SAN FRANCISCO DEPARTMENT OF BUILDING INSPECTION

SF Environment
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A Department of the City and County of San Francisco

Open Call For Qualified All-Electric Feasibility Reviewers

This Open Call seeks to develop a list of professionals interested in assisting projects with Review of Feasibility of All-Electric New Construction As Required by San Francisco Building Code 106A.1.17.1

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Purpose of The Open Call

In order to reduce the risks natural gas infrastructure, indoor and outdoor combustion of natural gas, and climate change pose to human health and safety, community resilience and equity, the San Francisco Board of Supervisors in November 2020 adopted the All-Electric New Construction Ordinance (San Francisco Building Code Section 106A.1.17.1). The ordinance applies to construction of all new buildings, both residential and non-residential, that apply for initial building permits on or after June 1, 2021. The ordinance does not impact additions or alterations to existing buildings.[1]

The Ordinance allows for limited installation of natural gas piping systems, infrastructure, and appliances on a case-by-case basis if all-electric building systems are determined to be physically or technically infeasible. The purpose of this Open Call for All-Electric Fe

asibility Reviewers is to establish a list of professionals experienced with all-electric design and construction who are available to (a) assist projects with resolving difficulties by identifying feasible options to meet their project objectives via all-electric technologies, and (b) after exhausting all other options, document the basis for determining that it is physically or technically infeasible to comply.

San Francisco Department of Building Inspection Administrative Bulletin 112 – *Implementation of All-Electric New Construction Regulations* (AB-112) outlines the regulations and procedures for evaluating projects that seek an exception from the All-Electric New Construction Ordinance. AB-112 outlines the role and qualifications for Feasibility Reviewers to assist DBI in making determinations about physical or technical feasibility of all-electric construction by evaluating proposed projects, assessing purported barriers to all-electric design, providing design assistance, and ultimately making a determination whether it is physically or technically infeasible to build all-electric for a specific project[2]. In all instances, the Feasibility Reviewer's first responsibility is to help resolve any obstacles and enable compliance. Where all options for successful all-electric construction are exhausted, Feasibility Reviewers will issue a

[1] The ordinance does not permit future alterations installing gas piping systems in buildings that are all-electric.
[2] San Francisco Building Code Section 106A.1.17.1 excludes project cost as a basis of infeasibility.

finding detailing why all-electric construction is physically or technically infeasible for the proposed project.

AB-112 requires any project granted an exception to limit gas piping systems, infrastructure, and appliances to the minimum necessary to mitigate the physical or technical infeasibility. Any area granted an exception to install gas piping systems must also install electrical infrastructure for future conversion to all-electric.

Respondents to this Open Call who are verified to hold the minimum qualifications required by AB-112 will be listed as All-Electric New Construction Feasibility Reviewers. The Department of Building Inspection, with the assistance of the Department of Environment, is preparing the List of Feasibility Reviewers as a courtesy for the convenience of project sponsors. Listing will indicate the professional has submitted evidence of currently holding the minimum qualifications, and does not constitute endorsement of any professional, nor any warranty for their work.

Project sponsors seeking exceptions are solely responsible for selection of Feasibility Reviewers, and costs related to All-Electric Feasibility Review are the responsibility of the project sponsor, including compensation of reviewers. Listing does not imply any individual reviewer will be hired to perform reviews. Project sponsors may select a reviewer not on the list, provided the reviewer meets, and the Department of Building Inspection and Department of Environment confirm, the minimum qualifications are met.

There is no fee for participation in this Open Call, nor for listing.

All-Electric New Construction Feasibility Reviewer - Roles and Expectations

The role of an All-Electric New Construction Feasibility Reviewer is to answer, within the discipline(s) of their expertise, three questions:

- What specific constraint causes all-electric design to be physically or technically infeasible, but does not apply to mixed-fuel?
- Can the constraint be resolved?
- Is the area and system proposed served by gas piping systems ready for

conversion to all-electric in the future, and constructed to provide equivalent health, safety and fire protection?

