

Volunteers' Meeting November 18, 2019

Croton100 Playbook

Carbon Tracking Committee



Topics

1. Change is difficult
2. Web site
3. App
4. Croton100 playbook
5. Emission reduction opportunities

*“Limiting global warming to 1.5°C would require **rapid, far-reaching and unprecedented** changes in all aspects of society.”*

- IPCC Summary for Policymakers, October 8, 2018

This won't be easy... we must be willing to step out of our comfort zone... we must kick our addiction!

Web site
work by Karl
Conrad, Deb
Hayn, Leila
Goldmark,
Shoshana
Daly



Congrats! You're one of the **top-**
performing environmental organization
sites

1,697

Page Views

165

File Downloads

45

Contact Form Submissions

Page 5 / © Croton100 2019



emission-free by 2040

about us

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get involved

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take the pledge

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App progress

- We would like a first (minimal) version to be available by launch date
- 2 main screens:
 - Dashboard showing carbon footprint history
 - Carbon footprint questionnaire that serves 4 purposes
 - Initial carbon footprint inventory, self-administered
 - Will focus on Heating, Electricity, and Transportation
 - “What if” calculations for proposed changes
 - Register changes (“pull the trigger”) to get credit/points
 - Re-administer the carbon footprint questionnaire at any time
- Other screens:
 - Establish user id, change password, reset password, get comparisons against neighborhood or people with similar-sized houses, see village-wide progress
- In the meanwhile, we have a spread sheet version of the carbon calculator
- Implementation sizing/timeline currently underway (Matthew Rubenstein)

Steps to achieve NET ZERO by 2040

- We need to establish a 2019 baseline, i.e., a personal carbon inventory
- We need to suggest ways of reducing this by 5% every year
- Some people will achieve 20% in the first year, others will take 5 years to achieve 20%, so be it
 - What we seek is *overall 5% reduction every year* across zip code 10520
- **Croton100 playbook** is an attempt to first convince ourselves (committed volunteers) that we know how to reduce our own carbon impacts
 - Let's first do what we seek to convince others to do
 - The playbook and master spreadsheet are posted in the "Documents" section of croton100.org
- Everyone's input is requested on the playbook
 - Try it on yourself
 - When comfortable, try it on family members and neighbors
 - Provide feedback to Liza McCarthy by Sunday, December 1 (elizamccarthy@gmail.com)
 - Several sections are incomplete, we need help: Diet, Gardening/Composting
- Once the playbook is finalized, we will run a training program on how to use it
 - Scale the benefits to the entire village through you, our dedicated volunteer pool

Today's goal

- Conceptual introduction to the playbook
- I will pretend to be a Croton100 volunteer, and you are a resident
 - We will use an *average U.S. home* as an example
- We will establish your carbon inventory in the following sections
 - Transportation
 - Home heating
 - Home electricity
 - Food and waste
 - Goods and services
- In each section, once we establish your carbon inventory, we will make suggestions for your consideration
- The theme is to *give carbon a seat at the table when you make decisions*

Section 1: Transportation



Questions:

How many cars? **3**

How many miles driven annually in each car? **11,398**

Miles-per-gallon of each car? **21.6**

Output (calculated automatically):

$3 * 11,398 / 21.6 * 8.887 / 1000 = 14.1$ tons of CO₂e

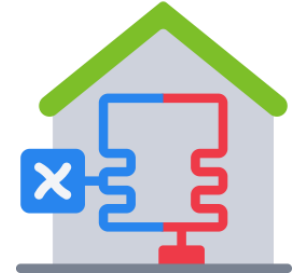
Tips:

Fewer miles: walking, biking, carpooling, club multiple trips

Better efficiency: more efficient car, maintain car properly, avoid idling, public transportation, drive gently

Biggest bang for the buck: SUV sedan hybrid plug-in EV

Section 2: Heating



Questions:

Primary fuel source? Oil / gas / propane / heat pump

How many gallons or cuft? 551

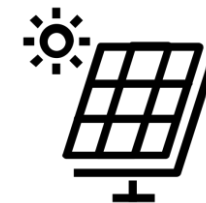
Output (calculated automatically):

$551 * 10.227 / 1000 = 5.7$ tons of CO₂e (19.8 tons running total)

Tips:

Efficiency: insulate hot water pipes, get energy efficiency audit of your house, use smart thermostats, maintain furnace well, don't block baseboards or radiators with furniture or carpets

Biggest bang for the buck: Oil ? gas ? propane ? heat pumps



Section 3: Electricity

Questions:

How many kWhrs per year do you use? **11,320**

What fraction from solar panels or community solar? **0**

Output (calculated automatically):

$11,320 * 100\% * 0.283538 / 1000 = 3.2$ tons of CO₂e (23.0 tons running total)

Tips:

Less electricity: LED bulbs, Energy Star appliances, turn lights off, wash clothes in cold water, clothesline/drying rack for some clothes, put computers and TVs on a sleep timer, conserve water, avoid phantom power

Biggest bang for the buck: move to 100% solar and wind power



Section 4: Waste

Questions and output (calculated automatically):

