natural gas. This means solar does not add to capacity. Rather, it, and equally unreliable wind energy, only temporarily displaces reliable generation. At best, wind and solar energy wastes scarce resources on intermittent generation. At worse, subsidized wind and solar are schemes to enrich the already rich and powerful.
If it would really saver money without a large outlay up front I might consider it
Not enough access to direct sunlight, I won't re,I've reees
It needs to be more cost efficient before I would consider it.
I would do this to save money and free myself from the government more than help the Earth. Though I think being a good steward of what God has given us is important, saving humanity from the evils of war-loving, thieving government (all governments) is so much more important.

I have heard that disreputable contractors have damaged homes in the process of installing them.
It would invalidate our 50-year warranty on our roof.
I need to investigate more about cost of installation and cost of usage
Cannot get a return on my investment, too much maintenance, and will not run my whole house or eliminate my electric bill.
However, this is costly and take years for me to recoup the cost of the panels and installation
I live in a condo and do not have the option.
The technology is not there to make it economical. Plant a tree instead
I would, If they make financial sense for me. I know solar panels aren't cheap
Analysis by a solar energy provider shows that my house is not suitable.
Economic incentives for homeowners
Would have to be economically beneficial
Expense is the issue
Waiting for improved lower cost technologies that are self-sufficient and not in need of subsidies.
Initiatives would be necessary if cost is prohibitive
Too much space and expense
I live in a wooded area
Would love to have solar power but can't afford to install it.
Incentives for solar panels or information about trusted installers/companies needed.
I don't own my own home. If I did, I would consider installing solar panels. However, I've heard that solar panels don't last long and can't be recycled.
Must be somewhat price competitive with conventional sources
waste of resources
Until solar panels are able to achieve at least 24-25% efficiency, they are not economically viable in DE, since DE residential installations cannot generate income for the homeowner or offset their electric bill to \$0.00 (we still have to pay the base monthly fees, meter charges, etc. Other states have much better R.E plans and programs
My home is already very efficient thanks to insulation and I have natural gas heat, so it will have to be inexpensive to add panels and convert to electric (heat pump), but I am highly motivated to do this maybe when my heater dies or sooner if it becomes economically sound

6. **Energy – Energy Efficiency Upgrades:** I have made or would be willing to make energy efficiency upgrades in my home (e.g., better insulation and windows, ENERGY STAR appliances). *Indicate in the Optional Comments section any support (incentives, technical assistance, etc.) you would require to take this action.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	137	38%
Agree	152	42%
Neutral	43	12%
Disagree	14	4%
Strongly Disagree	15	4%
TOTAL	361	

Optional Comments:

Extensive air sealing to attic, encapsulated crawlspace, upgraded insulation, had home energy audit
Regular Maintenance can make a house more energy efficient. However, each family knows what they can/cannot afford.
Regular Maintenance can make a house more energy efficient. However, each family knows what they can/cannot afford.
I have made energy efficiency upgrades but do not want to be forced to make them until I was ready.
When upgrades are an option in my budget, I choose energy smart options.

I don't own my own home. If I did, I would consider using efficient appliances. However, I am concerned about the emissions involved in producing new appliances.
Technical assistance/recommendations would be needed.
Homeowner can upgrade appliances if they want and it should not be mandatory without incentives offered. In most case the return on investment to the homeowner is low. If people are making upgrades to Energy Star items and it is to feel good than fine, but the US cannot save the world. China and India present a greater issue. The best fix thus far for the climate change concern is COVID-19 that stopped the economy.
I rent so cannot alter the home I live in.
Need tax breaks to help defer costs
Economic incentives--such as tax credits etc.
I have made improvements including a high efficiency natural gas furnace for which I was supposed to receive a rebate but did not.
Again, if it makes financial sense.
I would change everything if it made economical sense. Turn off a switch when leaving a room also makes sense
We made that decision when we purchased a new heating/cooling unit.
When need to replace items in my home we purchase energy star and increased energy efficient items as we are a Delmarva Power customer and Legislators and Commissioners keep adding line items to increase our monthly utility bill.
I have energy star appliances and good insulation
Do this when funds allow. when remodeling will upgrade to more efficiency items
These in no way ought to become standards. These initiatives increase the cost of living and ought to be optional to the consumer
Have done this.
We do what we can with the budget we have. I don't want any help from the government in doing it either.
Please incentivize
Only unsubsidized energy efficiency enhanced should be encouraged.
I put in a geothermal system that is extremely inexpensive to run, especially in the summer. I don't want to be penalized by the utility for using less kws or due to the square footage of my house
I would not want this to be mandated.
Saving energy makes sense. Still wary of subsidies. Maybe tax breaks.
Saving energy makes sense. Still wary of subsidies. Maybe tax breaks. Technical assistance also good idea
I always choose an energy-efficient choice
To save money
With incentives
If it made economic sense without subsidies provided by tax dollars
I would only do so to save money on my costs or for my comfort. Not for green policy
Depends how much it would cost
We already have.
Of course! It makes sense to try to conserve energy whenever/wherever feasible.
Already have
Not happening unless the appliance is in need of replacement.
I've done all upgrades voluntarily with no government directive or incentive and believe that is how everyone should improve their ways.
Again, any financial incentives should be income inverse proportional.
We have done some but need to do more
This is the second step in reducing load - the first is reducing use
Have purchased Energy Star fridge, and will go with all-electric furnace next year.
I recently upgraded my attic insulation to R-60 and plan to add new siding/insulation and convert my gas water heater and HVAC to heat pump units. Energize Delaware is a great organization that needs more funding support.

