



Kate Harrison  
Councilmember District 4

## ACTION CALENDAR

June 1, 2021

To: Honorable Mayor and Members of the City Council  
From: Councilmember Harrison (Author), Councilmember Bartlett (Co-Sponsor)  
Subject: Budget Referral and Resolution Establishing a Pilot Existing Building Electrification Incentive Program to Assist New Homeowners, Renters and Existing Homeowners with Transition to Zero-Carbon Buildings

### RECOMMENDATION

1. Adopt a Resolution establishing:
  - a. a two-year Pilot Existing Building Electrification Incentive Program to Assist New Homeowners, Renters and Existing Homeowners with Transition to Zero-Carbon Buildings; and
  - b. an annual process for the Energy (or successor) Commission and the Facilities, Infrastructure, Transportation, Environment & Sustainability Policy Committee (FITES), in consultation with community groups, to provide input to staff and Council about eligible *categories* of fund expenditures to maximize equitable emissions reductions and impacts for eligible households while leaving the mechanisms for doing so to staff discretion.
2. Refer to the June, 2021 budget process:
  - a. \$1,500,000 of general fund monies from excess equity as seed funding for the two-year pilot, inclusive of staff costs, for FY 2022.

### CURRENT SITUATION, EFFECTS, AND RATIONALE FOR RECOMMENDATION

The world is facing a grave climate emergency, requiring municipalities to rapidly transition towards zero carbon economy by 2030. Transitioning Berkeley's economy will require significant investment on the part of both government and residents. It is in the public interest to establish a financial incentive program to assist new homeowners, renters and existing homeowners with the transition to zero-carbon buildings. This item establishes the general scope of a two-year Existing Building Electrification Incentive Program Pilot and refers to staff to design an equitable program with \$1,500,000 for FY22, inclusive of staffing costs, and contingent on the availability of excess equity, from the General Fund. It also asks the Energy (or successor) Commission and FITES Committee, in consultation with community groups, to provide input to staff and Council on at least an annual basis about categories of fund expenditures that would provide the

most benefit for low-income households and to maximize equitable emissions reduction impacts. The establishment of this program is consistent with staff and Council goals and budgetary priorities.

### BACKGROUND

According to the best available science, a 50% reduction in emissions must happen worldwide by 2030 or earlier in order to delay extremely catastrophic warming. To meet the U.N.'s global 2050 target to keep emissions as close as possible to 1.5 degrees Celsius, wealthy nations and cities will near zero by 2030.<sup>1</sup>

As a result of the scientific and economic realities of climate change, and despite the people of Berkeley's average relative wealth, it is not realistic to expect the owners of the City's approximately 46,000 residential housing units to electrify their buildings in a decade without significant government co-investment. Low-carbon technology can often be out of reach of many low-income households and, without direct assistance, many will be left behind. Transitioning Berkeley's economy will require significant investment on the part of both residents and the government. Following Berkeley's 2019 landmark prohibition on natural gas infrastructure, staff have released a Draft Berkeley Existing Buildings Electrification Strategy that is currently unfunded.

Such investments would significantly lower Berkeley's carbon emissions, at least 37% of which are from buildings, and provide residents with a plethora of health and safety benefits that will likely outweigh upfront costs. The program can be crafted in a way that supports good paying jobs, for example including unionized contractors, workforce development and local hire requirements. The transition to a zero-carbon city thus has the potential to uplift both workers and residents.

In January 2021, the City's Office of Energy and Sustainable Development reported to the Energy Commission that the cost of electrifying the City's entire low-rise building stock (approximately 36,000 units, or 90% of all Berkeley buildings and 65% of floor area) would be between \$700 and \$880 million. An additional \$120 million is needed for efficiency improvements and solar.

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<sup>1</sup> IPCC, 2018: Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. *World Meteorological Organization, Geneva, Switzerland, 32 pp.* <https://www.ipcc.ch/sr15/chapter/spm/>.

