# State and Local Plans

# Review of Reference Energy Plans

The plans reviewed were from:

- **Tompkins County, NY**
- **King County, WA**
- **Maryland State**
- **Philadelphia, PA**
- Burlington, VT
- Corvallis, OR
- Aspen, CO

* - Plans in bold discussed below.

# Review of Reference Energy Plans

Typical plan for energy efficiency and renewable sources:

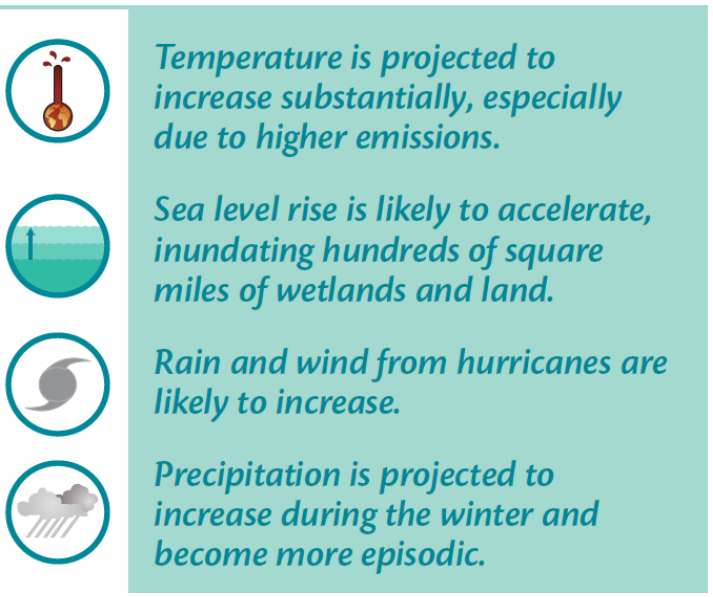
Components of plans:

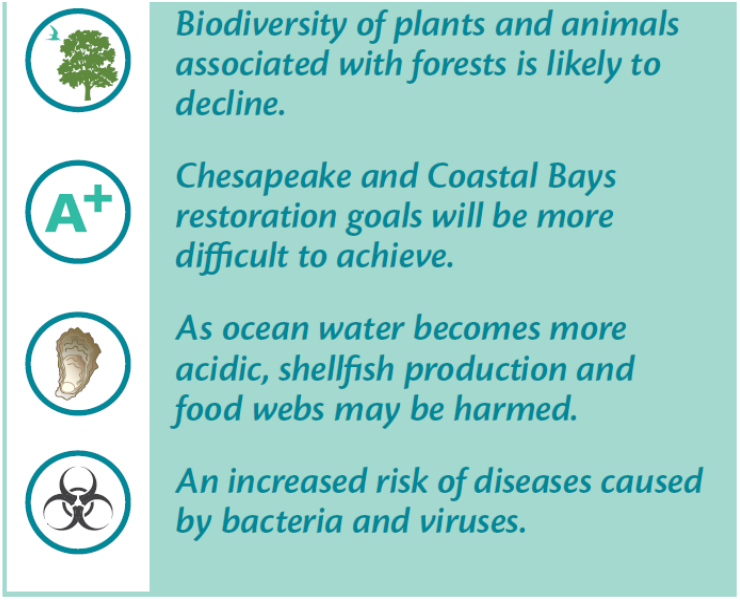
- Statement of purpose
- Scientific discussion of the need for energy conservation and greenhouse gas (GHG) emission reduction
- Criteria for moving forward – Core Values
- GHG emissions inventory and energy usage inventory
- Emissions reductions and energy reductions by sector
- Early cost-effective, implementable steps
- Coordination of gov't. agencies, power companies, and others
- Planning for execution of plan