We had a tankless water heater installed when we needed to replace our hot water heater. We also installed a radiant heat floor in one room. We buy Energy Star appliances whenever possible and replaced one vehicle with a hybrid Prius
I have a brand new energy efficient 5000 sq ft home. With top of the line windows & doors, 6" spray foam insulation, top of the line appliances. My electric bill was only \$150 last month.
Subsidy would certainly help. With the tax changes many people cannot take advantage of the write off anymore.
Upgraded kitchen
I think that there should be more resources on how homes can be upgraded in older homes and lower income communities.
My home is already well designed for energy efficiency and I agreed to the Delmarva automated system that cuts my power under high load conditions.
Have purchased an energy star appliance
Energy star is kind of a rip off. A lot of new home builders are using that and only that as their selling plan.
Electricity in my apartment is sourced entirely from green energy - Clearview Energy.
Our washer and dryer are energy start. They were given to us by friends, for free. As we have replaced appliances, we haven't necessarily looked to ensure they are energy star, but it would have been good to do so.
Did updates several years ago through the SEU which paid for partial costs.
The managers at my apartment should do more of this.
I purchase energy star products when possible, but I rent so I don't get to choose major appliances.
I have a geothermal heat pump and energy efficient appliances
Landlord discounts would be nice to encourage renters to upgrade aging rental homes
More rebates would be great.
We did an energy audit two years ago and made improvements

7. **Energy – Energy Conservation:** I always unplug and/or turn off devices and heating/cooling when not using them. Indicate in the *Optional Comments* section any support (incentives, technical assistance, etc.) you would require to take this action.

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	93	26%
Agree	175	49%
Neutral	46	13%
Disagree	32	9%
Strongly Disagree	13	4%
TOTAL	359	

Optional Comments:

I'm good about lights but not good about electronics
Agree it is important but don't always do it!
Yes, other than air filters, which need to run continuously.
I would need a step by step guide on best practices.
Bought a home with installed appliances which include non-necessary energy vampires (digital clocks, etc.) - would love to see these designed out of available appliances
People seem happy that it has been a moderate winter. They will be less happy with a hot summer and running A/C a lot.
I do unplug a lot of appliances when they are not in use, but not across the board. I would really LOVE the switches on the outlet plates that allow you to turn on and off without unplugging. Very common in Australia.
I replaced all my lighting with LED's and have a dual heat pump system, and in the summer, we go north while our DE HVAC is set to 80 degrees.

It is more efficient to maintain heating and cooling other than starting and stopping but otherwise try to be cognoscente of turning off devices etc.
I try but hard to remember to do it. I do turn off lights when not using them. Don't leave lights on in room not being used
I unplug all small appliances.
Not always as consistent as we could be but have replaced bulbs with LED bulbs throughout our house
Give out free/discounted smart surge protector power strips?
Actually, I can do better at this. Somethings cannot be easily turned off.
Disseminate public information via media that is eye catching so people are attracted to listen and learn the financial impacts of these actions.
I don't always, but again, I try to conserve energy as much as possible.
Any measure I take is to lower my inflated Delaware energy bill not as a result of climate concern
Use natural gas, not wind or solar, it does not to any climate problem and is very cost effective
Nobody's perfect but I do what I can while not leaving my house pitch black for security reasons
Try to be more conscientious
People have the right to use resources in the manner they see fit, without any government meddling in their affairs.
Again, this is to save money. If I work less, the government can't tax me as much to spend on killing people in wars and doing other horrible things. There are some nice people in government, but every government is bloated and ultimately destroys people so much more than the changes of our Earth's climate.
Make motion sensor controls mandatory in new builds or building modifications
I unplug some devices but not all and I don't want to be required to do so
Our energy bill is lower than our neighbors'.
Again, an option should NOT be mandated
I turn lights off when I leave rooms, but keep appliances, TVs, lamps plugged in at all times.
Please incentivize
Programmable thermostat with 10 degree setbacks during the day when we are at work. I unplug things for vacation, not daily

8. **Energy – Smart Technology:** I have installed smart technology in my home (i.e. programmable thermostat) that allows me to control heating/cooling. *Indicate in the Optional Comments section any support (incentives, technical assistance, etc.) you would require to take this action.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	115	32%
Agree	132	37%
Neutral	55	16%
Disagree	29	8%
Strongly Disagree	23	6%
TOTAL	354	

Optional Comments:

I have replaced items in my home with energy smart technology, but I do not want to be forced to replace something.
Our thermostat is manually programmable but cannot connect to iPhone.
I do this like many homeowners to save money. This is not about saving the planet. I upgraded to heat pumps in my home to reduce the amount of propane gas because it cost much more than electric.
Good idea to encourage - energy conservation
We installed an 18 SEER heat pump with programmable thermostat when we had to replace 3 years ago.
As items break or wear out, I am for installing updated technology.
I haven't because they aren't affordable for me

