

Briefing
Fuel economy standards for cars: good for drivers, good for the environment and good for Poland

Context

In July 2012 the European Commission published its proposal on fuel efficiency and CO₂ standards for new cars in the year 2020 (Review of Regulation 443/2009). The Commission proposes to reduce fuel consumption of new cars by almost 30% by 2020 to 3,8 l/100km¹ (or 95g CO₂/km). This proposal is currently being discussed by the Council and the European Parliament and is of singular importance to Poland.

Poland is a country with a rapidly growing car fleet and a equally growing thirst for oil. At the same time Polish cars, which are still by and large second hand cars, are a lot less efficient than the EU average. Because of lower incomes, Poles spend a relatively big part of their disposable income on fuel bills.

This briefing assesses what the impacts of EU fuel economy standards would be for Poland and discusses the impacts of different policy options. The briefing summarises the findings of a T&E report prepared by Malcom Fergusson².

1. Introduction: the wider impacts of fuel economy standards

Regulation 443/2009 sets fleetwide CO₂ emission standards for new passenger cars in the EU. It also regulates fuel economy, as this is directly linked to carbon dioxide emissions. For 2015 the Regulation sets a target of 5,3 l/100km³ (or 130g CO₂/km) and for 2020 a target of 3,8 l/100km (95g CO₂/km).

Fuel economy standards have been in place since 2008 and have reduced average fuel consumption of new cars from ca. 6,5 l/100km to 5,3 l/100km in just 5 years. At the same time cars have not become more expensive. Achieving the 2020 target is may add up to €1000 (4000ZL) to the cost of an average new car in Europe⁴ but because of annual fuel savings of around 2000ZL the initial investment will pay back in 2 years and over the lifetime of the car, €2900-€3800 (12.000-16.000ZL) will be saved which otherwise would have been spent on fuel. A 2,8 l/100km (70g) target in 2025 is estimated to cost around €3000 (12.500ZL) but again, fuel savings would compensate for the higher acquisition costs.⁵ The money drivers save on filling up their cars can be spent elsewhere and this then boosts local economies and creates jobs.⁶

At the same time the increased demand for fuel efficient technology is likely to boost production and jobs at parts suppliers which also benefit from the investment certainty long term targets provide. Automotive parts suppliers employ 4 times as many people as carmakers.

Notably, the proposed fuel economy standards have benefits for energy security, the trade balance and reduced carbon dioxide emissions. The latter are projected to fall by as much as 39 megatons per year in 2025 EU-wide.⁷

Fuel economy standards are good for drivers, good for the economy and good for the environment

2. Poland and cars: a (costly) love story

Car ownership in Poland has increased dramatically over the last decades from around 150 cars per 1000 inhabitants in 1990 to ca. 450 cars per 1000 inhabitants in 2010 (see Figures 1 and 2), which are close to the average in the EU15. Some additional growth can be expected but it is likely to be much slower. Since the Polish car fleet is generally old and as the economy and prosperity continue to grow, the fleet is expected to undergo rapid renewal in coming years.

