

Gearing down

A secular downturn in US fuel consumption is underway as Americans fall out of love with their cars, says Gregor Macdonald



Streets ahead:
LA's Gold Line
Metro

LIKE a hum in the background of the global economy, the oil age has been in quiet withdrawal for the past 10 years. The shift began in 2002, when, after two stable decades, oil's share of the world's energy mix began to decline from 38% to its position now at around 33% (see graphic). In its place have been the advance of natural

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gas and the powerful ascent of coal. Meanwhile, the oil industry floundered, letting slip its claim as the top provider of energy to world industry.

Despite a near doubling of world oil and gas investment, and a quadrupling of the oil price, the industry has eked out a just a 2-3% increase in world supply. Crude-oil production globally is now running at 75.5 million barrels a day (b/d), having finally broken through the ceiling that held from 2004-05 at 74 million b/d. This is unimpressive, to say the least. In response, the world economy now

operates using oil and coal in nearly equal amounts.

This surprising and alarming trend shows no signs of reversing. Oil use, constrained by price, is increasingly rejected by the world economy as GDP rebounds instead to the powergrid. Indeed, while the 2008 financial crisis deepened oil's struggle for market share, the demand for global electricity has bolted ahead, barely interrupted over the past five years. Will oil stagnate further?

In Pasadena, California, where wintertime roses bloom in the shadow of the snow-capped San Gabriel mountains, the terminus of one of LA Metro's new light-rail routes, the Gold Line, creates a pleasant district of walkable, transit-oriented residential development. In recent years the city of Los Angeles, guided by its ambitious Measure R programme, has undertaken nothing less than a heroic restoration of its own, pre-war streetcar network, with lines stretching to all points on the city's compass.

Do not laugh. LA, the "what-me-worry?" epicentre of car-dependent growth, once presided over the largest light-rail network in the world. The resurrection of that network has caught doubters off guard; passenger numbers have been skyrocketing since oil began its price revolution and now total more than 9 million journeys per month. This is

no surprise. Across the US, workers are flocking to new or expanded rail systems from Boston to Denver. The result? Starting with the peak consumption year of 2005, US oil demand has been hammered lower by nearly 14%. And the retreat is still under way. Indeed, the newly trumpeted promise of US oil independence is, in truth, composed of just one part new oil production. The other two parts of this increasing freedom come via demand destruction. Thus, the new bounty from tight oil is unquestionably good economic news for the US. Mostly, however, it's supply freed up for export.

The end of the car

As Americans shed their cars, return to public transportation, and take to the streets on bicycles, it appears that what began as an oil shock and financial crisis has now converted to a more discretionary, cultural trend. Across the country, passenger numbers on Amtrak, the national railway, are at their highest levels since 1971. But more pointedly, it is no longer the dream of young people in the West to own their own automobile.

In Chicago, new urbanists recently celebrated the opening of the Windy City's first protected bike lane – a veritable bicycle highway, to be exact, running through the core of downtown. To own a designer bicycle, or an iPhone, or to live in a neighbourhood near commuter rail – these accessories are now ranked more highly in today's culture. And why not? If you have just emerged from university under a burden of debt and cannot find a job with high wages, car ownership is simply impossible. Now it's uncool, too.

To be sure, economic conditions in the West have become progressively less bad. But the aftershocks of the earlier crisis still reverberate. In 2012, US oil demand took yet another lurch downward. This time, demand even undercut the nadir of 2009, when the US economy was reeling from systemic financial shock. Gasoline demand last year in California reached all the way back to 1998 levels. Gasoline across the US as a whole is back to 1992 levels, and highway miles driven – when adjusted for population growth – are also back to levels from before the new millennium. In layman's terms, the explanation is simple: we in the West cannot afford high oil prices.

But from a more sophisticated view, we might see these tectonic shifts differently.