While I am fully in favor of anything that would reduce my energy bills, or better yet, take me completely off the grid, I am not in favor of "smart technology" that would assist the government in monitoring my life. Also, I did not answer some of the questions in part 2 because "None of the Above" was not an option.
We have no trouble controlling the heating/cooling without this.
I'm a semi-Luddite, so I'm not a fan of smart technology. Instead, we almost never use our central heating and a/c, but instead localize our heating and cooling by all staying in the same room. It's easier in the summer, as our house tends to stay naturally cool. Besides, I have enough devices unfortunately where Big Brother can track my family and me. No more, thank you.
I oppose all monitoring of energy or information use.
I do not know how to operate something like this.
I am working on getting an energy audit for residence and a rental.
We have a programmable thermostat, but I do not want a Smart Meter mandate. These meters have been linked to illness.
Again, to save money
I have a lot of home automation.
The key to this question is "that allows ME to control"
Stay tuned for classified zero point energy technology far better than today's solutions.
No financial incentives should be available to people who have incomes that allow them to afford these devices but should be available to people in inverse proportion to those of lower incomes.
I would not call a programmable thermostat "smart".
Nest has several programs that we can sign up for. Please contact them and get involved: https://nest.com/energy-solutions/
Already have programmable thermostat.
I have a smart thermostat and the heat pump system is checked twice a year and works remarkably well.
Have not used this tech yet, working toward this goal
I rent an apartment and do not have the ability to take this action myself.
I just keep it at 65 all the time. Rarely turn on A/C.
We keep talking about doing this. We really should!
Incentives and technical assistance would be good. I just manually adjust temps at different times of day/night
We have electric baseboard heat, so no thermostat.
I live in an apartment and would like to have something like this
I rent so I can't do this.
Have it already
Don't like smart technology and will never use it
Too expensive to renovate our 100 yr old rental house willing to do on own property

9. **Transportation – Public Transportation:** I often (at least 4 times per month) use public transit to commute to work. *Indicate in the Optional Comments section any support (incentives, more or different routes, etc.) you would require to take this action.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	25	7%
Agree	21	6%
Neutral	59	16%
Disagree	70	19%
Strongly Disagree	185	51%
TOTAL	360	

Optional Comments:

More, smaller electric buses
Not available for my commute. Commuter rail from Newark to Aberdeen would help.
Public transit is not available between my house and work
Disabled so I don't travel much
Agree on importance of public transport. Am retired and don't use often
I do not use public transit, but do drive and love my 2008 Prius
No public transportation is available in my immediate area
Public transportation is inaccessible where I live. The closest bus stop is half a mile away and requires to go walking down a steep hill. Not to mention, only 1 bus route passes through my area.
I work from home or I fly to California (1 time/month) for work
We have almost non-existent public transportation infrastructure in Delaware. We need more buses, preferably running on solar power, and also more trains or to create a streetcar system.
I no longer work, but I did use public transit when possible. Delaware Public Transit needs to improve greatly to rise to the challenge of providing more complete and consistent service to the entire state.
There are no reasonable bus or train routes to my work because it's in the suburbs. I would take the bus if it was easier to get to a stop.
No public transportation available that would get me to work in a timely manner.
Routes and options are very limited in my area
Public transit is not an option to get to work, but sometimes i commute with my husband who works in the same building.
No convenient bus/train routes
Retired from work.
Not available where I live.
I do not, the bus system in NCC DE does not provide enough connections/routes to make the feasible for my schedule. It takes > 1.5 hrs (each way) for me to travel the 12 miles from home to work. If there were faster, more direct routes, I would ALWAYS take public transit.
No option for me to use public transit, but I carpool
Public transportation should be provided free of charge to low income (or all) residents.
I am retired and do not commute to work but I am interested in keeping track of local bus services.
I don't personally use public transportation but agree about its use
Good idea but not practical time wise.
Depending on the area (especially in Wilmington) safety is a concern.
Way to slow to depend on to get where I need to go.
Still driving personal vehicle. Not enough options to take DART from Hockessin to Newark and be dropped off close enough to work location.
I am retired so am not commuting to a job.
I will never, EVER use public transportation/Uber/etc. It is a health risk and breeding ground for germs. It is also extremely unsafe and filled with weirdos. No thank you
We are retired but prior to retirement one of us used public transportation daily to work for 3 years
Poor schedules and lack of consistently running vehicles. Buses STINK and use diesel! No pickups in "off the main route" areas.
I agree that public trans. is preferable, but there is none available close to my house.
I drive my electric car to work, since there is no mass transit available. I would support the DC commuter train coming to Newark though.
No real options in southern Delaware
Unfortunately, I never use public transportation
I do not work. There is no public transport near my home, and I cannot walk too far.
I do not work outside the home
In Sussex public transportation will not work for the majority, do not have major employers other than chicken plants.

I have no interest in using public transportation and would not use it even if it was available for where I needed to travel
Not convenient. Does not run when I need to come home.
I walk to work, but would consider it if I commuted and it were convenient.
I have no service where I live
Not enough mass transit in Delaware and nobody is looking into this from the government side.
I think this is a losing proposition but if done financial incentives should only be available to lower incomes families who have to use public transportation.
I drive a company truck for a living so cannot take mass transit.
I work out of my home now
I work from home so do not commute at all.
Public Transportation is a reason New York has the C-19 problem it has today.
I have participated in DART Community Conversations and Public Hearing Workshops to help design more accessible and efficient routing which should be part of their public record so please collaborate with them.
Little or no option to use any kind of public transportation in my area
Don't take public transportation
Public transportation is not available
Retired but public transportation was not an option from New Castle to Newark
Delaware is not set up for public transportation. Zoning codes, particularly NCC's infamous UDC don't provide for enough density. The notion that suburban residents of NCC (or the other counties) can routinely and conveniently use public transportation is a pipe dream and completely and utterly unrealistic.
CV19 making many of us rethinking crowding in both transportation and cities / towns
I am retired and don't need mass transit.
I do not work or drive, but prefer alternatives to single user cars.
The infrastructure is not in place like it is in DC or the UK
I am retired, but I think people should take whatever transport they want to commute
Light rail transportation is part of UN Agenda 21. I do, however, know someone who uses bus transportation, and Dover could use more routes. In addition to waiting for a bus, she sometimes has to go to the transit center and switch buses.
Mass transit just contributed heavily to the spread of COVID-19 in New York.
Work from Home - Travel less than 3000 miles per year by car
I have a car.
Public transit is not cost effective outside of densely populated areas. The market should determine how resources are allocated, not the government.
I would like to use it more, but I don't really have a need at the moment. Of course, public transportation would be better if it were privatized, as they have done in Japan.
I commute 4 miles and it's not on a bus route.
Retired
The system is not effective in this area.
Public transportation is not available for most of my driving routes
I use public transportation b/c cheaper then commuting. Our SEPTA system is awful though-would use more if improved.
I am retired and drive to the beach and store, but I am at home a lot too
I am in real estate so public transportation can't accommodate my needs when doing home tours.
Unfortunately, public transportation in lower delaware is limited, but at least it exists. the schedules don't work for me...
Live in rural area and no public transportation. Work is 1/2 hour away, so if telecommuting was available in normal non Corona virus times, I would do that a few times a week.
I used public bus transportation to work for years but am now retired.
In our rural area, public transportation is not a viable option.