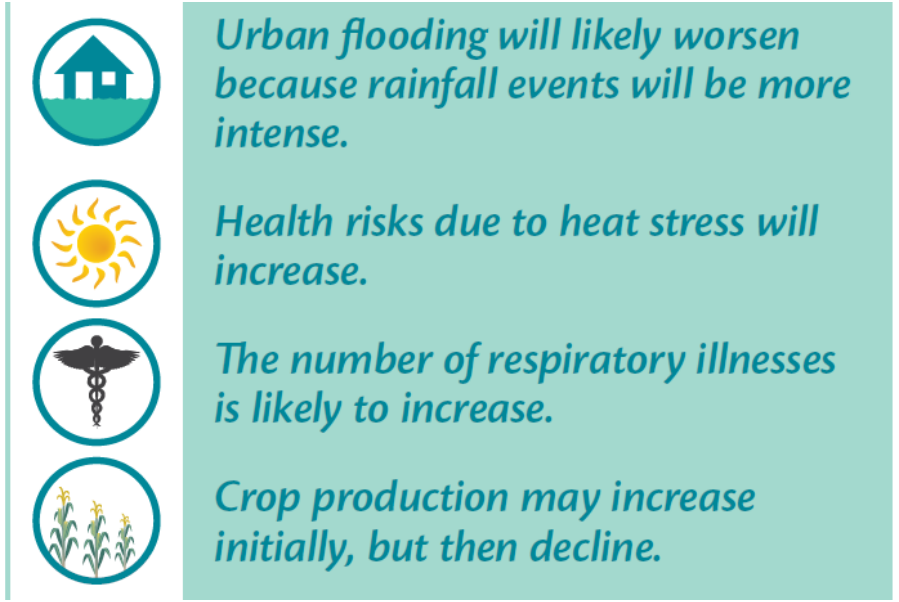
# Review of Reference Energy Plans

State of Maryland – (adjacent to Chester County)

Highlights the High Cost of Inaction



# Review of Reference Energy Plans

Emission Reduction by program from 2012 (reductions in millions of metric tons of greenhouse gases annually) to achieve 25 % reduction by 2025

| Sector Program | Initial reductions | Enhanced reductions | Sector Program | Initial reductions | Enhanced reductions | Sector Program | Initial reductions | Enhanced reductions |
|---|---|---|---|---|---|---|---|---|
| Maryland Renewable Energy Portfolio Standard | 6.86 | 10.96 | Regional Greenhouse Gas Initiative | 0.00 | 3.60 | Managing forests to capture carbon | 1.80 | 1.80 |
| EmPOWER Maryland | 8.42 | 10.52 | Buildings codes | 3.15 | 3.15 | Planting forests in Maryland | 1.79 | 1.79 |
| Zero waste | 2.80 | 4.80 | Public transportation initiatives | 2.00 | 2.89 | | | |
| Maryland Clean Cars | 4.33 | 4.33 | Corporate Average Fuel Economy (CAFE) Standards | 2.27 | 2.27 | | | |

# Review of Reference Energy Plans

State of Maryland

Highest impact measures:

- Renewable Portfolio Standards (RPSs)
- Government initiatives for building efficiency
- Transition to clean cars
- Updating of building codes
- Mandatory vehicle fuel efficiency (CAFE) standards
- Regional Greenhouse Gas Initiative (RGGI)

# Review of Reference Energy Plans

## Tompkins County, NY - Policy of Tompkins County

- Reduce greenhouse gas emissions to reach a minimum 80 percent reduction from 2008 levels by 2050 and reduce reliance on fossil fuels across all sectors.
- Improve the energy efficiency of all components of the community energy system.
- Increase the use of local and regional renewable energy sources and technologies.
- Increase carbon capture and storage in the county's forests, wetlands, and soils.
- Reduce the amount of material disposed of in landfills.

