

What could a **Green New Deal for Philadelphia** look like?

It is clear that Philadelphians are increasingly demanding the right to breathe clean air and a safe climate. Following are suggestions for a Green New Deal Agenda that would unite social justice and environmental objectives, and provide both broad goals and possible strategies that can be made more specific as we all work to flesh them out.

We are proposing these ideas as a draft for discussion with other social justice and climate organizations in Philadelphia, to build a dialog that will lead to the most effective and most broadly supported strategies possible.

Broad goals to consider are:

- **Improve air quality**, beginning with low income communities, who are the most impacted.
 - Toxics out of schools
 - PES refinery site converted to non-polluting uses
 - No new fossil fuel infrastructure or polluting industries
- **Create family-sustaining jobs** in using energy more efficiently, and in the transition to renewable energy systems, inviting low income communities via apprenticeship and job training.
 - All new construction net-zero
 - All existing buildings retrofitted to net-zero to the extent possible
 - Invite industries that contribute to climate health – e.g, create solar panels, wind turbines, electric vehicles, regenerative instead of extractive industry such as hemp-crete, hemp insulation, large scale tree planting
 - Develop localized agricultural systems ensuring healthy, sustainably grown food for all Philadelphians, that requires minimal fossil fuel use
- **Fund the transition**
 - A tax on large corporations, similar to the Portland Clean Energy Fund
 - A public bank for Philadelphia, leveraging our investments to fund the needed retrofits, especially for low income residential homes.
 - Require that low income residents are not financially burdened by the transition

Specific Proposals

How could we improve air quality, create good jobs and reduce our greenhouse gas emissions?

Per the 2018 UN Intergovernmental Panel on Climate Change (IPCC), we need to reduce emissions in all sectors by 45% by 2030, based on 2010 emissions levels. This translates to 7.6% per year for the next 10 years, or faster. Some climate scientists claim that the IPCC report does not go far enough because it does not address unforeseen tipping points. Thus, the Federal Green New Deal asks for net zero emissions by 2030. You may know that the Federal “Green New Deal is a 10-year plan to mobilize every aspect of American society to 100% clean and renewable energy by 2030, a guaranteed living-wage job for anyone who needs one, and a just transition for both workers and frontline communities”.

Philadelphia emits 15.5 million tons of carbon dioxide equivalent (CO₂e) and spends at least \$3.1 billion on fossil fuels each year. To address this urgency, we propose:

1. **Commit to no new fossil fuel projects**

Prioritize and support job-creating industries that move Philadelphia to 100% clean energy, while blocking new fossil fuel initiatives.

This means the PES refinery doesn't re-open, the Passyunk Energy Center and the SEPTA gas plant get cancelled. It also means politicians and candidates sign the No Fossil Fuel money pledge, and are held to it. We need **strong political commitments** with binding targets, and transparent & meaningful democratic participation.

2. **Reduce energy use in Commercial buildings, including Municipal**

These account for 39.88% of our City-wide emissions at 9.7 million tons CO₂e annually.

- a. New buildings must be net zero energy -- With no fossil fuel (gas) hookups, new buildings will have highest possible level of thermal efficiency, and fitted with efficient, electric appliances and HVAC systems. Sourcing the electricity from renewable energy would make these residences Net Zero Energy Buildings, with net zero greenhouse gas emissions.

- b. New Development Incentives, pg 33 & pg 44 of Powering Our Future. None of these offer quite enough emissions reductions.
 - i. Solar
 - ii. *Expand Density Bonus Incentive* mentioned on pg 44 of Powering Our Future. For next 2 years, until 2022, offer an incentive for projects already in the pipeline that could be built with Energy Star score of 100. After 2022, all new buildings must be net zero energy. Emissions reductions estimated to be 559,440 MTCO₂e annually.
 - iii. *Permit Streamlining* mentioned on pg 44 of Powering Our Future. Reducing permit fees is a fair incentive, but we would discourage any speeding up of permits, which would be insensitive to community input. Emissions reductions estimated to be 155,660 MTCO₂e annually.
 - iv. *Property Tax Incentives for High-Performing New Buildings* mentioned on pg 44 of Powering Our Future, could be improved by using a tiered tax-credit program based on the HERS rating system. The more efficient a building, the lower the rating, and a resultant lower tax for two years. Emissions reductions estimated to be 28,250 MTCO₂e annually