There is no bus service in Hockessin.
Not enough availability
Not applicable - retired
We are retired
There is NO public transportation within 15 miles of my home!
For me personally I work out of my home and do not need to travel to an office in Washington DC - which I did for a couple years. Public transportation was not an option. Public transportation is fine in a big city but in Sussex County I would think in most cases not possible for many people. There is not enough people here to be a problem plus most people are service and trades and not working at one location.
I cannot easily do that.
I would love it if I could take this action, but living outside the city and having to travel to day care makes this impractical at best, impossible at worst.
Subsidized fare
I walk to work at least 4 times per week.
There is no Public Trans available from close to my home to my office, so I drive myself.

10. **Transportation – Alternative Modes:** I would be willing to walk/bike to work at least 4 times per month. *Indicate in the Optional Comments any barriers that currently exist to you taking this action.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	44	13%
Agree	61	17%
Neutral	64	18%
Disagree	62	18%
Strongly Disagree	118	34%
TOTAL	349	

Optional Comments:

I work 20 miles away but otherwise love the idea of biking or walking
Need more bike trails and lanes!!
My job does not have shower facilities. If it did then I would seriously consider biking.
My disabilities make bicycling impossible and it is way too far to walk!
I do bike to work under good conditions. Bike paths are lacking.
I am retired.
We are retired. When we worked, our places of employment were too far to walk.
I work from home now, but always used public transit (trains, subways, buses, etc.).
Not applicable -retired
Too far
Would really consider if I didn't live 8 miles away.
This option is NOT viable for my work.
I work from home
N/A - Retired, use to work from home.
Not practical for me. I took the bus.
Live too far from work.
BUT I am 5 miles from my office. when i get there i need a shower and change of clothing. Hard for it to work this way
I live too far from my office and can't tour homes by walking. I work from home most of the time. I think many people are finding they can work from home and this should be encouraged in my opinion.
Retired doesn't apply to me
I would if feasible
I live too far away from work to walk, and if I were to bike in, my employer doesn't have a shower.

I do not live within 20 miles of my workplace.
Too far not practical at my age.
I'm lucky to reside just one mile from my office.
Thankfully, I do walk to work every day now, thanks to working from home! Please note that I stay home because it is my choice to do so, not because of some government mandate.
Rural living does not lend itself to bicycle use. Furthermore, where I live is no business of the government.
I work 30 miles from home so no.
This is UN Agenda 21. The goal is to get rid of cars.
I work too far away from work
I'm retired, but when I worked, I lived 5 miles from work and drove my car.
We are retired and walk around development 2X a week. Folks who still work can take transit or drive to a stop .5 miles from destination and walk. Take umbrella.
C'mon. There is way way way too much sprawl for anyone to seriously suggest that residents should (or could) live close enough to the place of employment to work. This is a pure fantasy and totally unrealistic. Let's move on to discuss things that might work rather than fantasies like this.
It was 54 miles to work
Retired
Too far to walk there and bicycling presents real safety challenges
Difficult to do because I don't have safe access
I already do
Not possible for many distances for employees from home to work.
too far
This only works for a small segment of the population and probably more likely those who have higher incomes.
Roads not safe for bicycle
I don't live and work in a location that makes alternative transportation feasible.
Not safe or practical
My office is too far from my home for this, but I can telecommute.
Can't ride a bike
I live outside of commuting
I live 45 minutes (via car) from work
For most jobs distance in Sussex much to walk.
Do not work. Can no longer bike. Would walk some places.
I work too far from home and the roads are dangerous
Walking from home would only be feasible if I worked from home, like I am now
It's almost an hour drive to work. If the DC commuter rail were extended to Newark though, I could ride my bike to the Newark train station.
I don't work - am retired.
Absolutely not. I live in the country and commute 45 minutes to Maryland
Absolutely not. I live in the country and commute 45 minutes to Maryland. How does someone even do that safely with a brief case and bagged lunch??
Retired but due to prior surgery biking would not be an option. Walking to my prior job would take Ed too long
Zoning reforms are needed to mix uses.
7 miles is too far to walk without a long workday, and I don't feel confident biking with the way most people drive.
too far. too long
I work fairly far from home from a biking perspective. The bike routes would not be safe as a commute option but if there was a highly bike friendly and safe route, I would do that when the weather cooperated.
Who works close enough to their home to do this??
Commute is too far.
I work a 45 minute drive from where I live.