Item 9 - Communications  
Energy Commission  
January 27, 2021

1/27/2021

### Draft Total Costs

Approximate total modeled costs for converting Berkeley's low-rise housing stock today:

- Covers 36,000 1-3 floor homes (90% of all Berkeley buildings and 65% of floor area)
- \$280-430 Million more than business-as-usual gas replacements (no solar or envelope improvements)
- Additional \$220-660 Million for envelope efficiency and solar PV

	No Solar	Minimum Solar (Offset)	Maximum Solar (Net Zero Energy)
<b>Economy Appliances</b>	\$700 Million	\$930 Million	\$1.2 Billion
<b>Mid-Tier Appliances</b>	\$880 Million	\$1 Billion	\$1.2 Billion
<b>Mid-Tier + Envelope Improvements</b>	\$1 Billion	\$1.2 Billion	\$1.4 Billion

	Single-family			Multi-family	
	Under 1,500 ft <sup>2</sup>	1,500-3,500 ft <sup>2</sup>	Over 3,500 ft <sup>2</sup>	Under 1,000 ft <sup>2</sup>	1,000 ft <sup>2</sup> and over
<b>1.1: Economy Appliances</b>	\$12,770	\$15,350	\$19,220	\$9,730	\$11,980
<b>1.2: Economy Appliances + Offset Solar</b>	\$5,710	\$4,130	\$2,770	\$6,550	\$5,940
<b>1.3: Economy Appliances + NZE Solar</b>	\$1,190	\$0	\$0	\$2,770	\$1,300
<b>2.1: Mid-Tier Appliances</b>	\$10,090	\$10,620	\$11,850	\$9,190	\$9,790
<b>2.2: Mid-Tier Appliances + Offset Solar</b>	\$6,100	\$3,970	\$1,990	\$7,550	\$6,500
<b>2.3: Mid-Tier Appliances + NZE Solar</b>	\$1,720	\$0	\$0	\$3,990	\$1,780
<b>3.1: Mid-Tier Appliances + Envelope</b>	\$12,010	\$16,180	\$22,500	\$9,700	\$13,020
<b>3.2: Mid-Tier Appliances + Envelope + Offset Solar</b>	\$8,930	\$10,960	\$14,190	\$8,270	\$10,150
<b>3.3: Mid-Tier Appliances + Envelope + NZE Solar</b>	\$4,300	\$4,310	\$4,870	\$4,550	\$5,090

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Clearly, this relatively modest pilot program would only make a small dent in the City's retrofit challenge, perhaps facilitating 400-500 retrofits per year. However, the success of this pilot program will likely spur the Council and residents to seek additional federal, state and local funds to expand the program in subsequent years. The expertise and lessons learned through this pilot will help guide future efforts aimed at closing the 46,000 gas-powered residential unit challenge.

Since 2018, the Council has explored opportunities to increase public investment in building electrification retrofits. Councilmember Harrison's November 27, 2018 referral, following the passage of the Climate Emergency Declaration, requested that the City Manager draft an ordinance expanding eligibility for the existing Seismic Transfer Tax Rebate Program to include electrification and other resiliency measures. Staff subsequently presented the draft ordinance to Council in July of 2020 at the outset of the COVID-19 pandemic with a recommendation to take no action for a year due to COVID-19-related fiscal uncertainty, and the item was held over at the Facilities, Infrastructure, Transportation, Environment & Sustainability Policy Committee (FITES).

At the same time, staff also presented to FITES a related referral to design a companion Resilient Homes Equity Pilot Program that would provide funding for home retrofit improvements to low-income residents. FITES and Council agreed to move the Resilient Homes Equity Pilot Program design and research process forward in November, 2020.