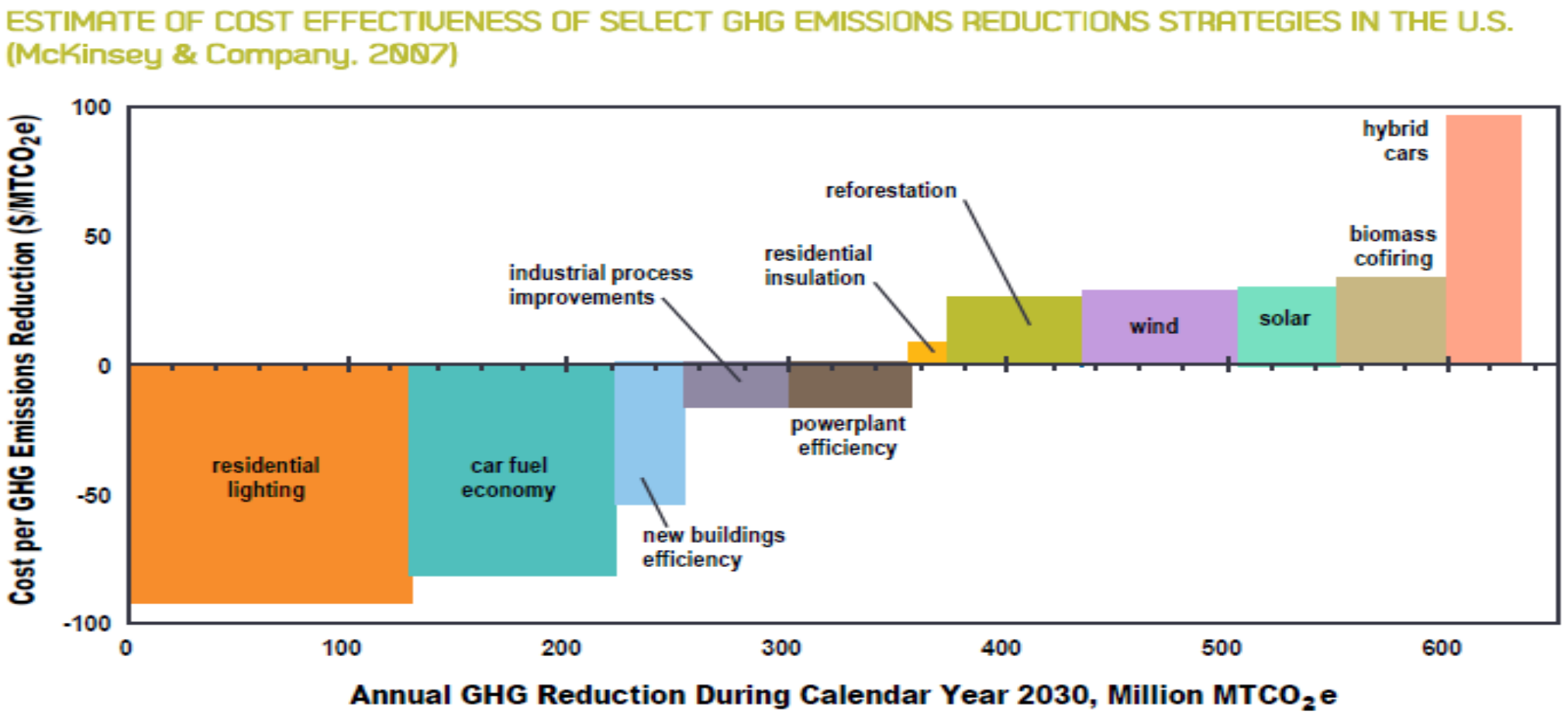
# Review of Reference Energy Plans

## Tompkins County, NY – Plan Provides Energy Roadmap

1) Provide an overview of the energy demand situation and the present energy supply structure in the County;
2) Investigate and quantify the energy production potential of renewable energy supply resources in county;
3) Identify the primary stakeholders in the present and future energy demand and supply;
4) Develop and analyze scenarios for the future energy demand and supply structures which fulfill the goals for an efficient energy future;
5) Develop evaluation criteria by which to select a preferred energy demand and supply structure to guide energy-related decisions in the future and identify a preferred scenario;
6) Identify those specific changes that will need to occur in the supply and demand for energy to meet the preferred scenario;
7) Specify actions we need to take (or avoid) in the next ten years to make those changes possible; and
8) Identify ramifications of those changes that need to be recognized and addressed.

# Review of Reference Energy Plans

## King County, WA – Determined Cost-effectiveness



# Review of Reference Energy Plans

## King County, WA

## Section One: Reducing Greenhouse Gas Emissions

- Target - Reduce countywide sources of greenhouse gas emissions, compared to a 2007 baseline, by 25 percent by 2020, 50 percent by 2030, and 80 percent by 2050. (Assuming one percent annual population growth.)