If I didn't need my car at work sometimes
Since I do not work my concern is with the number of pedestrians and bikers who are injured or killed on DE roads.
Its currently unsafe to bike on delaware roadways. We need some serious driver ped/bike safety education in this state.
Too great of a distance
Distance is about 7 miles which is too much to walk. There is no suitable public transportation with a reasonable schedule. Transit time.
Retired so not applicable.
Retired from work but walk to nearby activities
Distance is too far
I live 25 minutes by car from work, so this isn't feasible to me. If I lived closer to work, I would love this.
My work is too far to walk, and the route is not safe for biking (Lancaster Pike)
Although I live relatively close, I would have to ride on Marsh and Harvey roads with no bike path. This is a safety concern.
I live 25 mins drive away from work. Walking and biking are not realistic options because of time.
This would be very hard to do with my job and how far it is from my home.
This isn't an option for me
I would be, but I'm not physically able to do so
I have in the past, but no longer work
I am retired. I must drive to volunteer activities, or stay home.
Disabled
It takes me 10 minutes to drive to work. It would take me 30 minutes to bike. I think if employers support this by providing bikes, or allowing us to get to work later on those 4 days, they would incentivize this. Also, we need more bike paths and shoulders on the roads
Too far from work, but could bike to the train station.

11. **Transportation – Telecommute:** I currently have the option from my employer to telecommute/work from home at least one day per week. *Indicate in the Optional Comments section if you do or would take this action if offered.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	77	22%
Agree	75	22%
Neutral	86	25%
Disagree	43	12%
Strongly Disagree	66	19%
TOTAL	347	

Optional Comments:

My employer doesn't allow it, but I would if they did.
My employer allows it on occasion but not as a regular schedule
Telecommute is great for disabilities but jobs are mostly scams online
retired. Volunteer activities require my presence.
Not applicable, I'm retired
Retired
Telecommuting would be preferable, and half of my job could be done from home.
My employer, Oracle, already offers a complete work at home scheme for most employees
I can telecommute occasionally but not once a week. If the option was offered I would take it.
I no longer work, but it would be a definite improvement to make telecommuting an option for workers.
Teacher. Gotta be there
I might take the option once per week but it's important for me to be in the office with my team

Technically we can telecommute but until it is encouraged, I would not choose to do this because I feel it is looked at poorly by my supervisor (without a need).
N/A retired
I would like this option - but do not currently have it.
I would take this option if offered
I think this is a great idea. I'm doing this now through the Vito. Wanted to before but wasn't allowed. I work for the state in an office position that can easily be done from home going in a day or two a week would work easily
I commute 45 minutes. Work at home is not an option.
I am retired so will not be involved with telecommuting. When I did work, I was in healthcare so could not telecommute.
Would happily telecommute if employed.
Currently working from home full-time, due to the pandemic. Could not work from home before. I hope my company sees the benefit in at least a partial work-from-home schedule in the future.
I was a therapist, and would certainly see clients remotely as my daughter does. It is effective and convenient.
I am retired.
I am an employer and am open to telecommuting.
No cost to taxpayers and win/win for the environment and commuters!
Already work at home
I would take this option if offered
Retired
I don't like working from home but can if I choose to. But since I walk or take the bus this isn't a huge environmental impact when I do go to work
Retired
Retired
Not available
I think the pandemic has shown that telecommuting is much less productive for most, and not even an option for many. People need to go to a place of work for most jobs.
I do when I can sometimes telecommute to meetings, when not able, I carpool.
I would do this if I could
Retired
Telecommute is not possible in my occupation
I am retired.
I am retired.
Please see the previous comment on alternative modes. I'm self-employed, so I get to make rules with my clients. I thank Jesus every day for it.
This is only temporary, but I would love to see a push to have more people working at home. Maybe offer tax credit to employers
I want to be able to telecommute 5 days a week. The pandemic should be proving employers this is a legit possibility.
We are currently telecommuting as a result of the Covid-19 pandemic, but before that there were a lot of hoops to jump through to be able to telecommute.
N/A
I can do most of my work from home, but I can't tour homes without going to the properties.
only while the COVID crisis is going on...
Do not have this option.
Retired
Not applicable - retired
We are retired
I am retired.
I would if I could, but it's not that type of job.
I am a full time telecommute employee

I wish I had this option! State of DE limits this alternative!
My employer allows teleworking 2 days a week and I would take more days in a heartbeat.
I don't have this option, but I believe my employer would support this type of initiative if it were supported statewide.
I would take this option if offered
I have the ability to work from home and do so whenever possible, so this isn't an issue - especially during the CV-19 Pandemic

12. **Transportation – Electric Vehicles:** I already own or would be willing to purchase/lease a pure electric vehicle for my next car. *Indicate in the Optional Comments section any support (incentives, technical assistance, etc.) you would require to take this action.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	47	13%
Agree	71	20%
Neutral	63	18%
Disagree	62	18%
Strongly Disagree	108	31%
TOTAL	351	

Optional Comments:

