



## Context

### ***Proposed Ordinance: All-Electric Buildings for New Construction***

The proposed ordinance will update the San Francisco building code to require all new building permits submitted to the Department of Building Inspection (DBI) after January 1, 2021 be all-electric. All-electric buildings exclusively use electricity for power and do not contain any natural gas piping, fixtures, or infrastructure for air conditioning, heating, water heating, cooking appliances, and clothes drying appliances.

The goals of the ordinance are to increase building safety, improve indoor air quality, and reduce San Francisco's greenhouse gas (GHG) emissions. There is an exception process in the event that a project sponsor demonstrates it is infeasible to build all-electric. In the policy brief for the proposed ordinance, improved indoor air quality was identified as an equity and health benefit.<sup>1</sup> This analysis identifies additional racial equity concerns and recommendations, on the premise that if a policy is not intentionally designed to advance racial equity, then it is unlikely to do so.

### ***Racial Disparities in San Francisco***

Across every social indicator, when data is disaggregated by race, the legacy of more than 200 years of racially discriminatory government policies is evident in San Francisco. Racial disparities can be measured in unemployment, health, household income, housing and displacement, criminal justice, police violence, homelessness, education, and composition of the City and County of San Francisco's workforce.<sup>2</sup> Climate change exacerbates these disparities. People of color and lower income populations are least responsible for, yet most vulnerable to the impacts of climate change.

## Racial Equity Analysis

As part of its Racial Equity Initiative, the San Francisco Department of Environment (SFE) will evaluate and provide recommendations for legislation to better advance racial equity. The process with which these recommendations will be communicated to stakeholders and policy makers is still under development. SFE's final process will follow the Office of Racial Equity's policy analysis tool, which is being developed for Board of Supervisors legislation.

For the proposed ordinance, *All-Electric Buildings for New Construction*, SFE racial equity staff identified five *Equity Concerns* and two types of recommendations to address concerns: *Implementation Recommendations* and *Advancement of Racial Equity Recommendations*. For the *Advancement of Racial Equity* recommendations, collaboration with other departments and outside entities and funding are needed; several of these recommendations make sense at a larger scale, beyond the proposed ordinance alone.

<sup>1</sup> [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zebtbf\\_new\\_construction\\_policy\\_brief.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zebtbf_new_construction_policy_brief.pdf)

<sup>2</sup> <https://sfgov.legistar.com/View.ashx?M=F&ID=7586870&GUID=9E0222B9-7A4D-4082-8CCE-3F397520FC82>



**Summary Table: Equity Concerns and Recommendations**

<b>Concern</b>	<b>Concern Description</b>	<b>Recommendations</b> <i>(Ordinance Implementation Recommendations Italicized)</i>
<p><b>1) Energy Cost Burdens for Tenants</b></p>	<p>Higher utility bills disproportionately burden lower income populations. While information was provided about projected savings for the lifetime of the building, utility cost comparisons (all electric vs mixed fuel) for tenants in the shorter term (monthly/annually) were not provided.</p>	<p>Work with utility regulators and providers to facilitate equitable rate structures. Develop educational materials for tenants about peak electricity pricing and opportunities to reduce energy costs. Subsidies, incentives, and/or other financial assistance could be expanded for energy efficiency, solar, and/or other technologies to ensure affordability for lower income tenants.</p>
<p><b>2) Impacts to Affordable Housing</b></p>	<p>Given the significant shortage of affordable housing, it is imperative that all-electric construction does not have an impact on development. Housing unaffordability disproportionately harms people of color.</p>	<p><i>Focus outreach and technical assistance to affordable housing developers who are unfamiliar or inexperienced with building electrification.</i></p> <p>Feedback mechanism is needed to understand impacts of the all-electric ordinance and other environmental requirements and programs.</p>
<p><b>3) Lack of Workforce Considerations</b></p>	<p>There is significant income inequality by race. Historically the green building industry has not been racially diverse. Jobs in building electrification will not solve all income inequality, but can contribute toward closing the gap if they are designed to do so.</p>	<p><i>Focus outreach and technical assistance to Black, Indigenous, and People of Color (BIPOC)-owned businesses and racial/ethnic affinity professional organizations to increase competitive advantage.</i></p> <p>Workforce training targeting BIPOC and people with barriers to employment is needed. Incentives and/or requirements to hire graduates of the training and to direct work to BIPOC-owned businesses are needed.</p>
<p><b>4) Impacts to Restaurants</b></p>	<p>Cooking on an open gas flame impacts some cultural cooking. Electric appliances have cost and training implications.</p>	<p>Given the much-needed longer implementation period that the ordinance provides, there is an opportunity to better understand burdens and provide education. Broader and more diverse outreach to the restaurant industry can provide the assistance needed for new restaurants in new buildings that will face this transition.</p>
<p><b>5) Lack of Funding</b></p>	<p>Resources are needed to further advance racial equity in all-electric buildings, and to ensure a just transition for workers.</p>	<p>Create a funding stream using the climate justice principle where the largest polluter pays for the transition, such as a fee for large existing commercial buildings.</p>