## Section Two: Preparing for Climate Change Impacts

<u>Built Environment</u>

1. Wastewater Treatment and Conveyance
2. Roads and Bridges in Unincorporated King County
3. King County International Airport
4. King County-Owned Buildings and Facilities

<u>Planning and Regional Services</u>

5. Countywide and Regional Planning
6. Public Health
7. Stormwater
8. Flood Risk Reduction and Floodplain Management

<u>Planning and Regional Services</u>

9. Salmon Recovery and Other Rural Programs
10. Public Transportation
11. Environmental Science and Monitoring
12. Emergency Management

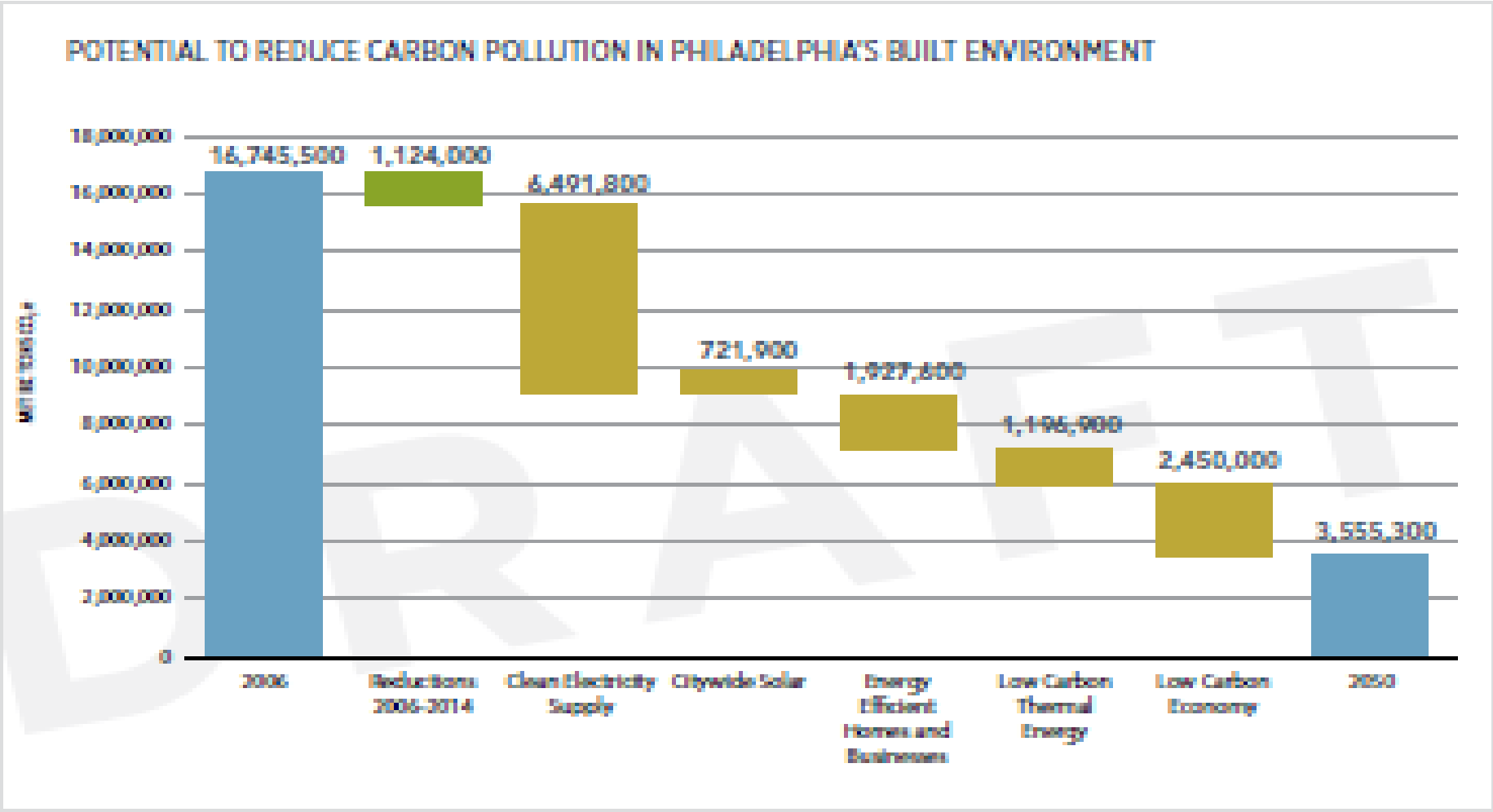
# Review of Reference Energy Plans

Philadelphia, PA - Five Core Values for Future Energy Work:

