

Introduction

Ireland's transport system is wholly unsustainable, both in environmental and economic terms, with only 1.2% of energy for transport originating from renewables and the other 98.8% dependent on imported oil. Energy use in the transport sector has mushroomed since 1990, with an 181% growth rate between 1990 and 2007. This growth includes "fuel tourism" - when motorists purchase cheaper petrol and diesel in the Republic of Ireland and consume it predominantly in Northern Ireland.

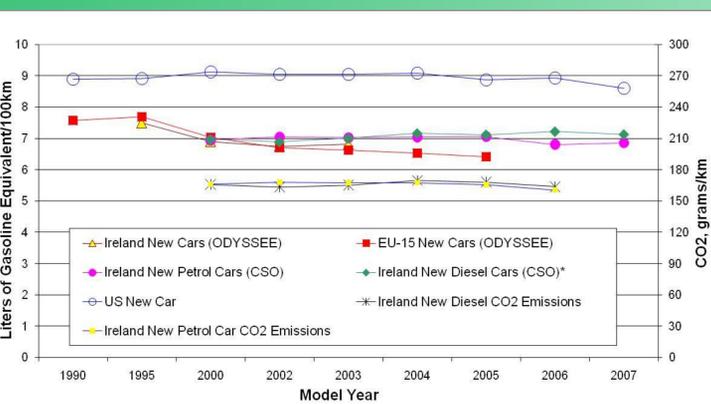
Transport is the overriding growth sector in greenhouse gas (GHG) emissions in Ireland. The rise in transport demand has been heavily incentivized by the burgeoning Irish economy of recent times (Gross Domestic Product grew at an average of 8.9% per year from 1994 to 2001) and the rising population which rose from 3.5 million in 1990 to 4.2 million in 2006. The GHG emissions from the transport sector accounted for 20% of Ireland's total GHG emissions in 2006, compared with 9.3% in 1990.

In response the Irish government has recently published its new Transport Policy: "Smarter Travel - A Sustainable Transport Future; A New Transport Policy for Ireland 2009 – 2020".

Historical Trends

Ireland's test fuel economy of new private cars has remained stagnant at about 7 liters of gasoline equivalent/100km from 2000 – 2007 compared to the US' new car fuel economy of 9 liters/100km for the same period. These test fuel economies are 15-25% lower than the "on-the-road" real world values.

The average CO₂ emissions of Irish new cars were steady at about 165g CO₂/km for both diesel and petrol cars. Regulation (EC) No 443/2009 requires that a fleet average of 130 gCO₂/km is to be achieved by all new cars registered in the EU by 2015.



*Note: Diesel Car fuel economy is reduced by 12% to account for diesel's increased energy content compared with petrol. Sources: International Energy Agency, Irish Central Statistics Office, ODYSSEE Project (European Commission).

For more information, please contact Mark Jennings at markgj1@stanford.edu or Lee Schipper at mrmeter@stanford.edu.

Ireland's Transport Policy; 2009 - 2020

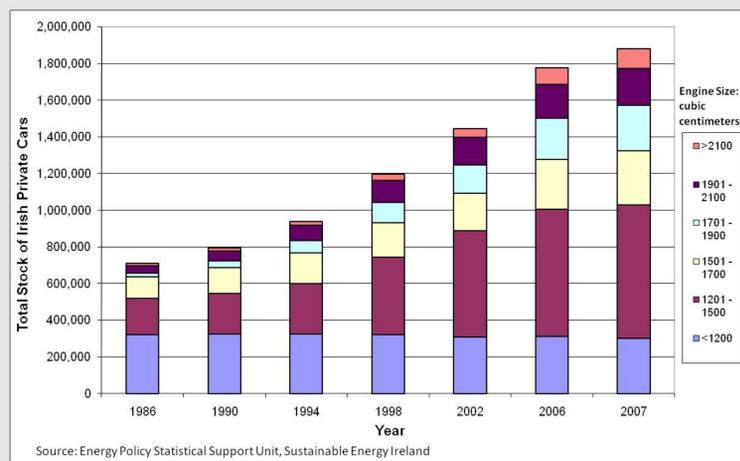
Mark Jennings

Atmosphere/Energy Program, Stanford University &

Lee Schipper

Precourt Energy Efficiency Center, Stanford University

Ireland's Car Stock has more than Doubled since 1990



While the fuel economy of new cars has been rather stagnant, the trend since 1990 has been that of purchasing larger and more powerful cars. Larger engine capacities are dominating new purchases. The striking trend though is that the stock of cars more than doubled between 1990 and 2007. The rate of increase in car ownership in Ireland is probably the most dramatic indicator of transport demand in Ireland. This trend has been mainly driven by Ireland's improving economy, a rising population and increasing urban sprawl. The more than doubling of stock has largely negated any technological fuel economy improvements.