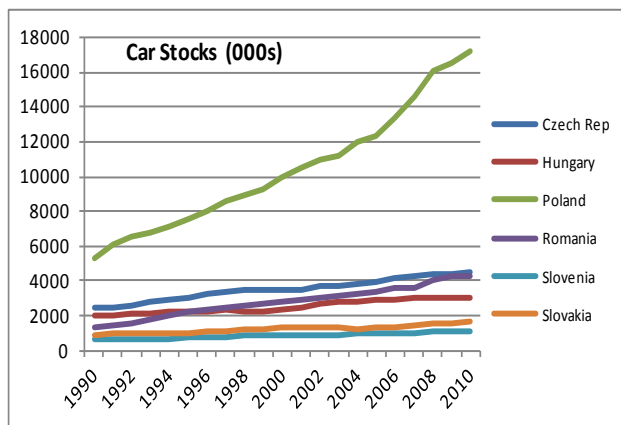


Figure 1

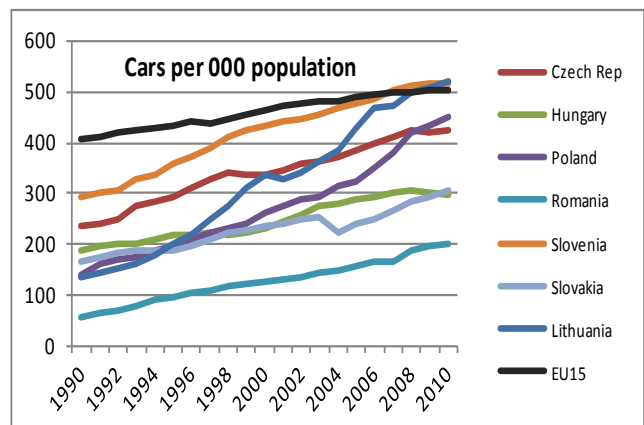


Figure 2

Driving a car in Poland is relatively more expensive than in the EU15 countries. Indeed, fuel prices only differ slightly from other EU countries⁸ whilst household income is still a lot lower.

This may explain why mileages in Poland are still relatively low compared to other EU countries although increased purchase power and improved infrastructure are likely to enable drivers to use their cars more frequently and for longer distances in the future. This could offset some or all of the fuel and CO₂ savings depending on how much more efficient cars will become.

Driving a car in Poland is relatively more expensive than in western Europe

3. Second hand cars and their importance for Poland

The EU fuel economy standards apply to new cars only but most new cars are sold into the second hand market – on average after 5 years. Second hand car buyers only pay a fraction of the extra cost needed to meet the target⁹ but will get the full efficiency benefit. This means second hand buyers stand to particularly benefit from the proposed fuel economy standards.

As shown in Figure 3 Poles overwhelmingly opt for second hand cars. In 2008 Poland imported more than 1 million second hand cars and sales of second hand cars outnumber new car sales by three to one.

Currently cars older than 5 years still make up around 80% of second hand car sales in Poland and within that group, half of them older than 11 years. The age of second hand car

imports has been falling steadily of the past years and this trend can be expected to continue as purchase power in Poland grows. At the same time , the number of new car sales is aslo likely to increase.

	Estimated Imports	New Registrations	Ratio Used Imports:New
Czech Republic	206456	202823	102%
Hungary	28818	174837	16%
Poland	1144033	375936	304%
Romania	223307	307409	73%
Slovenia	20249	78857	26%
Slovakia	103948	96940	107%

Figure 3

4. What the proposed 2020 fuel economy standards would mean for Poland

T&E has analysed the impact of the fuel economy regulation would be for Poland. The assumptions for this modelling exercise are in line with section 2 and 3 and are explained in more detail in the full report.

We have assessed the following scenario's:

- **Do nothing scenario:** rejection of the Commision proposal, no standards beyond 2015, slow efficiency improvements
- **Commission scenario:** adoption of the Commission proposal: 3.8 l/100km (95g CO₂/km) in 2020
- **Super credit scenario:** weakening of proposed standards by 0,5 l/100km (10g CO₂/km) through the introduction of generous super credits
- **Continued progress scenario:** adoption of the Commission proposal and introduction of a long term target of 2,8 l/100km (70g CO₂/km)

4.1 The different scenarios

The do nothing scenario is the baseline scenario. It reflects the already existing legislation and the progress manufacturers have made towards the 2015 target. The three other scenario's reflect different policy options that are currently being considered at EU-level.

The Commission proposal (2 in figure 4) has already been discussed in section 1. In essence it is a confirmation of an earlier agreement to set a 2020 target of 3.8 l/100km (95g) without significant flexibililities but also without additional long termambition.