To address these questions, a Review of All-Electric Feasibility must:

- **Identify the physical or technical constraint:** Document the specific physical or technical issue that results in the infeasibility of All-Electric design of the project.
- **Identify alternatives:** Based on review of plans, calculations, and supporting documentation, identify methods, equipment, and design features available to resolve the physical or technical issue to mitigate infeasibility.
- **Efficiency:** Where the issue relates to peak electrical load, energy efficiency construction practices, design options, and compliance credits can commonly contribute to resolving the issue. For the all-electric design, confirm all available compliance credits have been applied.
- Confirm all available energy efficiency design and construction practices have been applied to all building features contributing to loads regulated by Title 24 Energy Standards. Confirm equipment specified is no less efficient than the prescriptive baseline specified by Title 24 Energy Standards.
- **Mechanical:** Review envelope and architectural features and mechanical design are consistent with minimization of load on mechanical equipment. Determine whether space conditioning and water heating electric peak load can be reduced via piping or plumbing design, equipment sizing, equipment layout, or substitution of equipment type. Mechanical equipment must be no less efficient than electric prescriptive baseline, where such a baseline is provided by Title 24 Energy Standards.
- **Electrical:** Review electrical panel schedule and load calculations for the all-electric design. Confirm that connected electrical load and demand electric load for the all-electric design are calculated in accord with California Electrical Code and are consistent with the design for compliance with Title 24 Energy Standards.
- **Provide documentation** of examples of all-electric design and construction of similar systems and circumstances.
- **Document Available Solutions**: Review the mixed-fuel design, and document the specific area and system proposed as mixed-fuel. Confirm that the physical or technical constraint will specifically be resolved by granting an exception allowing mixed-fuel construction of the area and system. Confirm proposed gas piping systems, fixtures, and infrastructure are limited to the system or area of the building for which All-Electric design is infeasible.
- **Apply Electric Ready Design Guidelines**: Areas served by gas piping systems, fixtures, and infrastructure must prepare for future retrofit to all-electric by installing sufficient electrical conductors and raceways, bus bar capacity, and overcurrent protection, and providing sufficient space and drainage for future replacement of gas systems with electric. Reviewers shall affirm that the project design conforms to the relevant provisions of Electric Ready Design Guidelines to the extent feasible.

- **Recommendation Regarding Health, Safety, and Fire Protection**: Review construction methods, safety equipment, and design features proposed. Recommend specific design features, equipment, and construction practices sufficient to ensure the project's modified design provides equivalent fire protection and health and safety to all-electric design.
- **Document All of the Above** via a report addressing each item above in detail.

Review documentation must be incorporated into plans, with signature by a reviewer for each discipline (electrical, mechanical, and architectural/Title 24), and stamp by the Design Professional of Record.

Minimum Qualifications

All-Electric Feasibility Reviewers must apply specialized knowledge and experience in the application of energy efficiency design and construction; compliance of all-electric systems with Title 24 Energy Standards, and experience with the design of all-electric systems for space conditioning and water heating. The review team must include each of the following:

Item	Qualification	Minimum Experience
1	Licensed Professional Engineer with Mechanical Specialty	Design and demonstration of compliance for at least one all-electric project which is: • Either multifamily (3 or more housing units), or commercial (minimum of 10,000 square feet floor area). AND • Either construction of a new building, OR an alteration where the scope included replacement of both space conditioning and water heating systems.
2	Licensed Professional Engineer with Electrical Specialty	
3	California Association of Building Energy Consultants – Certified Energy Analyst	Title 24 documentation accepted for compliance for at least one all-electric new construction project of the same or similar occupancy to the project under review.

Each required discipline must be represented by a third-party, i.e., each individual reviewer must not be employed by a company responsible for the design or construction of the project. There is an exception: Projects seeking exception on the basis of Physical Constraint in a Small Infill Site (defined in AB-112) may employ Feasibility Reviewers who are also responsible for the design of the project.

Due to the qualifications required, review is expected to be performed by a team, but individuals holding multiple qualifications may serve more than one role.