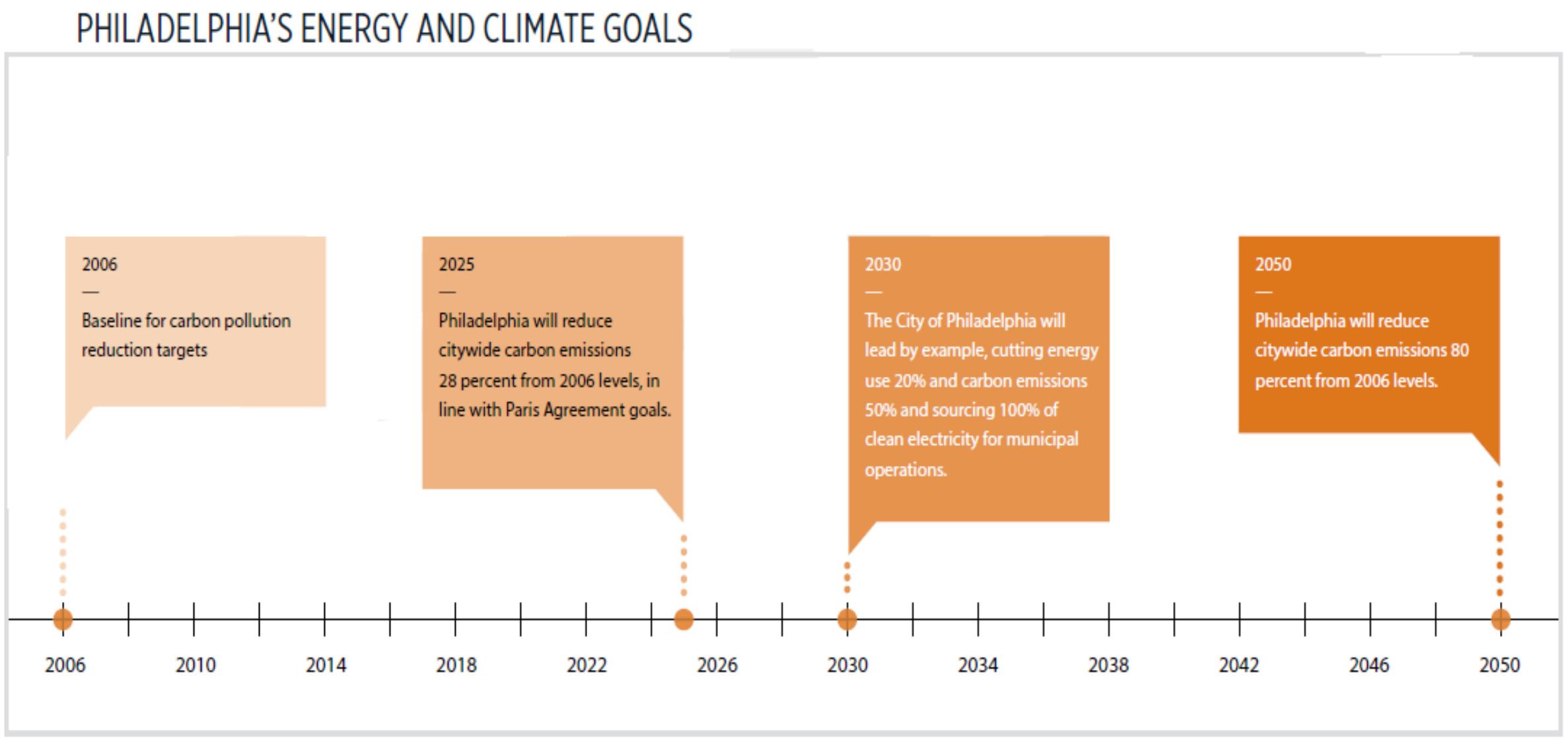
- Clean – Reduces contribution to climate change and local air pollution
- Efficient - Cuts wasted energy, saving money and reducing pollution
- Resilient – Maintains access to energy despite the effects of climate change
- Affordable - Help reduce energy bills, particularly for vulnerable citizens
- Equitable – Works to eliminate inequities in how the energy system impacts Philadelphians