The average daily km traveled to work has increased steadily from 9.9km in 1986 to 15.8 km in 2002 and then steadied at 15.8 km in 2006. This is indicative of the poor spatial and transport planning throughout Ireland in the last two decades. Business services and financial services are currently bunched in city center locations, which has led to longer commuting distances, as sprawl continued to grow out from urban centers into hinterlands. The population distribution in Ireland's urban areas is unlikely to change in the coming years. There have been various attempts by the Irish government to improve non-car travel, but none have really been effective, as cars have had a consistent 73% average modal share of passenger-km from 1990 - 2007. Car travel continues to dominate and this is one of the problems that the new transport Policy aims to address. A new motor tax based on CO₂e emissions was introduced in July 2008 to incentivize the purchase of cars with smaller engines. It is difficult to analyze the consequences of this tax as it was brought in when the recession was beginning to affect Ireland.

New Transport Policy

The main targets of the Irish Government's new transport policy for Ireland are that by 2020;

- Population/employment density will be increased in urban areas so that less travel demand is derived.
 - The total share of car commuters per day will drop to 45% (vs. 65% in 2009) which will mean that 500 – 600,000 more commuters will be using alternative modes. At least 200,000 will be people who commuted by car in 2009, plus, due to population growth, an additional 210,000 will be pedestrian or bicycle commuters, and 90,000 more will use public transport.
 - Alternatives such as walking, cycling, public transportation and e-working will be supported.
 - The total kilometers traveled by the car fleet will not increase significantly from current levels.
 - A reduction will be achieved on the 2005 figure for GHG emissions from the transport sector.
- Supplemental measures include:
- The road freight sector will become more energy efficient.
 - Ireland will provide further incentives to encourage electric vehicle technology with the aim of achieving 10% market penetration by 2020.
 - Transport 21, an 18 billion Euro government investment (2006 – 2015) to transform Ireland's national roads, public transport and regional airports.
 - A general minimum housing density of between 35 and 50 dwellings per hectare will be ensured in urban areas of suitable size and population, particularly in high capacity public transport corridors.
 - Requirements on organizations with over 100 staff to develop and implement workplace travel plans.
 - To make available a safe, accessible, integrated and reliable bus service for 18+ hours of the day.

Discussion of New Policy

Lack of Strategic Timelines

The major obstacle to the successful delivery of this Policy is the lack of a delineated timeline with a strategy for achievable goals. There will be a biennial report first presented to the Irish government in 2010 by an interdepartmental working group. There are no guidelines as to when actions have to be first introduced, when or what the interim targets are.

Insufficient Greenhouse Gas Emission Reduction Target

There is no specified emission reduction target for 2020, only a promise that a reduction will be achieved on the 2005 figure of 13.7 Mt CO₂e. A carbon tax of 15 Euro per tonne has been introduced in the Budget for 2010 which is expected to reduce emissions by 250,000 tonnes per year. There are other factors that will reduce CO₂e emissions from vehicles in the next few years such as:

- New motor taxes based on CO₂e emissions that were introduced in July 2008,
- The current global recession and
- The new EU Regulation requiring that a fleet average of 130 gCO₂/km to be achieved by all cars registered in the EU by 2015.

However, GHG emissions are directly related to the total number of vehicle miles traveled (VMT), which generally increase when accessibility to essential services decreases without adequate public transportation in place. Irish VMT has been increasing in recent years, with 24 million VMT in 2000 rising to 33 million VMT in 2007. This is due in part to increasing urban and rural sprawl (and thus reduced accessibility), more road capacity and a public transport system that is not properly integrated with major mobility pathways.

Conclusions

Target	Conclusion
Overall policy	Good ambition but lacking in details and a strategic timeframe
Increase urban population/employment density	Brownfield development and the construction of new pedestrian/cycle lanes along with increased accessibility to urban centers is required.
Reduce share of car commuters	Large investments in public transport and public education campaigns are needed.
Support alternatives to cars	Fiscal measures, such as congestion charges, should be introduced for Dublin, Cork & other major urban areas.
Keep km travelled at 2009 levels	An unrealistic target, as the number of vehicle miles travelled has been increasing annually in recent years.
Reduce transport sector GHG emissions from 2005 levels	Will not be realized unless a quantitative target is announced and acted upon. Emissions from the transport sector have been increasing on an annual basis since 1993.