### **Equity Concern #1: Energy Cost Burdens for Tenants**

The policy brief for the proposed ordinance<sup>3</sup> references studies on certain building types—single family homes, low and medium-rise residential, office, retail—that indicate a financial benefit over the lifetime (30 years) of the all-electric building. This projected financial benefit is applicable to building owners. However, not all tenants pay for building-wide operational costs and most will likely not live in the building for the duration of its lifetime. It is unclear what the change in utility costs will be to tenants. Tenants are subject to volatility in energy markets, and spikes will be felt more acutely in single fuel systems. Higher utility bills disproportionately burden lower income tenants.

### **Recommendations to Further Advance Racial Equity**

SFE could work with utility regulators and providers to facilitate equitable and affordable rate structures. SFE could conduct post-occupancy evaluation of monthly costs to investigate potential burdens, and work with tenant organizations to develop educational materials about peak electricity pricing and opportunities to reduce energy costs. SFE, in partnership with stakeholders like the SFPUC and PG&E, which are more directly involved in these areas, should monitor policy opportunities that provide subsidies, incentives, and/or other financial assistance that could be expanded for energy efficiency, solar, and/or other technologies to ensure affordability for lower income tenants.

### **Equity Concern #2: Impacts to Affordable Housing**

The policy brief for the proposed ordinance<sup>4</sup> indicates that low- and medium-rise residential, among other building types, will benefit from lower construction cost through the elimination of natural gas infrastructure and lifetime savings that include both cost reductions in building operations and societal cost from building all-electric construction. The ordinance development process engaged over 40 different affordable housing professionals, along with the Mayor's Office of Housing and Community Development (MOHCD), and it was generally agreed that electric buildings are affordable and reliable, and provide good solutions for both tenants and developers. There was not an expressed need for special exceptions for affordable housing, including a financial exemption. It's important to note that examples of all-electric buildings in San Francisco are limited and some developers may lack expertise in all-electric building design.

A variety of circumstances and factors affect San Francisco's ability to produce a sufficient supply of affordable housing. Construction costs are one such factor: in 2019 San Francisco was found to have the highest construction costs in the world.<sup>5</sup> Construction costs themselves are affected by a variety of factors, including increased project costs due to additional required design work,<sup>6</sup> and a "lack of competition from subcontractors, especially in specialized trades (electrical, plumbing, etc.), is driving up bids for new development projects."<sup>7</sup> While these factors are independent of a fuel switch requirement, it is important that fuel switching does not contribute to the affordable housing shortage in any way. Any impediments to producing affordable housing will burden all of San Francisco, and in particular people who are unhoused, housing cost burdened, and/or at risk of displacement—all three of which are experienced disproportionately by Black populations and People of Color.

### **Ordinance Implementation Recommendation**

SFE, along with other City departments responsible for affordable housing production should focus outreach and

<sup>3</sup> [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zebtbf\\_new\\_construction\\_policy\\_brief.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zebtbf_new_construction_policy_brief.pdf)

<sup>4</sup> [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zebtbf\\_new\\_construction\\_policy\\_brief.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zebtbf_new_construction_policy_brief.pdf)

<sup>5</sup> International Construction Market Survey (2019). Turner and Townsend

<sup>6</sup> [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zebtbf\\_new\\_construction\\_workgroup\\_notes\\_1.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zebtbf_new_construction_workgroup_notes_1.pdf)

<sup>7</sup> p. 27 [https://default.sfplanning.org/publications\\_reports/Housing\\_Affordability\\_Strategies\\_Report.pdf](https://default.sfplanning.org/publications_reports/Housing_Affordability_Strategies_Report.pdf)



technical assistance to affordable housing developers who are unfamiliar and/or inexperienced with all-electric construction. SFE racial equity staff can compile a list of potential stakeholders to provide assistance for this effort.

### **Recommendations to Further Advance Racial Equity**

SFE in conjunction with relevant city agencies and partners could continue to facilitate feedback mechanisms (e.g., a survey or listening session) to hear from affordable housing developers about obstacles, lessons learned, and changes in construction and operational costs in all-electric buildings. It may be prudent for the feedback gathering process to include broader building requirements, not only the all-electric new construction requirement.