The super credit scenario (2a in figure 4) is a reflection of industry proposals to weaken the 2020 target by around 0,5 l/100km (10g) by introducing generous super credits and rejects targets beyond 2020. Super credits are a form of creative accounting which gives manufacturers very generous emission allowances in return for limited sales of ultra efficient vehicles (below 50g).¹⁰

The continued progress scenario (3 in figure 4) is based on the Commission proposal but continues progress beyond 2020 by setting a target of 2.8 l/100km (70g) in 2025.¹¹ This would have an impact mainly beyond 2025 but could also speed up improvements before 2025.

The impacts of different scenario's on average fuel efficiency (right) and CO₂ emissions (left) are shown in figure 4.

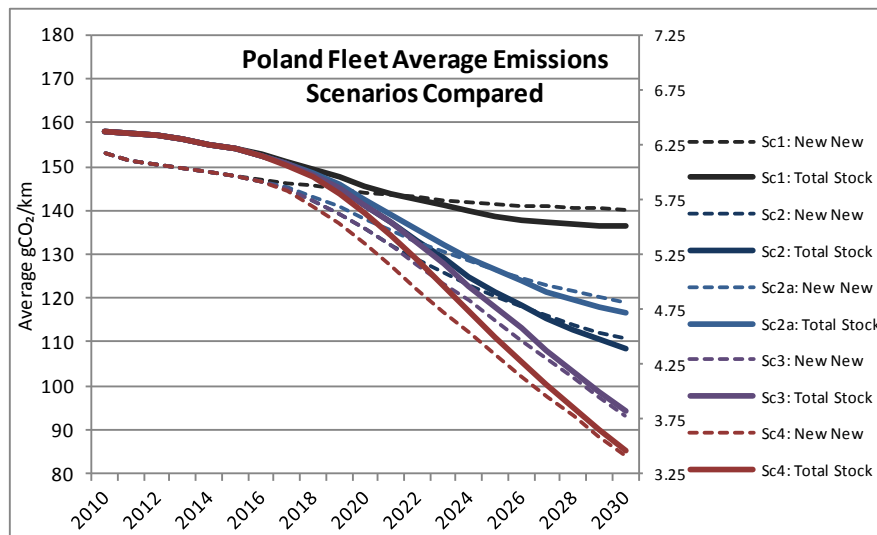


Figure 4

Figure 4 illustrates how different policy options lead to radically different fleet average emissions. This trend becomes apparent in 2020 but grows in strength year by year. The continued progress scenario (3) leads to the quickest fuel consumption and emission reductions. Whether any of these options is retained in the final law is subject of fierce debate. Poland has an important role to play in these debates in the Council but also in the European Parliament. The analysis below shows that the outcome of the debate will have a profound impact on energy security and fuel consumption in Poland.

4.2 Fuel costs for Polish car drivers

The impact of these different fleet averages on drivers is profound, as illustrated in figure 5. Whereas the do nothing scenario would drive up the cost of car ownership significantly over the coming years because of the increasing mileages and slow fuel efficiency progress, all the other options would bring down the fuel cost per car.

