Reducing Port Chester’s Carbon Footprint

Dec. 10th, 2019
What We Have Learned

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

\[ \text{CO}_2, \text{Nitrous Oxide, Methane, Ozone} \]

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 CO$_2$-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