- c. Existing buildings must have “increased thermal efficiency”. Most buildings that will be standing in 2050 have already been built, making efficiency retrofits critically important.
 - i. *Expand Energy Benchmarking Program* - pg 46 of Powering Our Future - 25,110 MTCO₂e which rates energy use and emissions for commercial buildings.
 - ii. **Building Tune-up Program** - pg 46 of Powering Our Future - 183,380 MTCO₂e - legislation passed as the “Building Energy Performance Program”, requiring non-residential buildings 50,000 square feet or larger — about 2,000 buildings — to undergo a high-energy performance inspection, submit a certification to the Office of Sustainability and conduct recommended "tune ups," or retrocommissioning)
 - iii. **Commercial Time of Sale Requirements in order to receive a certificate of occupancy.** Potential to save 1,533,550 MTCO₂e, per pg 47 of Powering Our Future
 - iv. **Commercial Property Assessed Clean Energy (C-PACE)** - p 43 of Powering Our Future - carbon savings of 6,440 MTCO₂e - : “..a mechanism for financing energy efficiency and renewable energy

improvements on private property. PACE programs allow local governments to fund the up-front cost of energy improvements on commercial and residential properties, which are paid back over time by the property owners...”

- v. *Landlord [Energy Use] Disclosure Requirement* (p 47 of Powering Our Future to provide information on energy costs prior to a lease agreement. Until
 - vi. Require that commercial buildings **reduce** fossil fuel use in a fixed **timetable**, as is being done in NYC (Climate Mobilization Act).
 - vii. Require that all municipal buildings be powered by clean renewable energy by 2030. Including school district and airport.
 - viii. Recreation centers can be cooling centers during extreme heat, offering programming for children and adults
- d. All heating and cooling systems, when replaced, must be replaced with electric systems.

3. Reduce energy use in Residential buildings

These account for 23.84% of our emissions, at 3.7 million tons.

- a. New buildings must be “highly efficient”
With no fossil fuel (gas) hookups, new buildings will be thermally tight, use passive solar design, have efficient, electric appliances and HVAC systems. Sourcing the electricity from renewable energy would make these residences Net Zero Energy Buildings, with net zero greenhouse gas emissions. Strategies:
 - i. A city ordinance banning new fossil fuel hookups
 - ii. An incentive program such as changing current tax abatement program to one that reduces taxes for new homes that are designed to be zero-emissions.
 - iii. Adopt building codes that result in zero emissions, such as California’s new building code that is close to net-zero. See [CA Building Code Takes Big Step Toward Net-Zero E](#)
- b. Existing buildings must have “increased thermal efficiency”
 - i. *Residential energy use disclosure at time of sale*, potential to save 1,125,830 MTCO₂e - p 47 of Powering Our Future - 2020

- ii. *Energy conservation requirements for seller at time of sale* - p 47 of Powering Our Future - minimal HERS rating by 2021, with increasing standards annually until 2030.
 - iii. Cooling is the fastest-growing end use in buildings as its energy demand more than tripled between 1990 and 2018. Low energy cooling is crucial to counter that trend. A white coat to existing flat roofs would reduce cooling needs.
 - 1. Every residential building with a flat roof must be white coated by 2022, paid for by building owner, with City loan / subsidy, if needed
 - 2. When replacing a pitched roof, lighter colors should be selected.
 - iv. Smart homes - Sensors, automated controls, and other smart software can optimize energy use and reduce it by 15% or more if applied correctly.
 - v. Retrofit as many homes as possible, beginning in low-income communities, to result in zero greenhouse gas emissions, creating good-paying jobs employing residents of low-income communities. Goal: 10% or more of homes each year.
 - vi. Expand and improve existing Neighborhood Center program which offers government and utility subsidies not just for immediate utility service, but also in the retrofitting of their home.
- c. Existing buildings must transition to electric for increased efficiency
 - i. Offer rebates for electric appliances, not for gas.
 - ii. Education about electrification

4. Just, efficient & electric transportation system for all Philadelphians

Transportation accounts for 23.83% of emissions, at 3.7 million tons, where we spend \$982 million annually. Think outside the car! Think multi-modal! Use transit more, drive less, fly less, move our stuff around smarter, transition to electric vehicles.