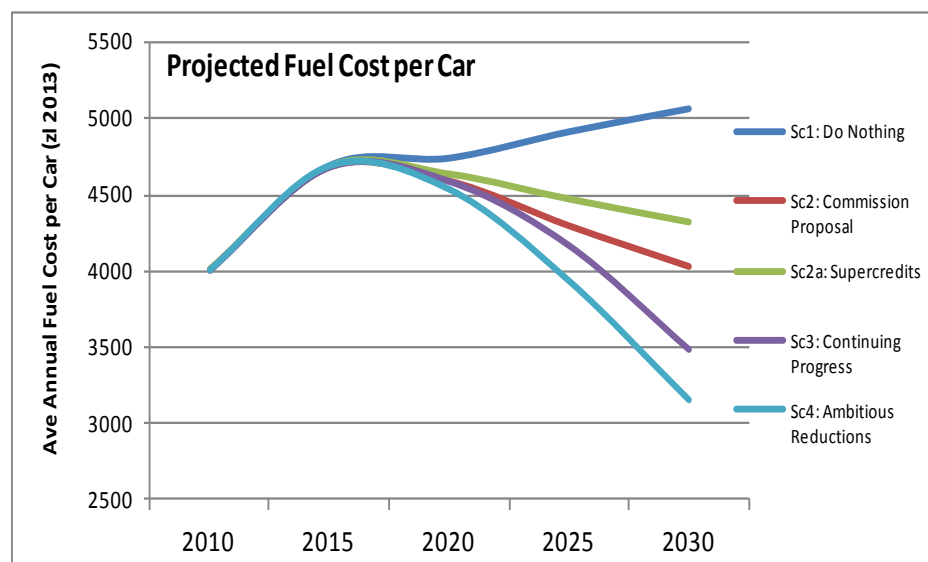


Figure 5

The continued progress scenario promises the best outcome for drivers. Fuel costs would start falling beyond 2015 and this trend would be reinforced year by year driving fuel costs down by 29% in 2030 compared to 2010 levels. That's a difference of more than 1500ZL compared to 2010.¹² The super credits scenario would significantly reduce these benefits. The monetary impacts of different scenarios are summarised in figure 6.

Scenario	2015	2020	2025	2030
Average Annual Fuel Cost per car (zł 2013)				
Sc1: Do Nothing	4687	4735	4908	5058
Sc2: Commission Proposal	4687	4593	4296	4026
Sc2a: Supercredits	4687	4633	4469	4318
Sc3: Continuing Progress	4687	4593	4171	3488
Sc4: Ambitious Reductions	4687	4533	3935	3160
Change in Cost relative to 2010				
Sc1: Do Nothing	+17.0%	+1.0%	+3.7%	+3.1%
Sc2: Commission Proposal	+17.0%	-2.0%	-9.3%	-18.0%
Sc2a: Supercredits	+17.0%	-1.1%	-5.6%	-12.0%
Sc3: Continuing Progress	+17.0%	-2.0%	-11.9%	-28.9%
Sc4: Ambitious Reductions	+17.0%	-3.3%	-16.9%	-35.6%

Figure 6

4.3 National car fuel demand

The lower fleet averages will also impact on overall demand for car fuel and thus oil imports. Overall demand for fuel in Poland would drop as a result of the fuel economy standards whereas Figure 7 demonstrates that no further policy action would lead to a growing demand for fuel. **Given the fact that 94% of Poland's oil comes from Russia** and the importance attached to energy security in the national debate, this is significant.

