

1 [Building Code - Mandating New Construction Be All-Electric]

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3 **Ordinance amending the Building Code to require new construction to utilize only**
4 **electric power; adopting findings of local conditions under the California Health and**
5 **Safety Code; affirming the Planning Department’s determination under the California**
6 **Environmental Quality Act; and directing the Clerk of the Board of Supervisors to**
7 **forward this Ordinance to the California Building Standards Commission upon final**
8 **passage.**

9 NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
10 **Additions to Codes** are in *single-underline italics Times New Roman font*.
11 **Deletions to Codes** are in *strikethrough italics Times New Roman font*.
12 **Board amendment additions** are in double-underlined Arial font.
13 **Board amendment deletions** are in ~~strikethrough Arial font~~.
14 **Asterisks (* * * *)** indicate the omission of unchanged Code
15 subsections or parts of tables.

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14 Be it ordained by the People of the City and County of San Francisco:

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16 Section 1. General Findings.

17 (a) The Planning Department has determined that the actions contemplated in this
18 ordinance comply with the California Environmental Quality Act (California Public Resources
19 Code Sections 21000 et seq.). Said determination is on file with the Clerk of the Board of
20 Supervisors in File No. 200701 and is incorporated herein by reference. The Board affirms
21 this determination.

22 (b) On August 19, 2020, the Building Inspection Commission considered this
23 ordinance at a duly noticed public hearing pursuant to Charter Section D3.750-5.

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25 Section 2. Findings Regarding Local Conditions.

1 (a) California Health and Safety Code Sections 17958.7 and 18941.5 provide that local
2 jurisdictions may enact more restrictive building standards than those contained in the
3 California Building Code, provided that the local jurisdictions make express findings that each
4 change or modification is reasonably necessary because local climate, geologic, or
5 topographical conditions and that the local jurisdictions file the local amendments and
6 required findings with the California Building Standards Commission before the local changes
7 or modifications can go into effect.

8 (b) The Board of Supervisors hereby finds and declares that the following
9 amendments to the San Francisco Building Code are reasonably necessary because of local
10 climatic, topological, and geological conditions as discussed below.

11 (1) The topography of San Francisco creates increased risk of fire due to
12 high density of buildings on very small lots and high population density. It is necessary and
13 appropriate to stop building new natural gas infrastructure that increases acute and
14 cumulative fire risk across the City.

15 (2) San Francisco's geologic and topographic conditions produce increased
16 risk for earthquake-induced failure and consequent fire due to local hazardous seismic
17 microzones, slide areas, and local liquefaction hazards. Natural gas infrastructure may
18 rupture, fail, and/or explode due to earthquake-induced structural failure. After seismic
19 events, natural gas infrastructure will take significantly longer to resume service compared to
20 electrical infrastructure. It is necessary and appropriate to reduce fire risk and increase
21 resiliency by eliminating the construction of new natural gas infrastructure.

22 (3) San Francisco's climate and topography create wind patterns and
23 periodic seasonal high temperatures that produce smog and ozone that exacerbate the
24 respiratory ailments of residents. Natural gas combustion is a major source of indoor air
25 pollution that further exacerbates the effects of regional pollution for the City's residents and

1 can be particularly acute in the City's dense population and smaller dwelling units. It is
2 reasonable and appropriate to decrease pollution exposure and resulting human health
3 impacts by utilizing All-Electric construction instead of creating additional natural gas
4 infrastructure.

5 (4) Human activities releasing greenhouse gases into the atmosphere cause
6 increases in worldwide average temperature, which contribute to melting of glaciers and
7 thermal expansion of ocean water. As a city located on the tip of a peninsula, surrounded on
8 three sides by water, San Francisco is experiencing and will continue to experience the
9 repercussions of climate change such as extreme heat events and rising sea levels causing
10 significant erosion, increasing impacts to infrastructure during extreme tides, and causing the
11 City to expend funds to modify its infrastructure.

12 (5) The operation of buildings comprise a significant portion of the City's
13 greenhouse gas emissions. In 2017, the operation of buildings was responsible for 43.7% of
14 citywide greenhouse gas emissions. The City has grown considerably in recent years. For
15 example, since 1990 the economy of the City grew 162% and population increased by 22%.
16 This growth results in construction of new buildings and significant rehabilitation of existing
17 buildings.

18 (6) San Francisco's electric system increasingly utilizes renewable energy.
19 Emissions of carbon dioxide per megawatt hour of electricity delivered to the City have
20 decreased by 78% since 1990. The City has set a goal of ensuring that 100% of electricity
21 usage citywide is generated via renewable, greenhouse gas-free sources by 2030. In 2017,
22 80% of greenhouse gas emissions from the operation of buildings citywide was due to
23 consumption of natural gas or district steam produced via combustion of natural gas.

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1 (7) The primary constituent of natural gas is methane, which is 86 times
2 more potent of a greenhouse gas than carbon dioxide. In addition, more than 4% of methane
3 leaks into the atmosphere prior to delivery.

4 (8) It is necessary and appropriate to stop construction of new natural gas
5 infrastructure in San Francisco in order to reduce the unique impacts San Francisco will
6 endure from global warming.

