REACH CODE CHECKLIST

FOR NEW COMMERCIAL BUILDINGS (excluding hotels and motels)

The Reach Code is a local ordinance adopted in Hayward which modifies the CA Energy Code to reduce natural gas use in new construction. The Reach Code also amends CalGreen to expand the requirements for Electric Vehicle (EV) ready parking spaces. For new residential buildings 3 stories or less, please use the Reach Code Checklist for New Residential Buildings 3 Stories or Less. For high-rise residential buildings and hotels/motels, see the Reach Code Checklist for High-rise Residential and Hotel/Motel. For checklists, background information and the full text of the Reach Code, please see the City of Hayward website here: https://www.hayward-ca.gov/reach-code

PART A: COMMERCIAL BUILDINGS – EXCLUDING HOTELS/MOTELS

The Reach Code requirements for these types of buildings offer two different approaches. One is an all-electric design and the other is a mixed fuel design. With the all-electric design, there is only a performance approach. Following the mixed fuel design, there are performance and prescriptive options. The checklists for each option are below. **Choose one option per building**. The first approach is the least complicated option.

CHECKLIST 1A – ALL ELECTRIC APPROACH FOR (ALL OCCUPANCIES)

- ☐ The energy report for the new building shall be completed using the Performance Method with the current modelling software approved by the CA Energy Commission.
- ☐ The project complies if the Proposed Design Building has an energy budget no greater than the Standard Design Building with an all-electric design.
- ☐ No further requirements in Part A. **Continue to Part B for EV parking requirements.**

CHECKLIST 2A – MIXED FUEL – PERFORMANCE OPTION

- ☐ The entire solar zone (see CEC section 110.10) shall have a solar PV system installed.
  **exception: The PV system may be sized to cover less than the solar zone provided that the system is sized to generate annual electrical output equal to the building's modelled annual electric load.*
- ☐ The energy report for the new building shall be completed using the Performance Method with the current modelling software approved by the CA Energy Commission.
- ☐ **OFFICE AND RETAIL OCCUPANCIES**: The energy budget shall have a compliance margin of at least 15%* better than the Standard Design Building.

- ☐ **ALL OTHER OCCUPANCIES IN BUILDINGS WITH INDOOR LIGHTING AND MECHANICAL SYSTEMS**: The energy budget shall have a compliance margin of at least 10%* better than the Standard Design Building.
- ☐ **ALL OTHER OCCUPANCIES IN BUILDINGS WITH INDOOR LIGHTING OR MECHANICAL SYSTEMS BUT NOT BOTH**: The energy budget shall have a compliance margin of at least 5%* better than the Standard Design Building.

**exception: If the Certificate of Compliance is prepared by and signed by a Certified Energy Analyst and the energy budget for the Proposed design is no greater than the Standard Design Building, the required compliance margin for all of the above occupancy types can be reduced by 1%.*

☐ **Continue to Part B for EV charging requirements.**

CHECKLIST 3A – MIXED FUEL – PRESCRIPTIVE OPTION

☐ The entire solar zone (see CEC section 110.10) shall have a solar PV system installed.
**exception: The PV system may be sized to cover less than the solar zone provided that the system is sized to generate annual electrical output equal to the building's modelled annual electric load.*

☐ The energy report for the new building shall be completed using the Prescriptive Method. The building shall have constructed and installed systems and components meeting the applicable requirements of Sections 140.3 through 140.9 and additionally the following measures as applicable intended to exceed the remaining prescriptive requirements:

1. Install fenestration with a solar heat gain coefficient no greater than 0.22.
2. Limit the fenestration area on east-facing and west-facing walls to one-half of the average amount of north-facing and south-facing fenestration.
3. Design VAV box minimum airflows to be equal to the zone ventilation minimums where VAV systems are installed.
4. Include economizers and staged fan control in air handlers with a mechanical cooling capacity ≥ 33,000 Btu/h.
5. Reduce lighting power density (watts/ft2) by 10% from that required from Table 140.6-C.
6. Improve lighting without claiming any Power Adjustment Factor credits:
   a. Perform Institutional Tuning per Section 140.6(a)2.J.
   b. In office spaces, control to daylight dimming plus off per Section 140.6(a)2.H.
   c. Install Occupant Sensing Controls in Large Open Plan Offices per Section 140.6(a)2.I.

☐ **Continue to Part B for EV charging requirements.**

PART B: EV CHARGING READINESS

CHECKLIST 1B – OFFICE BUILDINGS

- **Nonresidential new construction office buildings**:

- ☐ When 10 or more parking spaces are constructed, 20% of the available parking spaces on site shall be equipped with Level 2 Electric Vehicle Charging Stations (EVCS).
- ☐ An additional 30% shall be at least Level 2 EV capable.
- ☐ Include electrical single line drawings and/or specifications on the plans.
- ☐ For EV Ready and EV Capable spaces, Provide the following:

    - A of 1-inch diameter raceway. This raceway may include multiple circuits as allowed by the California Electrical Code.
    - Electrical calculations to substantiate the design of the electrical system to include the rating of equipment and any on-site distribution transformers, and have sufficient capacity to accommodate the required number of dedicated branch circuits for the future installation of Electric Vehicle Charging Equipment (EVSE).

- ☐ Provide a table on the cover sheet listing the total number of parking spaces and the number of EV ready spaces or spaces with EVSE.

CHECKLIST 2B – OTHER NON-RESIDENTIAL BUILDINGS (such as: retail, dining, institutional or industrial)

- **Nonresidential New Construction Other than Office Buildings**

- ☐ When 10 or more parking spaces are constructed, 15% of the available parking spaces on site shall be equipped with Level 2 EVCS.
- ☐ *Exception: Installation of each Direct Current Fast Charger with the capacity to provide at least 80kW output may substitute for 15 EV Ready spaces after a minimum of 15 Level 2 EV Ready spaces are installed.

ADDITIONAL NOTES AND EXCEPTIONS FOR COMMERCIAL BUILDINGS

1. Automatic Load Management Systems (ALMS) may be installed to decrease electrical service and transformer costs associated with EV Charging Equipment subject to review of the authority having jurisdiction.
2. The requirements apply to multifamily buildings with parking spaces including:
    a. Assigned or leased to individual dwelling units, and
    b. Unassigned residential parking.
3. EV charging spaces and equipment shall comply with the accessibility requirements of CBC Ch. 11B.
4. If a building permit applicant provides documentation detailing that the increased cost of utility service or on-site transformer capacity would exceed an average of $4,500 among parking spaces with Level 2 EV Ready Spaces, the applicant shall provide EV infrastructure up to a level that would not exceed this cost for utility service or on-site transformer capacity.

PART C: SIGNATURE LINE

This form has been completed by: _____

_____ _____

Signature Date