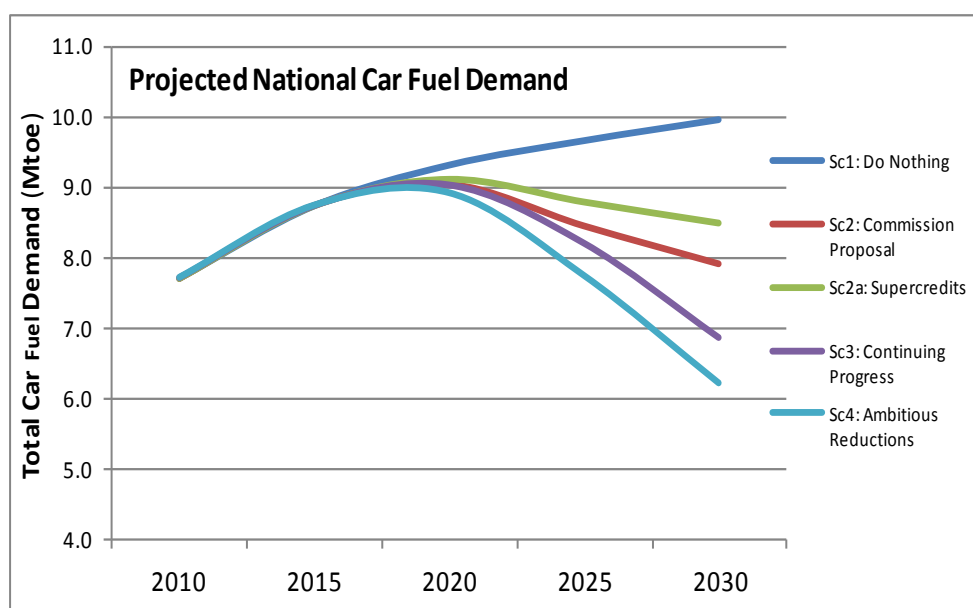


Figure 7

As illustrated above, the continued progress scenario would be the most effective in driving down total oil imports and reducing Poland's dependency on imported oil. The table below also shows that it is the only scenario which would allow Poland to reduce car fuel imports to a level below 2010.

Without fuel economy standards, Poland will become more dependent on imported (including Russian) oil

Scenario	2015	2020	2025	2030
Total Car Fuel Demand (Mtoe pa)				
Sc1: Do Nothing	8.75	9.33	9.67	9.97
Sc2: Commission Proposal	8.75	9.05	8.46	7.93
Sc2a: Supercredits	8.75	9.12	8.80	8.51
Sc3: Continuing Progress	8.75	9.05	8.22	6.87
Sc4: Ambitious Reductions	8.75	8.93	7.75	6.23
Change in Demand relative to 2010				
Sc1: Do Nothing	+13.3%	+20.7%	+25.2%	+29.0%
Sc2: Commission Proposal	+13.3%	+17.1%	+9.5%	+2.7%
Sc2a: Supercredits	+13.3%	+18.1%	+14.0%	+10.1%
Sc3: Continuing Progress	+13.3%	+17.1%	+6.4%	-11.1%
Sc4: Ambitious Reductions	+13.3%	+15.5%	+0.4%	-19.4%

Figure 8

4.4 CO₂ emissions

More efficient vehicles also impact on national car CO₂ emissions. As shown by the table below, the continued progress scenario is the only scenario which would allow Poland to reduce its overall emissions by 2030 compared to 2010 levels. By reducing emissions more in transport greater headroom exists for emissions in other sectors.

Scenario	2015	2020	2025	2030
Total Car CO ₂ Emissions (Mt pa)				
Sc1: Do Nothing	24.7	26.4	27.3	28.2
Sc2: Commission Proposal	24.7	25.6	23.9	22.4
Sc2a: Supercredits	24.7	25.8	24.9	24.1
Sc3: Continuing Progress	24.7	25.6	23.2	19.4
Sc4: Ambitious Reductions	24.7	25.2	21.9	17.6
Change in CO ₂ Emissions (Mt pa) relative to 2010				
Sc1: Do Nothing	+2.9	+4.5	+5.5	+6.3
Sc2: Commission Proposal	+2.9	+3.7	+2.1	+0.6
Sc2a: Supercredits	+2.9	+4.0	+3.1	+2.2
Sc3: Continuing Progress	+2.9	+3.7	+1.4	-2.4
Sc4: Ambitious Reductions	+2.9	+3.4	+0.1	-4.2

5. Wouldn't fuel economy standards be bad for the Polish automotive industry?

Poland has a growing automotive industry and has three big manufacturing plants, Fiat in Tychy, Opel in Gliwice and Volkswagen in Poznań. More than half of Poland's automotive revenue is generated through component sales and 98 percent of Polish automotive products are destined for foreign markets. Automotive suppliers are supportive of the proposed fuel economy standards¹³ and generally benefit from the long term investment certainty and future markets long term targets provide.