Baseline emission	808 kg of CO ₂ e
Do you recycle newspapers?	-132 kg
Metal?	-104 kg
Plastic?	-42 kg
Magazines?	-32 kg
Glass?	-30 kg
Total from waste	468 kg
Running total	23.5 tons

Tips:

Recycle correctly, clean/rinse recyclables

Biggest bang for the buck: avoid packaging altogether



Section 5: Goods, services, zip code overhead

Output:

Every household is charged 10 tons for goods/services and 5 tons for common emissions (school, train station, shops, houses of worship)

Running total 38.5 tons

Tips:

Divest fossil investments, check ESG scores of 401(k) and all investments, buy energy efficient appliances with the Energy Star label, plan meals to avoid food waste, buy sustainable clothing brands, avoid single-use plastic, buy local goods

Summary

Here is your carbon footprint

Here are the top few actions you can take

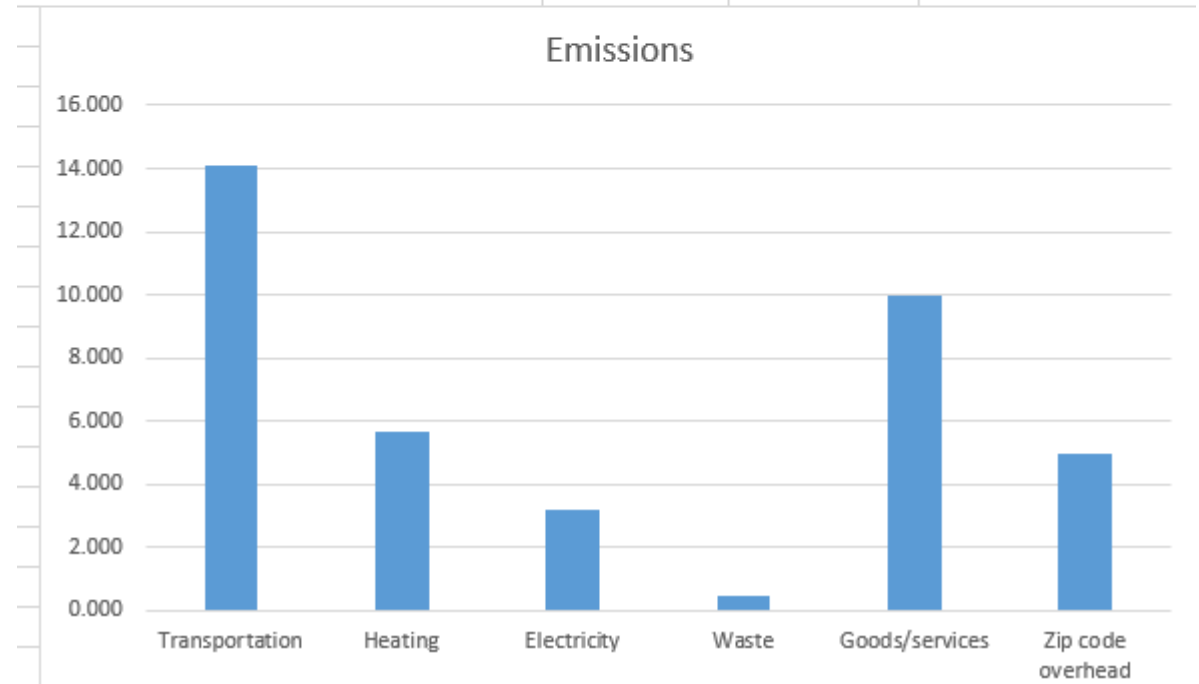
Please volunteer, take the pledge, give carbon a seat at the table in all future decisions



Carbon Calculator for <<names>>
<<Street>>
Croton on Hudson, NY 10520



Category	Emissions
Transportation	14.069
Heating	5.663
Electricity	3.226
Waste	0.468
Goods/services	10.000
Zip code overhead	5.000
Total	38.425



Emissions progress since Croton100 started

Residence	Action	Tons of CO ₂ e	Points	Date commissioned
Kennedy/ Andrews	Ground-source heat pumps	12.481	12,481	Evaluation on November 25
Buchanan/ Visweswariah	Ground-mount solar panels	5.129	5,129	Oct 31, 2019
Rowe	Roof-mount solar panels + green ESCO	4.859	4,859	ESCO done, solar not commissioned
Brodie	Switched to 20% bio-diesel for furnace	1.814	1,814	Advice provided
Beller	Insulated hot water pipes	0.511	511	Partly done, improvement not measured yet
Total		24.794	24,794	

We have to scale up this type of success by a factor of 50 after launch!

Asks

1. Take the pledge
2. Ask your like-minded {family members, friends, neighbors} to take the pledge
3. Read the playbook and try self-administering to determine your carbon footprint
4. Administer the playbook to a friendly audience (with spreadsheet) if you feel so inclined
5. Provide feedback to Liza McCarthy
6. If you would like to author one of the missing sections or add a section or you have expertise in the subject matter of a section, please get in touch with Liza