

# STAFF REPORT

## City of Lancaster

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Date: June 28, 2016

To: Mayor Parris and City Council Members

From: Jason Caudle, Deputy City Manager

Subject: **Zero Net Energy (ZNE) Home**

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### **Recommendation:**

Direct the Planning Commission to explore the feasibility of implementing the 2016 California Green Building Standard's voluntary zero net energy (ZNE) tier for newly constructed residential buildings as a mandatory requirement in Lancaster.

### **Fiscal Impact:**

Unknown at this time. Staff will evaluate a cost effectiveness study that is being developed by the investor owned utilities to better understand the ramifications of implementing the ZNE tier for home builders and consumers.

### **Background:**

CAL Green's voluntary ZNE tier takes effect on January 1, 2017 and represents the California Energy Commissions (CEC) suggested path towards net zero. Although the requirement will be voluntary throughout the State starting in 2017, if a local jurisdiction adopts the standard as a local ordinance, it becomes mandatory in that jurisdiction. The ZNE tier is expected to be a mandatory requirement for home builders in 2020.

Various methods for building a zero net energy home were explored with staff determining that Cal Green's ZNE tier is likely the simplest path for builders to follow in order to meet a potential zero net energy requirement. The ZNE tier will require buildings to show a 30% or greater reduction in their energy budget compared to standard building design. Buildings will also be required to generate sufficient on-site renewable energy to achieve an energy design rating of zero. Staff reviewed the City's existing solar ordinance which requires homebuilders to install a minimum 1 kW solar PV system on new homes and believe the ZNE tier would complement this existing provision.

Because the ZNE tier is considered a reach code by the CEC, the City is required to submit a cost effectiveness study with their approved ordinance. Staff is working with the investor owned utilities codes and standards team who are in the process of completing an analysis to determine what level of efficiency is appropriate for each California climate zone before installing a solar PV system. Staff will use this study to fully understand the cost and value of the ZNE tier for home builders and consumers and will submit findings as part of the required analysis for the CEC.

There are many benefits to adopting the ZNE tier most notably for residents who would no longer have the burden of an electric bill. Additionally, because the use of renewable energy is encouraged in the State, home builders can take advantage of various subsidies that are available for the installation of solar PV systems and energy efficient products. Finally, adopting this ordinance would support the City's goal of becoming a Net Zero city.

Solar power combined with energy efficiency not only benefits the environment and strengthens the renewable energy market; it also has important financial benefits for homeowners. Homeowners save money on their utility bill because they are using less energy. Energy efficiency measures and solar systems also protect homeowners from rising energy costs. When researching the City's current solar ordinance staff determined the addition of a \$12,000 to \$15,000 (3 kW) solar PV system would increase a mortgage payment by \$75 to \$100 per month. Prior to solar, a typical Lancaster resident pays \$123.84 on their month energy bill. With an installed solar system a resident's mortgage payment could increase by \$75 to \$100 per month but their energy costs would then be zero. A homeowner could then expect to realize a savings of approximately \$25 to \$50 each month under these assumptions.

The CEC and Public Utilities Commission (PUC) have a vested interest in increasing the use of renewable energy and supporting energy efficiency and as a result have subsidized programs such as the New Solar Homes Partnership which currently provides homebuilders a per watt rebate of \$1.97 for single family subdivisions. Builders are also eligible for a 30 percent federal tax credit provided for the installation of solar PV systems. Additionally, the PUC has developed the Home Energy Efficiency Rebate which home builders can use to subsidize their cost for energy efficient equipment.

If ultimately approved by the City Council, Lancaster would be the first city in the State with a ZNE requirement for new homes. Lancaster has led the way in the expansion of renewable energy and this is one more logical step towards energy independence and a cleaner environment for homeowners.