Carmakers also stand to benefit from fuel economy standards because of the export opportunities it provides. All Europe's global competitors have fuel economy standards in place and the US have recently adopted very ambitious fuel economy standards which will challenge Europe's hegemony in the global clean cars race.¹⁴

Europe needs to stay ahead in the global race for cleaner cars if it is to stay competitive

Fuel economy legislation is good for employment in automotive manufacturing too. A 2012 study commissioned by Daimler AG e.a. shows that tighter fuel economy standards have beneficial impacts on employment in all scenarios that were assessed.¹⁵ The problem of overcapacity in some parts of the European car industry and the negative employment impacts this has will not be significantly effected by regulations to improve fuel efficiency and reduce CO₂ emissions

Conclusions

Of the four scenarios assessed the continued progress scenario with a 2025 target would be the most beneficial for Poland. Accepting the target proposed by the Commission and adding a long term target of 2,8 l/100km would drive down the cost of car ownership, reduce oil imports and also lower CO₂ emissions.

This would come at negligible cost for Poland. The cost of the technology needed to meet the targets is modest and pay back periods are relatively short. For the majority of Polish car buyers these costs will be further mitigated since for second hand cars only a fraction of the additional costs is passed on. Ambitious fuel economy standards will allow Poles to drive more for less money. That wouldn't be bad for the environment because CO₂ emissions would also fall.

In addition, employment in the automotive sector is likely to grow as a result of the adoption of fuel economy standards. The legislation is good news for Poland's many automotive parts suppliers. But carmakers also stand to benefit through increased export opportunities. Rising global oil prices will only increase the demand for fuel efficient cars and other automotive regions, e.g.US, are rapidly catching up.

The other scenarios, notably the do-nothing scenario and the super credit scenario would be disadvantageous for Poland and its motorists. They would increase the cost of driving and the need for Russian oil imports.

It can thus be concluded that it would be in the interest of Poland to support the proposed 2020 targets, reject overly generous super credits and set a long term target for 2025.

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¹ Average petrol (4,1) and diesel (3,6)

² http://www.transportenvironment.org/sites/te/files/publications/2013%20Poland_at_crossroads_final.pdf

³ Average petrol (5,6) and diesel (5)

⁴ This includes a 24% margin on the cost of technology

⁵ http://www.theicct.org/sites/default/files/publications/ICCT_CostCurveSummary_wkp20121102.pdf;
http://www.transportenvironment.org/sites/te/files/publications/Ricardo%20AEA_2025%20targets_Report_Jan_2013.pdf

⁶ <http://www.transportenvironment.org/press/low-carbon-cars-create-new-jobs-europe-report-says>

⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2012:0213:FIN:EN:PDF>

⁸ Fuel prices are determined by the global markets and minimum tax rates are set at EU-level

⁹ BEUC, the European Consumers' organisation estimates they'll pay 1/3rd:

<http://www.beuc.org/custom/2012-00461-01-E.pdf>

¹⁰ See analysis of super credit proposals by Germany (1) and MEP Thomas Ulmer (2), rapporteur in the Environment Committee of the European Parliament (1)

http://www.transportenvironment.org/sites/te/files/publications/german%20super%20credit%20proposal%20final_0.pdf

(2) http://www.transportenvironment.org/sites/te/files/publications/Briefing%20Ulmer%20report_final.pdf

¹¹ This was notably proposed by MEP Fiona Hall, rapporteur for the Industry Committee.

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2F%2FEP%2F%2FNONSGML%2BCOMPARL%2BPE-502.182%2B01%2BDOC%2BPDF%2BV0%2F%2FEN>

¹² There are of course costs associated with the technology needed to achieve these targets. As discussed in section one, these costs will be paid back through lower running costs relatively quickly and certainly within the average first period of ownership (5 years)

¹³ CLEPA Position on the revision of Regulation EC No 443/2009 setting emissions performance standards for new passenger cars and Regulation EC No 510/2011 setting emissions performance standards for new light commercial vehicles, June 2012.

¹⁴ <http://www.theicct.org/blogs/staff/thought-experiment-applying-proposed-us-2025-pv-standards-eu-fleet>

¹⁵ <http://www.elab.iao.fraunhofer.de/content/dam/elab/de/documents/elab-zusammenfassung.pdf>