Many economic and public health indicators suggest that the City is entering a more optimistic phase in the pandemic, to include the influx of substantial – but temporary - federal stimulus monies through the 2021 American Rescue Plan Act and the anticipation of a fairly rapid rebound in revenues to pre-pandemic levels. Transfer tax revenues for FY21 are estimated at \$20 million (compared with \$20 million in FY 19) and the city expects to receive a one-time two-year allocation of approximately \$68 million from the 2021 American Rescue Plan Act.

As a result, it is in the public interest to revisit the July 2020 item to see how the City can best move forward with providing residents with critical greenhouse gas reduction incentives in order to address our larger and longer-term crisis: climate change.

According to recent 2020 transfer tax data from OESD, on average between 2014-2019, 845 residential units were transferred per year, generating approximately an average of \$4.6 million total per year in eligible rebates for the Seismic Transfer Tax Program. The city has approximately 46,000 occupied housing units, with the vast majority being gas-powered.

### **Existing Building Electrification Incentive Program Pilot**

Since early 2021, Councilmember Harrison's office and the FITES Committee have been working with City staff to explore opportunities to fund retrofits through general fund transfer tax revenues and establishing a cap on total and per beneficiary allocations. In working with the City Manager, we have concluded that while the existing transfer tax rebate system is a good vehicle for allocating at point of sale, it does not provide funding for existing homeowners who may need to replace a broken appliance or who want to make voluntary retrofits. A better vehicle is a two-year pilot; this requires fewer staff resources to administer and builds on significant staff experience and expertise administering incentive programs.

This item provides an alternative to the Seismic Transfer Tax Rebate model in the form of a budget referral and resolution establishing two-year pilot incentive program funded via general fund allocations, which are currently partially funded by transfer tax revenue.

Currently, the Council approved amount in transfer tax revenues is allocated to the General Fund (as in the past, at \$12.5 million) and some portion is typically set aside for capital projects (generally at \$2 million). For the first year of this pilot program this item proposes to allocate a total of \$1.5 million in excess Transfer Tax equity which would be inclusive of staff's administrative costs.<sup>2</sup> On adoption of this proposal, total transfer tax expenditures would amount to approximately \$17 million, including the \$12.5 million typically allocated to the General Fund programs and the \$2 million to capital programs.

While the program will ultimately be designed by OESD staff through administrative regulation, this item also includes a resolution officially establishing the program and providing general parameters for how staff should allocate the proposed \$1.5 million retrofit fund. This program and the \$1.5 million allocation are already included as a line item in the Planning & Development Department's Fiscal Year 2022 proposed budget.

New property owners are most likely to remodel their units shortly completing the purchase. Thus, the Draft Berkeley Existing Buildings Electrification Strategy recommends allocating some portion of the fund for transferees of residential properties within two years of point of sale. The City is also exploring opportunities to adopt certain mandatory electrification requirements for transferees of new buildings through its BESO program, starting with the largest buildings.

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<sup>2</sup> This amount would be in addition to a separate \$500,000 Climate Equity Action incentive fund proposed by Councilmember Harrison, Mayor Arreguín, and Councilmembers Taplin and Robinson.

Equitably supporting existing homeowners and renters whose appliances, e.g., their water heater, break down suddenly, and those who wish to embark upon voluntary electrification projects to include new appliances, electrical work (e.g., panel upgrades) are also elements of the Building Electrification strategy. This part of the program would be similar to Marin County's Electrify Marin program which provides residents with income-qualified incentives for building electrification and panel upgrades. Since 2019, Marin has disbursed over \$100,000 in rebates.

