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## NAHB Comments on "Report - New Home Cost v. Price Study"

Additional submitted attachment is included below.

## National Association of Home Builders

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March 12, 2018

Commissioner McAllister and Energy Commission Staff

The National Association of Home Builders (NAHB) helps its members build communities. Each year, NAHB's members construct about 80% of the new homes built in the United States, both single-family and multifamily. A federation of more than 700 state and local associations, NAHB represents more than 140,000 members. About one-third are home builders and remodelers. The rest work in closely related specialties such as sales and marketing, housing finance, and manufacturing and supplying building materials.

NAHB would like to respond to a study submitted to the Pre-rulemaking docket by Nehemiah Stone on September 1, 2017, titled "New Home Cost v. Price Study." The study attempts to show that there is no link ("only marginal association") between construction cost and home values.

The study finds but downplays positive correlation between home prices and the growth of construction costs. Figure 4 on page 6 clearly demonstrates that home prices appreciated faster in California metro areas that registered higher construction cost growth. Suggesting that the correlation analysis cannot be used to study the causes of high home growth, the authors chose to run a regression. However, the only explanatory variables they used to explain the quarterly home price growth in the current quarter are the quarterly growth rates of home prices and construction costs in previous quarters. As such, the model cannot possibly be used to study the fundamentals that affect home price changes. It neither reflects the demand nor supply, nor general equilibrium housing market conditions. It completely omits such important determinants of home price as household income, mortgage rates, household formations, etc. As such, the model can only be used as a forecasting tool but is not set up to evaluate what fundamental factors drive home price changes, nor can the model uncover any causality.

In essence, the presented regression model is "we know nothing about what determines homes prices growth" model as only the house price growth rates in previous quarters are picked to explain the current quarter price growth. It is worth emphasizing, this model can be a convenient forecasting tool but cannot possibly explain the fundamental determinants of home prices. The simple correlation analysis is a more straightforward and clean way to see if home prices and March 12, 2018 Page 2

construction growth rates are related. And as Figure 4 on page 6 shows, home prices appreciated faster in California metros where construction costs grew faster.

Furthermore, the study is based on data which has little relevance to new home pricing. The authors use repeat-sale existing home prices (rather than new home prices) to study the effects of rising construction costs on home values. To measure construction costs, the authors chose the Land Institute "structure cost," which is the average replacement cost of existing structure, after depreciating the structure based on its age. According to the Land Institute, their estimated structure cost is based on the age and square footage of the house and extrapolated over time using construction cost indexes by the R.S. Means. As such, this measure has very little to do with cost of building new homes and cannot capture any changes in the Building Energy Efficiency Standards. In addition, it entirely omits all the regulatory costs builders incur during the development stage.

The authors also attempt to illustrate that there is no link between the construction cost and the incremental implementation of California Energy Code. It is not surprising they do not see any substantial increases in the "structure costs" following the regulation implementation, as again they are not looking at the construction costs of new homes but rather replacement costs of existing structures.

The authors emphasize their finding that a Metro's construction cost is highly correlated to the national cost of construction inputs. It would be surprising if they could not find this correlation as their construction cost measure is extrapolated over time using construction cost indexes by the R.S.Means. So this finding merely reflects how the construction cost measure is constructed by the Land Institute.

NAHB would like to recommend that CEC staff read the following study on the regulatory costs in the price of a new home:

http://www.nahbclassic.org/generic.aspx?sectionID=734&genericContentID=25061 1&channeIID=311&\_ga=1.154188152.1111877392.1422299172

Additionally, please see below to see NAHB's priced-out results that show how rising home prices affect affordability:

http://eyeonhousing.org/2016/05/14-million-households-priced-out-by-governmentregulation/

https://www.nahb.org/en/research/housing-economics/housings-economicimpact/households-priced-out-by-higher-house-prices-and-interest-rates.aspx

It is common sense that the more expensive housing becomes the fewer people can afford to purchase that housing. Government regulations have a clear and direct impact on housing affordability. NAHB Economics estimate that nationally, for every \$1,000 increase in the price of a home, 152,903 households are priced out of the market for a median-priced home. These are households that can qualify for a mortgage before a \$1,000 increase but not afterwards. NAHB would

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> like to ensure that accurate information is included for the record and looks forward to continuing the conversation with CEC staff and interested stakeholders.

Best Regards,

Murfin

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