Electric/hybrid vehicles have to be able to 'act and function' like a regular vehicle in order to achieve mass appeal. I drive very long distances (over 400+ miles) for a single trip and would need to have an EV/HB that could be quickly 'fueled' up without wasting 45-60 to recharge. Honestly, the Chevy Volt is the most impressive vehicle, as it can run on electric and then run a gas generator to power the electric motors and be quickly refueled, like a conventional vehicle. That's what's needed or an EV that can go 650 between charges.
I need to know more about infrastructure for purchasing - i.e. where can they be services and what upgrades might I have to do to my house in order to own one?
On one hand, I would be willing to purchase an electric vehicle for my next car. On the other hand, I think it would be more valuable to significantly increase my use of public transit.
They are expensive but I wish I could buy one.
It is not realistic to think that everyone can afford electric or hybrid vehicles. The difference in cost cannot be recouped over the lifetime of the vehicle. Every form of energy should be available.
I already have a hybrid.
I will never own an electric vehicle because it is not practical. Once again this is a feel good thing and an option for people to feel good about saving the planet. If it takes a government subsidy for people to buy an electric car than it is not a practical idea. I have 3 cars (1966 being the oldest) and all have V8 engines. People either love cars or their cars are just transportation. How about people praying to God and not worship the planet. I agree the climate does change but it is not something that man cannot fix. Man is having a tough time with COVID-19 now and you think man can stop natural disasters from occurring.
While the idea of EVs is appealing, making the batteries and the vehicles use fossil fuel. Battery disposal will add another waste MGT problem.
Not yet! Would consider with improvement in quality, range, and increased availability and ease of charging.
Would have to be cost effective ex government incentives.
I would be willing to purchase a hybrid but not pure electric due to scarcity of charging stations across US
I believe that we have other technology that may be utilized in gas engines.
I like the idea of electric cars, but if we're burning coal to charge them it doesn't really make any sense.
On Delmarva Power and all electric house already. Too many line items on bill. Also, cannot afford an electric car, do not earn enough at my job. I keep my car until the wheels fall off anyway. Buy it, pay it off and drive as long as I can.
Not practical for my situation.
Electric vehicles aren't affordable when you factor in the in home electric adjustments

BUT - they cost more than a gas operated car and take a long time to re-coop the extra cost of that vehicle. So, it becomes cheaper to buy a high MPG gas car to commute with.
I don't have a garage so a charging station could be a barrier. I also may need more access to chargers depending on how far I could go on a charge.
Public transit sucks because the routes are dictated by politics rather than actual need. I can only walk to one location that I work at, as the other 3 are more than 5 miles from my home. I would love to telecommute, but my work requires onsite activity (which is why the Governor's COVID shut down has essentially put me out of work). Electric vehicles require an ability to plug them in at night, which I cannot do since I do not have off street parking, and more often than not I have to park on another block from my home-also what good is an electric vehicle for reducing emissions when they have to be plugged in to a grid that is mostly powered by burning coal? Electric vehicles actually create MORE emissions than gas vehicles. Morons.
Waiting for an electric truck from Ford.
These vehicles rely on an increase in the power capacity. It makes no sense. Electric vehicles are too expensive
Would consider if cost of ownership was worth it
There is a coal burning plant charging these systems. Not sure it makes a difference. Cars today are much cleaner. China and India are causing most pollution-that is major concern.
I own a gas car out right. I'll at least make sure my future cars are fuel efficient, but it will have to be affordable for me to go pure electric.
Solar panels plus an electric vehicle would free me from government taxes at the pumps. Of course, the government will find a way to steal the money I have earned to use for their evil purposes, but at least it won't be as much. Also, being self-reliant is always a plus.
EV's are not cost effective modes of transportation.
Electric cars can be more harmful to the environment tge. Gas powered cars plus they are prohibitively expensive for the average person
I do not drive
EVs are not ready for prime time w/o subsidies and Electric charge still needs power from coal and NGas
Until vehicles can go at least 400 miles (or more) on a charge, and the ability to recharge takes 5 minutes or less, this is a waste of a discussion.
Too expensive, limited range, lack of recharge facilities
Colossal waste of money
Range is insufficient for BEVs to be practical now but AWD HEVs are Moreover few exist
They are superficially affordable but true cost of ownership is still too high
Production of electric vehicles is not carbon neutral, many parts require dirty manufacturing and the manufacture and disposal of the required battery packs is not environmentally sound
One needs to consider the cost, environmental impact and resources to produce these and the batteries used (to include disposal)
Hybrids are a much more sensible alternative and far less costly
EVs are a lot more dangerous to the environment than manufacturers advertise. I think transparency needs to improve, and once again, government should not be giving taxpayers' dollars to pick winners and losers.
We purchased a hybrid previously but the cost of replacing the battery made it worthless after 10 years. Again, this is only an option for people with discretionary income so it should only be partially subsidized for people of low incomes if subsidized at all.
Electric cars are probably worse for the environment than gas or diesel-powered vehicles. The electricity they require is mostly generated by fossil fuels, with tremendous inefficiencies in converting those fuels to electricity, sending the electricity to a charging station (at great power loss) and charging inefficient batteries that are expensive and environmentally harmful to produce and dispose of.
This also is going to change with the release of new classified technology.
I'd love to buy a used Tesla.
Still have to provide the power somehow to power these vehicles.
The environmental impact of batteries, extra cost and subsidies are a problem for me.

Depends on how much it would cost
I drive a Prius now; I may drive it until I can no longer drive.
If you include all energy cost to build and use and dispose of electric cars, does not really work.
The DE EV incentive was very helpful in making it possible to purchase my EV. Please increase the amount so my wife can buy one as well.
As larger EVs come to market I'll consider one.
Until technology has improved, I will not own an electric vehicle of any kind - well maybe a bicycle
Not quite ready for fully electric but definitely interested in hybrid
Already drive a 2016 Nissan Leaf.
Electric comes from burning coal. Burning coal is worse than gasoline fumes for the environment! Ludicrous. Hydrogen is a better solution.
If more charging stations were available and if other infrastructure changes were made such as electric cars with better mileage buying an electric car would be more desirable
I think that the choices are still too slim for my other preferences. I am a jeep owner and that is not an option.
financial assistance needed.
I will never ride public transportation or hire an Uber. It is less safe for a variety of reasons.
I will never buy an electric vehicle.
It has to be less than \$20,000, 200+miles between charges and a 20 minute charge
IF I have a "next car"
I am saving up to buy an EV. I need it to have a longer range which is likely in a few more years.
Just waiting for my current car to die. Plan to buy fully plug in.
Incentives and charging station network through 95 corridor
The tax rebate and credit in 2019 made it possible for us to purchase an electric vehicle! Would certainly buy another one if we can afford it and mile range continues to improve
I would like to, but we currently spend less than 10k on vehicles, and I haven't found an electric car that would fit my transportation needs for that price.
Would like to but again it comes down to affordability.
We need to invest in sustainable batteries
If prices go down in under 5 years, I wd buy electric.
Don't own EV but strongly consider for next car
I have no place to plug in--have enjoyed my Prius for years.
Our next vehicle will be electric purchase in 5+ years
I'm interested but having a computer-operated car intimidates me
We have one EV in our household that does most of the trips and plan to get a second one when E-SUVs are more affordable.
Need more incentives (rebates) and charging stations

