



A partnership between the UCLA Ziman Center for Real Estate and the UCLA Anderson Forecast

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Monthly condensed analyses of crucial real estate and economic issues offered by the UCLA Anderson Forecast and UCLA Ziman Center for Real Estate. Here, Matthew Kahn, professor at UCLA Institute of the Environment and Sustainability and research director at UCLA Ziman Center for Real Estate, explores solutions to climate change impacts on the built environment.

Market Incentives Can Help Real Estate Survive Climate Change

By Matthew Kahn, Professor at UCLA Institute of the Environment and Sustainability and Research Director at UCLA Ziman Center for Real Estate

While knowledge accumulates about the perils greenhouse gas emissions pose to the planet, there has been little attention on how neighborhoods and cities will be impacted by climate change.

In Southern California, that impact is becoming more real every day. Last January's wildfire in the parched Angeles National Forest showed that fire season is now practically year-round. Low-lying coastal communities such as Malibu face the challenge of sea-level rise that becomes dangerously obvious during storm surges. If climate change projections hold true, many Los Angeles communities will face significantly higher summer temperatures: My UCLA colleague Alex Hall predicts that Porter Ranch, for example, will experience a 22-day increase in the annual count of 95+ degree days between now and the year 2050, while coastal areas such as Venice will see very little increase.

While Governor Jerry Brown and the public sector grapple with government solutions to these crises, capitalism must also evolve to provide answers.

Consider the drought. Econ 101 teaches us that when demand is rising, prices for an increasingly scarce resource should also rise. Los Angeles residents pay roughly a ½ cent per gallon for water and the Governor is proposing rationing this scarce commodity rather than allowing market forces to work. If prices increased, some home owners would rip out their lawns and replace them with drought-tolerant, native plants. Given that urbanites use ½ of their water outside, there are countless other ways to incentivize. My UCLA colleague Yoram Cohen is devising creative ways to augment our water supply. Such innovations are more likely to be adopted if water is no longer viewed as a "free resource."

Property owners in inland areas such as Porter Ranch may worry that land values will fall as temperatures rise. But, the anticipation of future misery inspires entrepreneurs to devise high-performance air-conditioning systems and

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architectural designs so that indoor quality of life and productivity remain high. Mark Zuckerberg focused his attention on building Facebook. Future entrepreneurs will explore climate-change adaptation.

For a final example, consider the challenges of coastal flooding due to sea-level rise and increased risk of fire in fire zones such as Malibu. The insurance industry must be allowed by law to charge different premiums depending on the emerging risk assessment. Increased risk to home owners demands increased insurance pricing, with cheaper policies offered only if they have made investments (such as stilts) to reduce the risk of flooding. In fire zones, only home owners who build using materials that are flame-resistant or who invest in clearing brush should receive an insurance discount. This is how capitalism sends proper signals to real estate owners to invest in precautions. Yes, these are “small ball” investments, but they add up to a more resilient Southern California real estate stock.

Even our smart phones will help, giving us real-time updates on environmental adaptation. The government can text you that a Smog Alert is in effect and that you should spend more time inside. The electric utility can alert you that, due to dynamic pricing, electricity prices will be higher over the next three hours. This information will induce some people to cut back on consumption, helping to prevent power blackouts on even the hottest days. As California begins to mandate energy consumption disclosure laws for commercial real estate (Assembly Bill 1103), new apps will tell prospective real estate buyers what their electricity bills are likely to be in buildings they may rent or own. This information will nudge potential tenants to bid less for inefficient real estate and this information will incentivize landlords to invest in energy efficiency.

Our real estate’s value hinges on strong fundamentals, and our quality of life is what attracts dynamic and desirable firms such as Facebook and Google to open offices here. Mayors seeking to preserve the property tax base have strong incentives to deliver quality of life in the face of climate change.