# Review of Reference Energy Plans

## Philadelphia, PA



# Review of Reference Energy Plans



# Review of Reference Energy Plans

## Philadelphia, PA – Action Items

| | | |
|---|---|---|
| **LOCAL RENEWABLE ENERGY PURCHASING** | City of Philadelphia Renewable Purchasing<br>Institutional Renewable Power Aggregation<br>PA Power Switch and Community Choice Aggregation<br>Addressing Soft Cost Barriers | Citywide Solar Installation Campaigns<br>Solar in New Construction and Renovations<br>Leverage Home Repair and Weatherization Programs |
| **MODERNIZE BUILDING ENERGY CODES** | Updating Commercial Energy Codes<br>Updating Residential Energy Codes | |
| **BUILDING CODE COMPLIANCE** | Residential Energy Code Enforcement for Renovations and Additions<br>Third-Party Energy Code Compliance | Require Energy Modelling and Disclosure for New Construction |
| **PACE FINANCING** | | |
| **INCENTIVES FOR HIGH-PERFORMING BUILDINGS** | 2030 DISTRICT<br>Permit Streamlining<br>Expand Density Bonus Incentive | Property Tax Incentives for High-Performing New Buildings<br>Municipal Impact Fees |
| **UTILITY-FUNDED EFFICIENCY OPPORTUNITIES** | | |
| **EXISTING BUILDING REQUIREMENTS** | Expand Energy Benchmarking Program<br>Building Tune-Up Program | Residential Energy Disclosure at Time-of-Sale<br>Energy Conservation Requirements at Time-of-Sale |
| **SCALE EXISTING AND EMERGING TECHNOLOGIES** | Track Low-Carbon Thermal Technology Development<br>Evaluate District Energy System Opportunities | Promote Geothermal Heating and Cooling<br>Explore Solar Heating and Hot Water Systems |
| **LOW-CARBON THERMAL STUDY** | Evaluate Philadelphia Gas Works (PGW) Business Operations | Track Carbon Intensity of Thermal Electrification Strategy |
| **EXPAND PHILADELPHIA'S ENERGY COMMUNITY OF PRACTICE** | Deepen Energy Collaboration | Educate Philadelphians about Industrial Emissions |
| **SUPPORT PHILADELPHIA'S TRANSITION TO A CLEAN ECONOMY FUTURE** | Implement Philadelphia Energy Campaign<br>Reduce Carbon Emissions from the Port of Philadelphia | Prioritize Clean Economy in Supporting New and Existing Businesses |

# Review of Reference Energy Plans

Other plans to be reviewed:

- Florida
- Salt Lake City
- Minneapolis
- Virginia
- North Carolina
- Pittsburgh
- Sacramento County, CA
- San Bernardino, CA

# Review of Reference Energy Plans

| Components of Plans | How it could apply to Chester County | |
|---|---|---|
| **Statement of purpose** | Achieve 100% clean, renewable energy in our community by 2050 and 100% clean, renewable electric power by 2035, with interim benchmarks to verify progress toward these goals. | |
| **Scientific discussion** | Scientific basis for the need for achieving net zero manmade emissions of greenhouse gases (GHGs) | |
| **Criteria for moving forward – Core Values** | • Efficiency first<br>• Equitable and just<br>• Clean and renewable | • Covering all sectors<br>• Community-wide<br>• Inclusive and transparent process |
| **Emission inventory** | Nine county 2015 Energy and Emission Inventory will be available by March/April of 2018 from DVRPC | |
| **Emission reductions by sector** | Built environment, transportation, solid waste, wastewater and water, agriculture and livestock | |
| **Early cost-effective, implementable steps** | Possible early initiatives:<br>• Model ordinances to streamline review and approval of renewable energy projects.<br>• Solarize (group purchase of solar systems) | • Energy efficient building standards<br>• LEDs<br>• Increased recycling |
| **Coordination** | Municipalities, Counties, DVRPC, PECO, businesses and industries, civic groups, schools | |
| **Planning for execution of plan** | Determine the roles of each level of government and next steps to be taken. | |