13. **Resilience – Preparedness:** I would be able to meet my basic needs if a storm caused me to be confined to my home without power for up to 72 hours. *Please indicate in the Optional Comments section any support or resources you would require to be able to do this.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	152	42%
Agree	152	42%
Neutral	29	8%
Disagree	22	6%
Strongly Disagree	5	1%
TOTAL	360	

Optional Comments:

I am 77 and can't stand heat; have nowhere to go for relief.
Water would be the biggest problem.
If during the winter, we would not be able to stay warm or cook food. If during the summer, it would likely be easier. One thing that would help would be seasonal assessments of what homeowners should have on hand for 72 hour emergencies. Maybe comprehensive lists of suggested foodstuffs and other useful items to have on hand in some easy to retrieve location not always requiring a computer. Of great importance would be better and more efficient portable phone chargers.
We are switching our appliances from gas to electric, so losing power is becoming a bigger issue. Please incentivize home energy storage systems like the Tesla Powerwall.
Shelter, yes. Food, probably but we'd have to get creative. Water, i don't know.
Near zero or zero net energy building codes could extend that beyond 72 hours.
I have a month's worth of food put away and have a disaster plan
I would need more space to store nonperishable food (and water if necessary)
Yep! Sure can! :)
We are prepared, and have done this before.
I have prepared. I don't need your "help." You might lock me in my home!
Probably should purchase a generator. But 3 days OK.
I have a backup generator and have and a stored water tank and preserved food.
Need better ways to get out of harm's way. One way only out, contact all authorities on way out (DE and MD).
I don't have enough bottled water
Might be a problem in winter with no heat.
I have the full ability to provide for my family and myself for up to 15+ days without outside assistance or electric power.

14. Resilience – Hazards: I have been impacted by intense storms, extreme heat, or flooding in the past. *Please indicate in the Optional Comments section how and to what extent you have been impacted by these hazards.*

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	46	13%
Agree	104	30%
Neutral	70	20%
Disagree	72	21%
Strongly Disagree	57	16%
TOTAL	349	

Optional Comments:

Flooded basement and loss of large tree
Heat sensitive condition MS
My basement began to flood 4 years ago during a storm that brought intense rain over multiple tide cycles. The flooding came from the ground up, not over land. I also have witnessed an increase in tidal flooding on area roads in my town. Also, I saw major flooding in my town and nearby towns during Snowstorm Jonas.
3 hurricanes and one year in the middle East with the US Army.
Told DelDOT for 5 years that heavy rains are eroding my creekbank behind my house. No response. DelDOT feels NO compunction to answer to the public... about ANYTHING! EVER!
I've also lived through Agnes in 1972, Sandy & Isobel in more recent years, and the polar vortex in 2015 - we need to be prepared for weather - we cannot control it
We have been affected by severe snowstorms in the past but that seems to be really a thing of the past. Severe rainstorms and power outages have been a small problem
Several hurricanes while living in other states. No major damage or injuries, just had to stay inside for a while.

We need to make some radical changes and unfortunately, our federal government is not going to lead the way. We need local gov to step up with strong and possibly unpopular measures to protect the environment for future generations.
So far, I have not been impacted and one reason is I checked the "500 year" flood maps before buying my house outside of that area.
Agree but impacts have been minor. I have had to find alternate routes to work, sustained some damage to my car, and had to weather storms but have not experienced damage to my home.
Extreme heat has compelled us to use more energy that we want to, for cooling. We have also experienced flooding.
Lucky me.
This is a natural occurrence and not mam-made!
Dumb question
In March several years ago power in the county was disrupted. Because only two homes were affected here, we were without for 6 days. We managed! Even with a 20 month old.
Mostly just loss of electricity
The storms this year have been nuts
I'm not really sure how to respond. Our basement has flooded several times in the past, but I believe that it was more of a function of how our lot sits compared to neighbors. We've spent a lot of money to try to rectify that situation. But I can't say that the flooding is related to climate change.
Hurricane Floyd hit very hard many years ago. Not directly affected as my home is on a hill, but the flooding was epic. Now the creek is terribly low all the time. Me thinks upstream a dam has changed things.
High water, loss of electric power, etc., snowstorms - just part of life, no big deal at this point
Blizzards, hurricanes, thunderstorms. Lifelong Delaware resident.
I thank the Lord for the interesting life I have led, the funny stories I now have, and the fact that I am still alive and by His grace survived some of the crazy stuff I have been through. It has truly built character. ;)
We've always been affected by these things. It's nothing new.
Don't believe storms more intense than usual. No impact yet.
Have not been affected by flooding, but have been required to purchase flood insurance
I have been without electrical power for 4 days
The question you need to address is "man-made" caused--climates have always "changed".
We have had far more power outages than in New Jersey. There is an infrastructure buildup need.
Loss of power for days, basement flooding
Haven't we all, since the beginning of time?
Climate is cyclical. Has been that way since the beginning of time
While living in NJ we lived in a rural area and often lost power due to heavy storms
The problem is it has not been clearly identified that climate change is natural or man-made! Until it is the programs are a huge waste! Scientists cannot agree on how much of climate change is caused naturally or by man. Climate has been changing since the beginning of time and I doubt that man can make much of a difference.
Our beach house has flooded during storms and we have had to make repairs and clean up the damage.
Climate change is real. Government involvement creates more of a problem. Bloom energy is an example.
Yes, when the Newark Power goes down which happens a lot
Hurricanes and river flooding in the lower areas of a former town I lived in.
Hit with 2 hurricanes when I lived in east N. Carolina recently.