<u>Electrify Marin</u>		
<u>Appliance Type</u>	<u>Standard Rebate</u>	<u>Income Qualified Rebate</u>
<b>Heat Pump Water Heater</b>	\$1,000	\$2,000
<b>Heat Pump Space Heater</b>		
Central Heat Pump	\$1,000	\$4,500
Mini-Split Heat Pump	\$800	\$3,000
<b>Induction Cooking</b>		
Range (Cooktop & Oven)	\$500	\$500
Cooktop only	\$250	\$250
<b>Service Panel Upgrade</b>	\$500	\$1,200

These incentives would be paired with rebates available through BayRen and EBCE, which are helpful but fall far short of the actual cost. For example, BayRen and EBCE offer \$2,000 for water heaters, which typically cost approximately \$5,000-\$10,000 when one includes the cost of potential electrical and panel upgrades. Berkeley's incentive program is also needed to pay for space heating electrification, and needed panel and other electrical upgrades for which there are currently no incentives. Electrical, panel and space heating upgrades are typically the most expensive part of any electrification project.

Staff have indicated that they believe an additional incentive of approximately \$2,500 per property owner would be significant to persuade many property owners to electrify.

### Alternatives Considered

FITES discussed whether to expand this program beyond building electrification to include fire safety and resilience upgrades. However, at this time, fire programs have separate revenue sources and greenhouse gas reduction is a top priority given the need to reduce emissions to near zero by 2030 per the 2018 IPCC report. For example, fire safety measures have received generous support from the voters through Measure FF, whereas climate is still severely underfunded. In addition, global warming is one of the chief causes of increased fire threats.

Budget Referral and Resolution Establishing A Pilot Existing Building Electrification Incentive Program to Assist New Homeowners, Renters and Existing Homeowners with Transition to Zero-Carbon Buildings

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June 1, 2021

FINANCIAL IMPLICATIONS

This item would result in a one-time investment of \$1,500,000 from excess equity to provide initial funding for a two-year Existing Building Electrification Incentive Program Pilot to assist property owners and renters with the transition to a zero-carbon economy. This investment includes staff costs to run the program.

ENVIRONMENTAL SUSTAINABILITY

Supporting incentives for building decarbonization will complement and accelerate Berkeley's ongoing efforts to reduce carbon emissions at an emergency and equitable pace in line with the Climate Action Plan, Climate Emergency Declaration, and Existing Building Electrification Strategy.

CONTACT PERSON

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ATTACHMENTS

1. Resolution

RESOLUTION NO. ##,###-N.S.

RESOLUTION ESTABLISHING A BUILDING ELECTRIFICATION INCENTIVE PILOT PROGRAM

WHEREAS, the world is facing a grave climate emergency, requiring municipalities to rapidly transition towards a zero-carbon economy by 2030; and

WHEREAS, transitioning Berkeley's economy will require significant investment on the part of both government and residents as staff have estimated that converting Berkeley's approximately 46,000 residential housing units will likely cost hundreds of millions of dollars; and

WHEREAS, low-carbon technology and infrastructure can often be out of reach for many households and, without direct assistance, many will be left behind; and

WHEREAS, moderate and lower-income communities are most impacted by global climate change and have the least financial ability to address it; and

WHEREAS, City's Draft Existing Building Electrification strategy both cite the importance of ensuring equity in access to carbon-free technology; and

WHEREAS, it is in the public interest to establish a two-year Existing Building Electrification Incentive Program to assist residents with the cost of transitioning from a carbon-based city; and

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager establish an Existing Building Electrification Incentive Program to invest in the following priorities, to be further defined by staff:

1. incentives for transferees of residential property to include appliance retrofits and electrical upgrades (including panel upgrades);
2. equitable incentives for existing residential property owners and renters pursuing electrification retrofits or replacing broken or outdated appliances, to include electrical upgrades (including panel upgrades);
3. a nexus with good paying jobs, for example use of unionized contractors, workforce development programs and local hire requirements.

BE IT FURTHER RESOLVED that the Berkeley Energy Commission, or successor, and the Facilities, Infrastructure, Transportation, Environment & Sustainability Policy Committee, in consultation with community groups, provide input to staff and Council on at least an annual basis about eligible categories of fund expenditures to maximize equitable emissions reductions and impacts for eligible households.

BE IT FURTHER AND FINALLY RESOLVED that any unexpended funds shall carry over from year to year.