What it means for Real Estate: the Solar-EV revolution

I recently test drove a Tesla. It was faster, better handling than my fine German car and costs only \( \frac{1}{4} \) as much to drive a mile! My MIT colleagues assure me that battery technology is still rapidly improving so greater EV ranges are ahead. Finally, although more expensive currently, with many fewer moving parts, in the long run EVs should be cheaper to produce and maintain than conventional cars. All this promises the first major change in Urban Transportation in over a century.

With no direct CO2 emissions, many ask if EV’s should be subsidized. In the short run that actually depends on where you live. In states with inefficient and polluting power generation—absolutely not. In states with a natural gas + renewable energy base, the current federal subsidy is economically justified. In the long run, if we correctly tax carbon production from fossil fuels, direct EV subsidies will be unnecessary.

Equally transforming is the prospect of using Musk Solar roof tiles on much residential housing – at least housing that has a sufficiently low FAR. Two or three story houses can generate almost all the power they will need – from a smooth fully integrate roof. Throw in a few Musk Battery packs, and many homes can operate off the grid. Tall buildings cannot achieve even a small fraction of this self-sufficiency. And this leads to the implications of this solar-EV revolution for real estate.

To my thinking, the prospect for suburban living has just gotten (pardon the pun) a lot brighter. Suburban houses not only can generate what they need internally but also fuel their cars - and all with absolutely no CO2 emissions. Lastly, all of this comes at a significantly lower cost than today’s energy system.

Meanwhile life in denser cities will change far less. It will still have to live off an expensive long distance power transmission grid – with mixed energy generation sources. Remember that transmission represents almost half of the delivered cost of electricity. Busses and subways will operate and cost about the same as they do today – just with less pollution.

Energy outlays are a far larger share of suburban household budgets than for those living in cities, so the impact of the Solar-EV revolution clearly has the bigger effect for the suburban life style. From 1870 onward, improvements in transportation and energy were largely responsible for the development of suburbs, both before and after the two World Wars. Looking forward, it seems quite likely that a second wave of suburbanization will result from the Solar-EV revolution.