

Has consumer capitalism hit a Powerwall?

June 10 2015, by David Holmes

The enormous amount of press that Tesla received last month over the announcement of its battery storage system – the [Powerwall](#) – cannot be put down to just clever marketing. There are so many reasons why it has grabbed everyone's attention, including mine, but for reasons other than the hype that has surrounded it.

For many, the Powerwall and other [battery storage](#) systems are a utopian symbol of salvation that can wrest control of energy production and distribution from the monopoly providers into the hands of the individual.

When these systems are paired with solar panels, the single-family household is finally made complete with the promise of autonomy that commodity capitalism has been able to deliver for generations. Only this time, the individual can autonomously power these commodities – be they electric cars or toasters – independently of the state and the multi-national energy provider.

In so doing, the Powerwall has scaled the wall that separated these consumer commodities from the consumer being able to power them. It has brought possessive individualism dramatically closer to the automation of everyday life.

The take-home message here is the triumph of consumer capitalism itself. It makes the Powerwall one of the most intriguing commodities of all because it stands at the crossroads of a contradiction.

Let me explain.

For the decades corresponding to the ["great acceleration"](#) in greenhouse gases, and therefore the warming that we are committing ourselves to, such emissions have all but been driven by consumerism – the need for each single-family household to duplicate every conceivable kind of fossil-fuel-powered consumer good, from the very first television and vacuum cleaner, and inefficient car, to the automated home of today. This requires ten times or more power outlets that it did at the start of the great acceleration.

So given this increase in energy consumption – which is driving consumer lifestyles as much as it is [climate change](#) – it is fitting that a candidate for redressing the latter is yet another privately purchased consumer commodity. Or is it?

Since the second world war, developed nations have realised the two greatest contradictions of capitalism – its productive and destructive power. On the productive side are the amazing comforts that are afforded to the private home – comforts our forebears would have paid very dearly for.

On the destructive side, the list is long. It includes the reckless exploitation of wage-labour in developing nations, and the destruction of the environment. The greatest casualty – the one reality that ["changes everything"](#) – is changes to the earth's climate.

The appeal of late capitalism's productive capacity, and that of socialist societies who have replicated it, has concealed the dystopian climate condition that it abstractly produces.

In his book Heat, George Monbiot summed up this situation:

Ours are the most fortunate generations that have ever lived. Ours are the most fortunate generations that ever will. We inhabit the brief historical interlude between ecological constraint and ecological catastrophe.

Can the privatisation of [energy production](#) and storage within the household unit reverse this situation or prolong the interlude that Monbiot has soberingly pointed to?

In *One Dimensional Man*, at the dawn of the great acceleration, critical theorist Herbert Marcuse advanced a new theory of capitalist ideology. Ideology was not a matter of alienated false consciousness, nor was it a simply the domination of ruling class ideas, through control of media for example. Rather, for Marcuse, capitalism sold itself to people by its very success. He called this the rational character of (capitalism's) irrationality:

Its productivity and efficiency, its capacity to increase and spread comforts ... the extent to which this civilisation transforms the object world into an extension of man's mind and body makes the very notion of alienation questionable. The people recognise themselves in their commodities; they find their soul in their automobile, hi-fi set, split-level home, kitchen equipment.

And so too the Powerwall. As an entrepreneurial capitalist more in touch with commodity fetishism than the average consumer, Tesla founder Elon Musk knew the importance of the Powerwall's image. When you think of a battery, you don't think of "style" and aesthetics, but a lot of thought has gone into the packaging of this lithium-ion technology. They offer a colour range of bright, shapely torsos carrying a futuristic crest. They are mounted onto the side of private dwellings as though they were a shield protecting the occupant from more than just climate change.

What they [promise](#) to protect the consumer from is electricity prices.

Some middle-class consumers will buy them to lower their carbon footprint, but the greatest take-up will be from those getting hurt by rising electricity prices.

In Australia, [studies](#) have shown that the greatest adopters of solar power technology are households from low-income suburbs.

Why? Because such households want to be free from the mercy of the multi-national providers, but also a sense that they have private means of control over their electricity consumption. This is the same logic which drives the success of the motor car over public transport in highly urbanised societies.

But paradoxically, the real reason that [electricity prices](#) have gone up is not because people are moving to solar. It is because that, in most developed countries around the world, what used to be a public utility, owned by the state, was itself privatised. Remember, a renewable-fed electricity grid is actually a giant battery, with its storage capacity being regulated by a social principle of supply and demand over daily cycles of use. The battery is at its peak during the day, when people are using it and when its supply is at its peak.

There are four sectors of power infrastructure that once used to be owned by governments: generation, transmission (large networks), retailers and distribution (smaller networks). The commercial versions of these utilities most threatened by grid-connected private storage and generation, are the first three, and they would be well-advised to flow their capital into storage and renewables themselves.

This would leave governments only needing to buy back the smaller distribution networks – rather than privatising them further – and provide every consumer with a collective battery that is charged by renewable energy from rooftops and windfarms.

As stand-alone systems it is unlikely that battery storage systems will succeed without offering an arbitrage opportunity. Arbitrage in this context is the ability to export power that is surplus to the needs of a household or businesses at any given time.

In this case, a battery storage system would actually become a distributed storage system that can supply power when renewables are not producing power directly. This would mean that what looks like a continuation of the social insularity that commodity capitalism produces is capable of collective social benefit.

Also, a grid-connected battery storage system would not require every home to have renewable-fed storage. But the more households that have storage within a given power network, the greater the fall in the collective price of electricity.

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