### **Equity Concern #3: Lack of Workforce Considerations**

A statewide analysis of the employment impacts of building electrification for new construction calculated a small decrease statewide. This study assumes that all-electric new residential construction is less expensive than gas-dependent construction due, in part, to avoiding the cost of natural gas piping associated with the service and meter connection. These avoided costs translate to reduced labor requirements. In the commercial and mixed-use sector, the cost difference between mixed-fuel and all-electric buildings is so minor that the study does not project a net change in employment for commercial new construction.<sup>8</sup> On a local level, no net impact on new construction jobs is expected. New buildings need hot water, heating, cooling, cooking, and clothes drying regardless of the energy source used (i.e., construction activity to install new plumbing, ductwork, and appliances). This was confirmed by labor representatives during the stakeholder engagement process. Electricians, green building professionals, and others involved in all-electric building design and construction could benefit from this proposed ordinance if work opportunities increase. Since all-electric buildings are new, there is a potential learning curve for workers. Stakeholders expressed the importance of companion workforce training and development to the ordinance.<sup>9</sup>

Historically, the green building industry and building trades lack diversity and are disproportionately white. The demand for skilled electrification professionals could continue to benefit the white population and leave out BIPOC. In 2018, American Indian and Black San Franciscans were more than three times more likely to be unemployed than Whites and unemployment rates were similarly high for Native Hawaiian / Pacific Islanders and Latinxs. Job inequality in San Francisco contributes to income and wealth inequality by race. Additionally, fossil fuel jobs have provided workers better pay, benefits, and longevity than green jobs.<sup>10</sup> To ensure a just and equitable transition into the new green economy, structures need to be put in place to foster workforce opportunities for BIPOC.

### **Ordinance Implementation Recommendation**

SFE and other City departments along focused on workforce development should focus outreach and technical assistance on BIPOC-owned businesses and racial/ethnic affinity professional organizations to increase their competitive advantage. SFE racial equity staff can identify stakeholders to assist in this process.

### **Recommendations to Further Advance Racial Equity**

Economic and workforce development interventions are needed to complement this ordinance, and to ensure racial equity in the just transition away from an extractive economy. SFE needs to better understand the priorities of the City's workforce programs and community workforce organizations and their preferred roles in green building and a just

<sup>8</sup> [https://innovation.luskin.ucla.edu/wp-content/uploads/2019/11/California\\_Building\\_Decarbonization.pdf](https://innovation.luskin.ucla.edu/wp-content/uploads/2019/11/California_Building_Decarbonization.pdf)

<sup>9</sup> [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zebtf\\_new\\_construction\\_workgroup\\_notes\\_3.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zebtf_new_construction_workgroup_notes_3.pdf)

<sup>10</sup> [https://greenlining.org/wp-content/uploads/2019/10/Greenlining\\_EquitableElectrification\\_Report\\_2019\\_WEB.pdf](https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf)



transition. Potential future workforce activities that SFE could play a supportive role include:

- Developing training for all-electric building construction and maintenance that is targeted to Black, Indigenous, and People of Color (BIPOC) and people with barriers to employment.
- Developing incentives, requirements, and/or certification standards for contractors who hire graduates of the training.
- Developing incentives, requirements, and/or other opportunities to direct work to BIPOC-owned businesses.

#### **Concern #4: Impacts to Restaurants**

Cooking on an open gas flame may be more important to the cuisine of certain cultures,<sup>11</sup> and there may not be an electric substitute that can perform as effectively. Electric appliances, while more efficient to operate, are more expensive and, at this point in time are a new technology that cannot be purchased second-hand and at a discount.<sup>12</sup> Independent of a fuel switch requirement, restaurants and their workers have been greatly burdened by the COVID-19 pandemic.

#### **Recommendations to Further Advance Racial Equity**

Feedback mechanisms are needed to understand the cost impacts to new restaurants and impacts to cultural cooking. The longer implementation time period for restaurant compliance can provide an opportunity to extend outreach to more diverse stakeholders seeking to open restaurants in newly constructed buildings.

#### **Concern #5: Lack of Funding**

Resources are needed to further advance racial equity in the construction of new all-electric buildings, and to ensure a just transition away from an extractive economy.

#### **Recommendations to Further Advance Racial Equity**

SFE could research the creation of a new funding stream using the climate justice principle in which the largest polluter pays for the transition, such as a fee for large existing commercial buildings. This principle could be applied beyond buildings to other sectors with high GHG emissions and to workforce programs beyond building electrification.

<sup>11</sup> [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zebtf\\_residential\\_meeting\\_notes\\_3.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zebtf_residential_meeting_notes_3.pdf)

<sup>12</sup> [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zebtf\\_new\\_construction\\_workgroup\\_notes\\_1.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zebtf_new_construction_workgroup_notes_1.pdf)