

Reducing Port Chester's Carbon Footprint

Dec. 10th, 2019



What We Have Learned

Greenhouse gases (GHG) cause the planet to retain heat:

CO₂, Nitrous Oxide, Methane, Ozone

The use of fossil fuels releases these gases and we **MUST** wean our society and economy off fossil fuels - **THERE IS NO PLANET B !**

The transition to a fossil-fuel free society will be bumpy and disruptive

There are three paths ahead for us:

1. Expand and exploit **clean, renewable sources of energy**

Invent, improve and scale these new sources

2. Meanwhile, **reduce our collective consumption** of dirty fuels and plastics

3. And, invest heavily in **CO₂-capture**, like forests and foliage



Clean, Renewable Energy Options

Solar panels, on a vast scale, aka PV (photo voltaic technology)

Daytime only, and seasonal

Wind turbines, also on a vast scale

Subject to weather, dangerous to birds

Hydro power: streams, rivers, tidal flows

Impact on fish

Geo-thermal power and heat pumps:
leverages earth's hot core

Biomass power: derived from organic waste

Requires methane capture and use

Hydrogen fuel

Technology & economics still evolving



Reduce our personal carbon footprints

SMART SHOPPING & CONSUMPTION TIPS

Stop/reduce eating meat

Vegetables, soy & poultry NOT red meat

Unplug your devices

Reduce the use of “vampire power”

Drive less or drive electric

Walk, bike, e-bike, bus, train, hybrid

Forsake “fast fashion”

Buy and keep durable, classic clothing

Plant a garden

Contribute to CO₂-capture

Eat locally grown, organic food

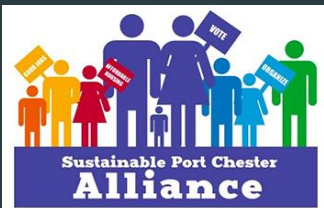
Less energy to deliver, fewer pesticides

Line-dry your clothes



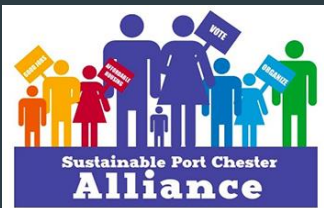
Energy-Reducing Consumption Tips & Hacks

- > *Sign up for electricity from clean sources*
- > Replace incandescent bulbs with LEDs
- > Install motion detecting light switches
- > Turn hot water temperature down to 120 F
- > Use low flow showerheads
- > Cook more, consume less take-out
- > Promote mixed-use zoning & development
- > Drive less aggressively
- > Keep tires properly inflated
- > Use traffic apps (Waze) to avoid jams
- > Take driving vacations, fly less
- > VOTE for Green candidates



More Extreme Consumption Tips & Hacks

- > Replace your “station car” with an electric
- > Buy food in bulk
- > Avoid processed and packaged foods
- > Shop with your own tote bags
- > Waste less: Freeze excess food, eat left-overs
- > Buy Energy Star appliances
- > Replace water heater with heat pump
- > Install double-paned windows
- > Favor environmentally responsible suppliers
- > Lower house temperature in winter
 - Layer your clothing indoors and out
- > Raise house temperature in summer
 - Dress lighter, use fans
- > Pay for carbon offsets when you fly



Community Manifesto Example - Somerville, MA's PLAN

1. Reduce the community's contribution to climate change and move towards carbon neutrality
2. Prepare for the unavoidable impacts of climate change
3. Distribute and share the opportunities created by climate action and work equitably



Community Manifesto - Somerville, MA

Implementation:

- ▶ Net-zero and resilient new buildings standards
- ▶ Improved energy performance in existing buildings
- ▶ Rapid transition to electric vehicles (and supporting infrastructure)
- ▶ Stormwater management
- ▶ Reduced consumption and waste
- ▶ Expanded tree canopy
- ▶ Equitable low-carbon mobility - expanded bus routes and frequency, more bicycle infrastructure, assess parking policy and supply
- ▶ Healthy and resilient community - preparedness & emergency alert system
- ▶ Pathway to 100% renewable energy - CCA green option
- ▶ Culture of climate action - educate and encourage participation
- ▶ Local government leading by example - new standards and goals
- ▶ State advocacy for carbon neutrality
- ▶ Regional collaboration for coastal resilience

