

**SWEDEN**

# The inconvenient truth about an 'oil-free society'

Stockholm's energy policy is not quite as it seems, writes David Ibsen

Sweden, unlike the US, is not addicted to oil – something it made perfectly clear when it announced in 2005 that it wanted to be independent of oil by 2020. It was a ground-breaking announcement that earned it respect and applause from around the world. But the world cheered too soon. Sweden's bold aim is not quite as it seems.

Many political leaders and environmentalists read about Sweden's ambitious target and thought – quite logically – that it meant the country was aiming to have reduced the amount of oil it uses to zero by 2020, and thus be independent of it. They were wrong.

The title of its policy paper, "Making Sweden an Oil Free Society", should certainly take much of the blame for this misunderstanding. But the subsequent text admits rather sheepishly that it wants to "reduce as far as possible actual consumption of oil by the year 2020".

With lawyerly deftness, it then states that "we wish to stress that 'use of oil' is not the same as 'dependence on oil'". The slippery semantics continue when it confesses that it wants to "reduce the one-sided dependence on oil in areas where total independence from oil will take much longer to achieve".

Having taken into consideration these important qualifications, the unvarnished fact is that, come 2020, Sweden will still be using oil, just less of it. The more interesting issue is how much less it will be using and how it plans to get there.

The answers to these questions provide a useful example of how scientific progress occasionally has to go backwards to proceed. Tucked away in the appendix of Sweden's badly named energy policy document is a list that reads like a pre-voyage check list for a 16th century exploration vessel.

It mentions firewood, spent liquor, pine tar pitch, demolition wood, peat, logging residues, stumps and other such reminders of a pre-industrial past. These, however, are biofuels and the starting point for Sweden's grand plan.

Sweden believes it has the climate and soil that will permit the growth of biofuels, which is to say crops and other naturally occurring items that can be turned into fuel for heating, transport and assorted industrial purposes.

Using its best estimates, which it admits are pretty rough, Sweden has calculated that the supply of biofuels can increase from 108TWh (terawatt-hour) to 154TWh in 2020 and 228TWh 2050.

This will be achieved with a full blown agricultural revolution involving the better use of existing agricultural land and unused forests

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for the production of biofuels. The amount of forestry used for these purposes now, for example, is zero, but could rise to 200,000 hectares by 2020 and 1,150,000 by 2050 – a small part of Sweden's 23m hectares of forest land.

These biofuels will be used in an assorted number of ingenious ways involving new or adapted engines, generators and turbines, that will fuel cars, trucks, houses and factories.

These will, the Swedes say, be combined with more familiar alternative energy sources such as wind power, wave energy, solar energy, improvements in energy efficiency through insulation and other information technology related solutions, such as IT based route planning for truck deliveries.

When all of this is totted up, and with the strong proviso that its calculations are based on guidelines rather than precise estimates, Sweden has set itself the following targets.

By 2020, Swedish society as a whole is to make 20 per cent more efficient use of energy; no oil should be used for heating residential or commercial buildings; road transport should reduce use of petrol and diesel by between 40 per cent and 50 per cent; and industry should cut its use of oil



by between 25 per cent and 40 per cent.

The details of how these are to be achieved are too numerous to mention, but it is fair to say that many of them are highly theoretical and occasionally speculative. They are based, for example, on levels of investment that have yet to be discussed at a budgetary level, let alone approved.

There is also quite a lot of discussion on micro issues, such as how the use of video conferencing can make travelling by train or plane unnecessary for business executives, as well as a fair share of generalities, such as "society should promote alternatives to air travel where possible".

Hypothetical levels of the weight of

cars and trucks in the future as a result of the possible use of new materials serves as another useful example of a crucial fact: this is a wish list, not a policy.

But it is a wish list that has captured the world's imagination. Al Gore, the failed candidate for the presidency of the US and a committed environmentalist, visited Sweden in September and praised it loudly for being a "nation providing moral leadership to the entire world on the most serious challenge that civilisation has ever faced".

He was in Stockholm to promote a movie, called "An Inconvenient Truth" about the threat of global warming. The inconvenient truth about Sweden's 2020 vision is that it will not be oil free by then, and that many of its calculations and arguments are hypothetical and ambitious in the extreme.