

Will the last one out . . .

Suburbs as we know them are doomed by the coming energy crunch -- unless we act now, says transportation analyst RICHARD GILBERT

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The price of natural gas is soaring. Next it will be oil. Suburban life as we know it could be doomed. Many suburban homes could be worthless in less than 20 years. Banks will soon wise up to the lack of future value. They'll renegotiate mortgages for only a portion of what owners paid for their homes. The resulting flight from the suburbs will worsen the predicament of those who remain. Can anything be done?

First, consider natural gas. Production of natural gas in North America has reached a peak and is beginning to decline, while potential demand for this relatively clean fuel continues to increase. The growth in demand has been driven chiefly by growing use of natural gas for generating electricity, but there has also been modest growth in its use for heating buildings, as a feedstock for many fertilizers, pharmaceuticals and plastics, and as a source of hydrogen.

The growing mismatch between supply and demand has resulted in the highest wellhead prices ever experienced in May. Prices are three times above the levels of a few years ago. This is only the beginning. Another tripling is likely over the next few years.

True, natural gas can be moved between continents, but the process is expensive and dangerous, and unlikely to play a major role in solving North America's critical supply problem. Prices will moderate only when much of North America's industry moves to Russia (where natural gas remains inexpensive), or consumers cut back by closing off several rooms in large homes each winter, or more coal is used for electricity generation, or all of these things.

Soaring natural gas prices are only a minor issue for the suburbs. It will be discomfoting to buy a 4,000-square-foot home and then find that heating it costs \$3,000 a month. But at least it will be possible to afford the natural gas bill by living in just a quarter of the home. The real crunch will come when oil production reaches its peak.

Oil is a world market, so the critical point will be reached when world oil production peaks and can no longer keep up with growing worldwide demand. Some experts feel the peak is already happening. Other experts suggest that

oil production can keep pace with demand until about 2015.

But 2015 is only 12 years away, only as far in the future as 1991 is in the past. What this means is that less than 12 years from now, oil prices will begin to rise as dramatically as natural gas prices are rising today.

Pump prices of gasoline are a little more insulated from wellhead prices than natural gas prices because so much of the present gasoline pump price is taxes. Nevertheless, it's safe to assume that by about 2020, gasoline prices will be several times current levels, in real terms. It could happen much earlier.

Will we still want to use gasoline in 2020? Well, there isn't an alternative. The automotive industry is pushing hydrogen as the fuel of the future, for use in fuel cells. But almost all hydrogen is made from natural gas, prices of which are already going out of sight. The only alternative production method is electrolysis of water, which costs even more than making hydrogen from natural gas.

The outstanding feature of Canada's suburbs is that their residents are almost completely dependent on automobile travel. How will this dependence continue when gasoline prices reach \$6 a litre (a conservative projection for 2020)? The simple answer is that it won't. Suburban living as we know it today will have become history by then.

How will suburban living recede into history?

A likely scenario is that banks will realize that suburban homes that are not near transit will become unsalable. Purchasers of such homes will find it hard to get a mortgage for anything but a small part of the purchase price.

Worse, owners of these properties will find that banks are offering renewals for only a small portion of what was initially paid for them. Without proper management, Canada's suburbs will implode in chaos as the market for new homes collapses and banks repossess existing homes.

How can this be avoided?

The simple answer is this: Intensify development in the cities and install transit. If all of the residential development effort in Canada's urban regions were to become focused on intensifying existing communities to the point where provision of adequate transit became feasible, chaos could be averted. Commercial and industrial development should also be intensified.

As well, we'll have to engage in a massive expansion of transit service. More buses won't help much because they will become too expensive to run. Light rail and even subways will be required. Such tethered systems -- with vehicles

that get their energy from a cable or rail -- can make efficient use of a very wide range of energy sources, including wind and hydro power.

How will the transit expansion be paid for? In the medium and long-term, it will pay for itself out of the fare box, as did transit in Canada until the 1970s. The challenge is getting the vital transit expansion under way now, so that disaster can be avoided in as much of the suburbs as possible.

Preparing for permanent energy shortages should be the highest priority of governments at all levels, more important than meeting the Kyoto target, more important than preventing the collapse of the aviation industry, and more important even than reducing taxes. Without early preventive action, the worst-case scenario for Canada's suburbs will become the likely scenario.

If you don't believe me, follow closely the proceedings of a key conference on oil and gas depletion to be held in Paris next Monday and Tuesday at the Institut Français du Pétrole (see <http://www.peakoil.net>).

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