- a. Encourage tele-commuting, walking, cycling
 - i. Wifi for All
 - ii. Support Vision Zero goals for pedestrians & cyclists
- b. Transit - Increase transit ridership with
 - i. fair fares

- ii. free public transit by 2025
 - iii. fossil-free transit (zero emission all electric buses) by 2030, prioritizing routes in low income communities, with greatest air pollution.
 - iv. accessibility at every SEPTA station (regional rail and subway)
 - v. Improve safety on public transit by adding safety officers
 - vi. Make public transit more convenient, with increased frequency, possibly using smaller, zero emissions, quiet vehicles.
- c. Delivery Trucks
- i. zero emission electric delivery trucks in the city
 - ii. Promote bicycle deliveries
 - iii. promote an “economy of short distances” - A local economy reduces transportation emissions.
 - iv. an anti-idling campaign that rewards citizens reporting idling diesel trucks & buses, like NYC.
- d. City Fleet, including School District of Philadelphia
- i. Include bikes, car-sharing,
 - ii. Electrify vehicles, including cars, trucks, school buses, especially yard tools like lawnmowers & leaf blowers.
 - iii. Provide charging stations powered on site by solar or remotely by wind energy.
 - iv. Rethink trash hauling policy - Shared trash compacter & private hauler for each block.
- e. Private cars
- i. Promote car sharing, reverse commuting
 - ii. Invest in public electric vehicle charging - require EV charging in parking lots and garages, by 2025. Electric vehicles reduce energy use, with 60% lower emissions when powered by fossil fuels, 100% lower emissions when powered by renewables.
- f. Airport
- i. A moratorium on new airports and airport expansion
 - ii. Cessation of privileges for the aviation industry
 - iii. Addressing the problems of offsetting
 - iv. Eschewing biofuels

- v. Aviation efficiency and long-distance travel. Energy use and emissions are growing rapidly in aviation. In aviation, improved engines, operational efficiency by air traffic control, airlines and pilots, and reductions in the amount of travel can cut aviation energy use and emissions by about 50%.

5. Industrial processes, Solid waste, Leaking gas lines, Waste water, and Land use

Accounts for 13.45% of emissions, at 2.0 million tons. No sense of current annual cost.

- a. **Industrial process** - refinery included here - 1,408,988 MTCO₂e or 67.4% of this category - According to the IEA, overall manufacturing energy intensity could improve by 44% between now and 2040 with 70% of the energy savings potential in less energy-intensive manufacturing sectors. Revise industry air and water regulations to lower fossil fuel use by 2030. More research needed.
- b. **Solid waste** - methane emissions from landfills measured here, not truck emissions, not incinerators - 577,750 MTCO₂e, 27.7% of this category
 - i. Eliminate single-use petroleum-based plastics.
 - ii. Put instructions on all recycling bins. Make sure all residents have bins with water-tight lids.
 - iii. Explore recycling possibilities. Research Rabbit Recycling as possible consultants and managers of a city-wide more comprehensive program..
 - iv. Incentivize backyard & neighborhood scale composting. Give away compost bins like we do recycle bins. Set up composting at the 400+ community gardens in the City for those that don't have a backyard and educate people 4x a year how to do this, utilizing RCOs . TV ads, radio ads, and instructions can be included in every political mailing to constituents.
- c. **Leaking gas distribution lines** - methane emissions result in 127,504 MTCO₂e - 6.1% of this category
 - i. Research needed how to disconnect instead of repair. This means whole neighborhoods get retrofitted homes for heat.
- d. **Waste water processing** - 23,912 MTCO₂e - 1.1% of this category
 - i. Eliminate single use plastics

- ii. Encourage raincheck / rain barrels
 - iii. Encourage permeable pavements where possible
 - iv. Widespread public education: how to avoid car fluids, trash etc. going down the storm drains. Beautiful streets and sidewalks campaigns.
- e. **Land Use, Land Use Change, and Forestry (LULUCF)**- our parks and trees absorb -48,756 MTCO₂E - negative 2.3% of this category.
- i. Rollout large scale tree planting by the city, combined with tree care, non mechanized street-sweeping and litter collection, with a focus on trees in low income neighborhoods and as identified in recent tree canopy report. The city should take responsibility for sidewalk repair if trees planted damage the sidewalk.
 - ii. Expand city programs to provide other plantings: along streets, back alleys, window boxes, green roofs where solar is not feasible.
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