How to Submit Qualifications

Minimum qualifications are based on license and/or certification; qualifications will be confirmed for individual professionals, not companies. Evidence of qualifications will be collected via an online form:

http://bit.ly/electricreviewerstatementofqualifications

Respondents must complete each question regarding the license or certification that are the basis for qualification. Incomplete or incorrect submissions will not be reviewed and will not be included in the List of All-Electric Feasibility Reviewers.

The form consists of three sections:

Section	Format	Information Collected
Contact Information	Questionnaire	Name Company Address Phone Email
License or Certification	Questionnaire	Type of License or Certification (PE or CABEC CEA) License or Certification Number License Type (PE's only) License Expiration Date (PE's only) CABEC Certification Type (CEA's only) Certification Date (CEA's only) Persons holding multiple relevant license specialties or certifications are encouraged to list each relevant qualification.

Experience	File Upload	List of one or more completed all-electric projects. Lists may be submitted as a spreadsheet (preferred) or portfolio. For each listed project, the following must be provided: • Project Name • Address • Primary Occupancy • Floor Area • Year of Completion • Your Role • HVAC technology/system type • Domestic hot water technology/system type • Contact information for the Project Sponsor or Project Manager (If you served as the Developer or Project Manager and were responsible for design or Title 24 documentation, please indicate.)

Review of Qualifications and Posting of List

Department of Environment and Department of Building Inspection staff will review submissions to confirm evidence has been provided that each reviewer meets one or more of the minimum qualifications for All-Electric Feasibility Reviewers as required by DBI Administrative Bulletin 112 - Implementation of All-Electric New Construction Regulations (www.sfdbi.org/administrative-bulletins). A list of persons who have provided evidence of qualifications will be provided upon request to project applicants, and may be publicly posted by the Department of Building Inspection or Department of Environment. The list will include:

- Reviewer name
- Employer/Company Name
- License and/or certification
- Date of expiration of each license and/or certification, as posted or otherwise communicated by the licensing or certifying body, at the time of staff review
- All-Electric design and construction experience provided

Terms and Maintenance of the List

The purpose of this Open Call is solely to develop a list of persons holding the minimum qualifications established in AB-112 to perform All-Electric Feasibility Review.

Incomplete or incorrect submissions will not be reviewed nor included in the List of All-Electric Feasibility Reviewers.

The Department of Building Inspection reserves the sole, absolute discretion to remove or omit reviewers from the List of All-Electric Feasibility Reviewers for any reason, including but not limited to:

- Reviewer requests to no longer be listed
- Expiration or lapse of qualifications
- Staff determination that a reviewer has submitted substantially inadequate or grossly incorrect analysis in a Feasibility Review, or in a document submitted as the basis of a Feasibility Review by others.

This Open Call is a time-bound process in order to provide a list of All-Electric Feasibility Reviewers in advance of the implementation of San Francisco Building Code 106A.1.17.1. The objective of the Open Call is to develop a list of persons confirmed to hold the minimum qualifications required by Administrative Bulletin 112 regulations.

After the conclusion of the Open Call, qualified individuals may seek to be added to the List of All-Electric Feasibility Reviewers by completing the same process described in How to Submit Qualifications above and notifying DBI Technical Services that evidence of qualifications have been submitted.

Questions

A webinar to address questions about this Open Call will be held:

Monday March 16, 2 pm

Options to Participate:

Microsoft Teams (recommended) – Click this link to join the meeting:
http://bit.ly/allelectricreviewerquestions

- Pre-registration is not necessary; simply join the meeting.
- The Microsoft Teams app is available for free for all devices and platforms: https://microsoft.com/teams

Call-in by Phone:
Number: (415) 906-4659
Phone Conference ID: 607 505 929 #

A recording of the Q&A will be posted by the Department of Building Inspection and the Department of Environment.

For questions not addressed in this document or AB-112, contact:

Department of Environment
environment@sfgov.org (Email is recommended)
(415) 355-3753