Price, ever cold-hearted, has performed its function admirably. By taking so many Westerners off the road, by devastating parts of the global auto industry, and by stripping wasteful consumption of all kinds out of OECD economies, price has rationed demand for limited oil supply from West to East. The several million barrels of lost demand have not disappeared. Rather, they have shown up in the developing world where, ironically, price sensitivity is lower because per capita use is so much lower. If you once commuted by car 300 miles per week to a job in downtown San Diego, the past decade's transition in oil prices was very painful. But if you are using only a gallon or two per week, in a large city in Asia, you are fine. In fact, you are thriving.

And that is the point: the EU and the US are shedding

Figure 1: Oil's share of global energy use

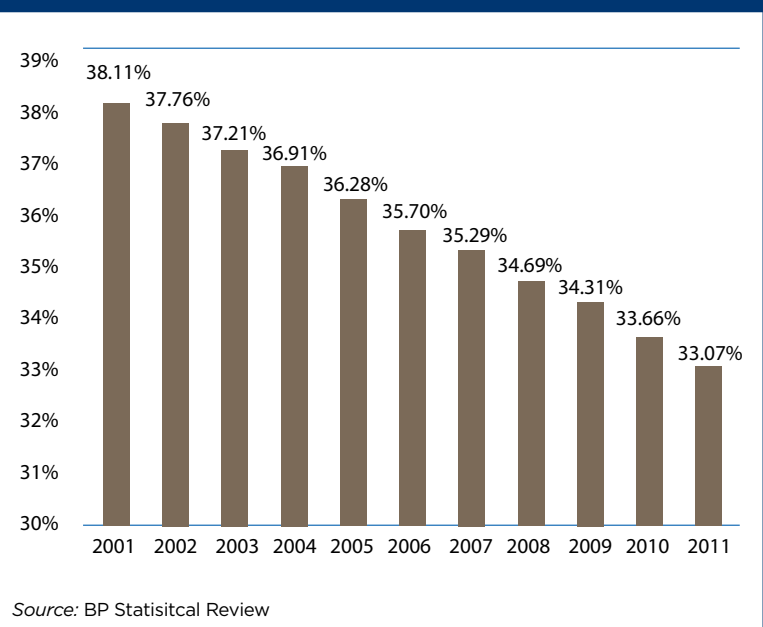
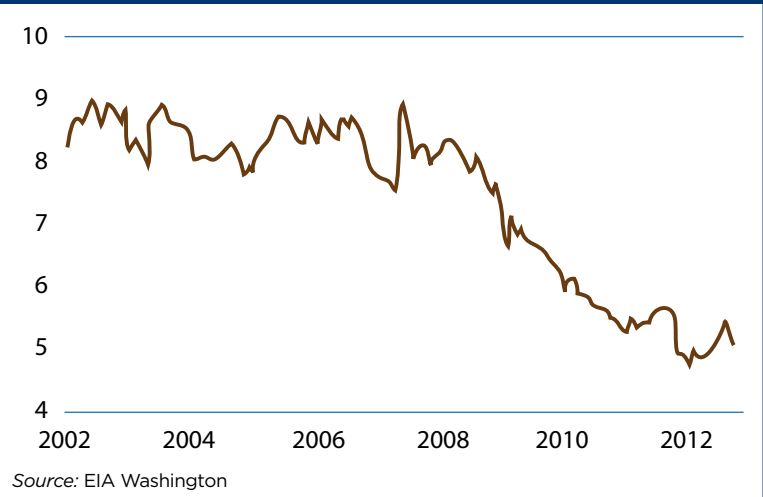


Figure 2: California total gasoline retail sales by refiners (million gallons per day 2002-2012)



2 percentage points of oil demand a year, while the non-OECD adds roughly the same. The trend will only deepen as the US, long asleep on mileage standards, finally sees its vehicle fleet start to turn over. However, the 6 gigajoules of energy in each barrel of oil have lost none of their utility value. Free from the constraints of wasteful demand, oil – the most dense, most versatile, and highest quality of the fossil fuels – will instead be more available to a broader array of world users, each taking just a small share for themselves. Instead of outright dissolution of the oil age, we might consider that a new oil age, with a wider geographical spread, is being born. **GM** ●

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