15. **Resilience – Neighborhood Cohesion:** I know my neighbors and feel comfortable going to them for help in the case of an extreme event situation.

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	82	23%
Agree	165	47%
Neutral	60	17%
Disagree	32	9%
Strongly Disagree	14	4%
TOTAL	353	

Optional Comments:

We have a cohesive neighborhood and can also offer help when needed.
For the most part.
Our neighbors work together.
No need, I'm the one they come to for help and assistance and I'm the one that reaches out to others in times of crisis
I live in a good community and we help each other
I know two of our neighbors well enough to reach out to for help if it was necessary. One neighbor very well, the other not so much.
I agree but do not know most of the neighbors. This is a weak hole in my own preparedness
I know many of them and would go to them only if absolutely necessary
Some neighbors yes but not as much cohesion as I would like
We should explore cohesion. As more and more disasters play out our neighbors are going to end up being our first responders until the real first responders can arrive on the scene.
I live in a condominium, all in same situation; not sure how much kindness they would show. I would help someone from lower level who was flooded.

16. **Resilience – Financial Stability:** I understand how a person's financial stability contributes to community resilience.

Response Options	Number of Responses	Percent of Total Responses
Strongly Agree	115	33%
Agree	186	53%
Neutral	38	11%
Disagree	7	2%
Strongly Disagree	5	1%
TOTAL	351	

Optional Comments:

I notice that under the subheading "priorities" you do not give an option to comment which means you are trying to manipulate a certain response - not good.
I think a community is built on other things than financial stability. We all have other, less tangible assets that we can contribute to our communities.
This is Delaware, money is tight, and right now unessential workers are in great distress. State and Feds have to stop pettiness and cooperate better and more quickly. Neighbors help where they can. But some folks have trouble telling others they need help. A local directory of phone and emails of several neighbors around us could be a big help.
Yep, just ask my wife!
So why is the state bankrupting us all over the virus????
Economic status is a function of life choices. Wise choices lead to upward social and economic status. The government should help facilitate individual responsibility, not redistribute wealth under the guise of environmental justice.

Stop putting the line items on our electric bills only with Delmarva Power. Make the whole State pay. Stop putting not needed taxes for Climate Initiatives in our little State.
I do not comprehend how these two are related. I grew up poor and community was strong-this looks like an excuse
Retired and financially stable
10% minimum affordable housing should be required of any development.
Whatever we do, we need to work to make sure that low income populations do not bear the greatest burdens.
I am grateful to be on Medicare and have money saved from my job.
My mom and I are working poor and she recently went out on disability.
Under Debt planning to buy house. Financials good but highly constrained.
Investment in education will create skills and techniques not currently utilized by developers, planners, and entrepreneurs.
Of course, it helps If one is financially able to pay for damage, order food and supplies, move to a higher, cooler area, etc.

Survey Page #3: THANK YOU

17. What county do you live in?

Response Options	Number of Responses	Percent of Total Responses
Kent	44	14%
New Castle	163	52%
Sussex	104	33%
TOTAL	311	

18. What zip code do you live in?

Response Options	Number of Responses	Percent of Total Responses
19701	6	2%
19702	3	1%
19703	1	< 1%
19706	1	< 1%
19707	14	5%
19709	15	5%
19711	23	8%
19713	9	3%
19720	6	2%
19734	6	2%
19736	1	< 1%
19801	2	1%
19802	1	0%
19803	15	5%
19804	1	< 1%
19805	6	2%
19806	10	3%
19807	5	2%
19808	14	5%
19809	5	2%
19810	11	4%
19901	6	2%
19903	1	< 1%
19904	9	3%
19930	13	4%
19933	4	1%
19934	9	3%
19938	3	1%
19939	4	1%
19940	2	1%
19943	3	1%
19944	4	1%
19945	3	1%
19948	1	< 1%
19950	1	< 1%
19952	1	< 1%
19953	1	< 1%

Response Options	Number of Responses	Percent of Total Responses
19958	18	6%
19960	4	1%
19962	3	1%
19963	8	3%
19964	1	< 1%
19966	5	2%
19967	2	1%
19968	5	2%
19970	13	4%
19971	8	3%
19973	2	1%
19975	4	1%
19977	4	1%
Out of state/other	5	2%
TOTAL	302	

19. What is your age?

Response Options	Number of Responses	Percent of Total Responses
Under 18	2	1%
18-24	5	2%
25-34	22	7%
35-44	36	12%
45-54	46	15%
55-64	75	25%
65-74	82	27%
75 and older	38	12%
TOTAL	306	

20. With which ethnicity do you most identify?

Response Options	Number of Responses	Percent of Total Responses
American Indian or Alaskan Native	1	< 1%
Asian/Pacific Islander	4	1%
Black or African American	4	1%
Hispanic	3	1%
White/Caucasian	261	90%
Multiple ethnicities/other	18	6%
TOTAL	291	