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8 Section 3. The Building Code is hereby amended by revising Sections 106A and 202,
9 to read as follows:

10 **SECTION 106A – PERMITS**

11 * * * *

12 **106A.1.16.3 Inspections.** Inspections by the Electrical Division are required for EV
13 Charging Station installations, and for any alteration or modification of the electrical system on
14 the property, including the installation of EVSE.

15 106A.1.17 Mixed-Fuel Buildings. The Building Official shall not issue permits for
16 construction of new Mixed-Fuel Buildings that submitted their initial application after January 1, 2021.
17 Permits for new construction that submit their initial application on or after that date may only be
18 obtained for All-Electric Buildings or Projects.

19 **EXCEPTIONS:** The Building Official may issue a permit for construction of a new Mixed-Fuel
20 Building in the following circumstances:

21 (1) Upon the Building Official’s finding that constructing an All-Electric Building or Project is
22 physically or technically infeasible and that a modification pursuant to section 104A.2.7 is warranted.
23 Modifications from this section 106A.1.17 shall only be issued under this exception where the Building
24 Official finds: sufficient evidence was submitted to substantiate the infeasibility of an All-Electric
25 Building or Project design; the installation of natural gas piping systems, fixtures and/or infrastructure

1 is strictly limited to the system and area of the building for which All-Electric Building or Project
2 design is infeasible; the area or service within the project where gas piping systems, fixtures and/or
3 infrastructure are installed is as Electric-Ready as feasibly possible considering other provisions of the
4 Building and Electrical Codes; and that the project’s modified design provides equivalent health, safety
5 and fire-protection to All-Electric Building or Project design; or

6 (2) The Building Official may issue a permit for a new Mixed Fuel Building that includes an
7 area specifically designated for occupancy by a commercial food service establishment (A-2
8 Occupancy) that is a Mixed-Fuel Building solely because it provides gas piping systems, fixtures and/or
9 infrastructure exclusively for cooking equipment within the designated commercial food service area
10 where the initial application was submitted prior to January 1, 2022.

11 **106A.1.17.1 Conversion to Mixed-Fuel Buildings.** The Building Official shall not issue
12 permits that would convert an All-Electric Building or Project into a Mixed-Fuel Building where the
13 initial application was submitted after January 1, 2021.

14 **106A.1.17.2 Municipal New Construction or Major Renovation Projects.** The provisions in
15 section 106A.1.17 do not apply to Municipal New Construction or Major Renovation Projects as
16 defined by Chapter 7 of the Environment Code that are subject to Section 706 of the Environment
17 Code.

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21 **SECTION 202 – DEFINITIONS**

22 Add these definitions as follows:

23 **ALL-ELECTRIC BUILDING OR PROJECT.** A building or project that uses a permanent
24 supply of electricity as the source of energy for all space conditioning (including heating and cooling),
25 water heating (including pools and spas), cooking appliances, and clothes drying appliances. An All-

1 Electric Building or Project may not install natural gas or propane piping systems, fixtures or
2 infrastructure for those purposes in or in connection with the building, structure, or within property
3 lines of the premises, extending from the point of delivery at the gas meter.

4 * * * *

5 **ELECTRIC-READY.** A building, project, or portion thereof that contains electrical systems
6 and designs that provide capacity for a future retrofit of a Mixed-Fuel Building to an All-Electric
7 Building. Electric-Ready includes sufficient ispace, drainage, electrical conductors or raceways, bus
8 bar capacity, and overcurrent protective devices.

9 * * * *

10 **MIXED-FUEL BUILDING.** A building that uses natural gas or propane as fuel for space
11 heating or cooling, water heating (including pools and spas), cooking appliances or clothes drying
12 appliances, onsite generation of electricity (except where primarily fueled by onsite digestion of
13 organic material), or contains fixtures, piping systems, or infrastructure for natural gas or propane
14 equipment for such uses.

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16 Section 4. Effective Date. This ordinance shall become effective 30 days after
17 enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the
18 ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board
19 of Supervisors overrides the Mayor’s veto of the ordinance.

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21 Section 5. Scope of Ordinance. In enacting this ordinance, the Board of Supervisors
22 intends to amend only those words, phrases, paragraphs, subsections, sections, articles,
23 numbers, punctuation marks, charts, diagrams, or any other constituent parts of the Municipal
24 Code that are explicitly shown in this ordinance as additions, deletions, Board amendment
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1 additions, and Board amendment deletions in accordance with the “Note” that appears under
2 the official title of the ordinance.

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4 Section 6. Severability. If any section, subsection, sentence, clause, or phrase of this
5 ordinance is, for any reason, held to be invalid, such decision shall not affect the validity of the
6 remaining portions of this ordinance. The Board of Supervisors hereby declares that it would
7 have passed this ordinance, and each section, subsection, sentence, clause, or phrase of this
8 Ordinance, irrespective of the fact that any one or more sections, subsections, sentences,
9 clauses, or phrases be declared invalid.

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11 Section 7. Directions to Clerk. Upon final passage of this ordinance, the Clerk of the
12 Board of Supervisors is hereby directed to transmit this ordinance to the California Building
13 Standards Commission pursuant to the applicable provisions of State law.

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15 APPROVED AS TO FORM:
16 DENNIS J. HERRERA, City Attorney

17 By: /s/ Robb W. Kapla
18 ROBB W. KAPLA
19 Deputy City Attorney

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