New Haven Climate Movement

Electric Future: Draft Proposal

The Electric Future campaign will develop a broad strategy to move towards adopting electric-powered buildings, transportation, and appliances to reduce greenhouse gas emissions and educate the public about the benefits of electrification.

1. **Overview:** As a coastal city, New Haven is particularly vulnerable to the devastating consequences of climate change and sea-level rise. New Haven must take additional measures to decarbonize transitioning from fossil fuel-powered buildings and transportation vehicles to electric-powered ones. These powerful strategies assist in combating climate change with additional benefits, including:
    a. **Reduced carbon footprint:** As electricity from the grid gets cleaner, all-electric buildings and vehicles will eventually stop producing greenhouse gas emissions. All-electric buildings and vehicles that have rooftop solar and/or purchase all electricity from renewable sources already produce zero-emissions.
    b. **Improved air quality:** All-electric buildings improve indoor air quality and overall health, by eliminating natural gas combustion inside homes that produces harmful indoor air pollution. All-electric transportation vehicles improve outdoor air quality, particularly for residents living near major roads.
    c. **Increased savings:** All-electric new buildings do not require the installation of gas infrastructure, saving these capital costs.
    d. **Reduced noise pollution:** Electric vehicles produce far less noise than gas-powered vehicles, and noise pollution has been shown to have detrimental effects on human health.
    e. **Increased social equity:** All-electric new construction *can* reduce housing costs. For disadvantaged populations that spend a disproportionate amount of their income on energy and are more likely to suffer from asthma due to poor air quality, zero-emission homes are an important opportunity to deliver social equity benefits.

2. **EF Strategy**: The Electric Future campaign will develop a broad strategy to move towards adopting electric-powered buildings, transportation, and appliances to reduce greenhouse gas emissions and educate the public about the benefits of electrification. In Connecticut, less than 50% of the energy used to generate electricity comes from fossil fuels (and percentage supplied through clean energy is mandated to increase by 2030), so combined with efficiency related to using electricity, electrification will reduce emissions.
   The campaign will:
    a. **Educate** the public about the benefits of switching to electricity and the harm being done by using fossil fuels both through pollution and climate change.
    b. **Promote** specific City policies, such as a mandate that new construction be all-electric and support electric vehicles.
    c. **Inspire** a commitment to move the City to become 100% electric by 2030.

3. **Key Asks:**
    a. Set up a meeting with Buildings, Planning, and Engineering departments to explore policies that would accelerate the move to electric buildings.
    b. Make a public commitment to support/co-lead the Electric Future campaign in July.
    c. Create a timeline for City Operations to convert to all-electric energy by 2030, with different departments developing a plan and timeline by January 1, 2021.

4. **Building Electrification Policy Options:** The Electric Future campaign aims to propose specific policies and projects designed to catalyze the transition from fossil fuels to electricity. These suggestions include, but are not limited to, the following:
    a. Require all new buildings from 2021 onwards to be 100% electric. In tandem, pass an ordinance that bans gas hookups in all new construction.[1]
    b. Create zoning and/or building property tax changes that incentivize all-electric building construction. (See this link)
    c. Require major building renovations to be all-electric and all new construction above a certain size to be all-electric.
    d. Retrofit all city buildings for electrification and encourage the adoption of heat pump technology, particularly in large, multistory buildings.
    e. Encourage adoption of energy efficiency standards for residential (HERS) and commercial (Energy Star) buildings.
    f. Require the Economic Development Department to educate prospective builders about electrification benefits and resources and to create a plan that prioritizes working with local contractors and supporting local workers in coming electrification and energy efficiency efforts.[2] (See this link, this link, & this link)
    g. Building construction applications require the applicant to provide electrification and greenhouse gas emissions estimates, and the application provides information on less fossil-fuel-intensive options for builders.
    h. Hire consultants/staff to initiate electrification and energy efficiency projects in the City and Board of Education facilities that will be paid for by energy savings.
    i. Create energy districts where all the buildings are electrified; a connected series of electric buildings runs more efficiently than a single electric building, and the district can serve as a pilot for electrifying all of New Haven. (see this link)

Background

[1] **Existing ordinances:**

- Brookline, MA: This by-law will prohibit the installation of fossil fuel piping in new buildings and in a major renovation of existing buildings. Consequently, this policy will require heat, hot water, and appliances that are installed during new construction and gut renovation to be all-electric. For situations in which electric alternatives are not practical or cost-effective, this by-law provides for exemptions, including for fuel piping for backup generators.
- Berkeley, CA: A) Natural Gas Infrastructure shall be prohibited in Newly Constructed Buildings. (Exception: Natural Gas Infrastructure may be permitted in a Newly Constructed Building if the Applicant establishes that it is not physically feasible to construct the building without Natural Gas

Infrastructure. For purposes of this exception, “physically feasible” to construct the building means either an all-electric prescriptive compliance approach is available for the building under the Energy Code or the building is able to achieve the performance compliance standards under the Energy Code using commercially available technology and an approved calculation method.) B) To the extent that Natural Gas Infrastructure is permitted, it shall be permitted to extend to any system, device, or appliance within a building for which an equivalent all-electric system or design is not available. C) Newly Constructed Buildings shall nonetheless be required at a minimum to have sufficient electric capacity, wiring, and conduit to facilitate future full building electrification.

[2] **Making a plan:**

- California’s plan to move toward building electrification: This plan provides a brief timeline and policy recommendation for California to move towards a desired electrified future. The plan highlights the policy of establishing all zero-emissions buildings by the year 2045, with California being a larger state and overall area. This policy, among others such as affordability, public awareness, and building standards help assist the State of California in their transition to building electrification.