GM Europe

GM Europe
Public Policy & Government Relations
EU Affairs
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Response from General Motors to the Public consultation on the implementation of the renewed strategy to reduce CO_2 emissions from passenger cars and light-commercial vehicles

General Motors (GM) appreciates the opportunity to offer comments on the implementation approach for a renewed strategy to reduce CO_2 emissions from passenger cars. GM has manufactured and sold vehicles in Europe for over 80 years and currently operates 9 vehicle-production and 10 powertrain facilities in nine EU countries and 4 engineering centres in Germany, Italy, Sweden and the UK. In total, we employ around 60,500 people directly in Europe with many additional jobs in 8,605 independent sales and service outlets and in the hundreds of European suppliers who support our facilities.

Today, we offer the largest portfolio of advanced vehicle propulsion technologies of any carmaker. For example, GM is the leading producer of biofuels vehicles globally. Saab is the clear market leader in Sweden and Europe with 11,000 BioPower vehicle sales in 2006. In North America, GM has more than 2 million flexfuel vehicles on the road and in Brazil 90% of the vehicles sold by GM are flexfuel vehicles. GM's Opel division is a market leader in CNG vehicle sales in Germany and Italy, the two EU countries that have put in place policies to support this alternative fuel technology.

Lower CO2 Alternative Fuel Solutions in Market Today

High-Blend Bioethanol

Saab BioPower

- Saab 9-3 BioPower 1.8 t (Sport Saloon, Sport Wagon & Convertible)
- Saab 9-5 BioPower 2.0t & 2.3 t (Saloon & Estate)

CNG - Biogas

Compressed Natural Gas

- Opel Combo 1.6 CNG
- Opel Zafira 1.6 CNG

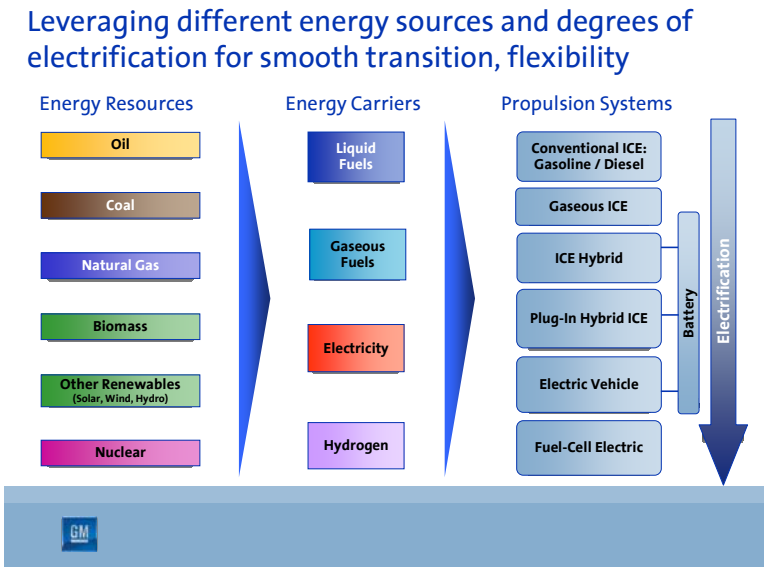
Getting the approach right is a critical issue for our customers, for our employees and for our company – we are committed to working constructively with our counterparts in the industry and with policy makers in Europe to ensure that the strategy to reduce CO2 is affordable for consumers, viable for manufacturers, proportional with other sectors and supported by the necessary fuel, infrastructure

and taxation policies to ensure a fully integrated, cost-effective, pan-European approach. We hope the Commission finds these comments helpful and uses them in developing its next step in the process. As this is a complex issue, we encourage the Commission to seek clarification if it has questions about our response.

General Motors has also participated in the preparation of the comments submitted by the European Automobile Manufacturers Association (ACEA) and fully supports its comments.

GM Approach to achieve CO_2 emission reductions

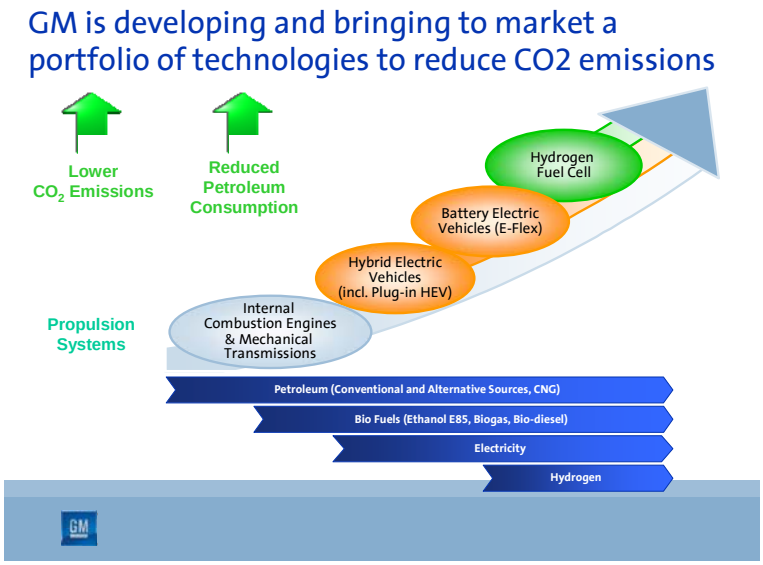
CO_2 emissions from motor vehicles are a function of the interrelationship between vehicle technology and fuels. As demand for personal mobility continues to grow, GM believes that energy diversity will be critical to meeting this demand with the social and economic benefits that enhanced mobility brings in a more sustainable and affordable manner. We are developing vehicle technologies to leverage a number of different energy pathways combined with varying degrees of electrification to enable us to respond to whatever strategic energy policy governments around the globe establish to drive towards lower CO2 transportation on a source to wheels basis.



GM globally has the broadest range of propulsion technologies in the industry. To further reduce CO_2 emissions, we are pursuing a strategy of energy diversity on several fronts:

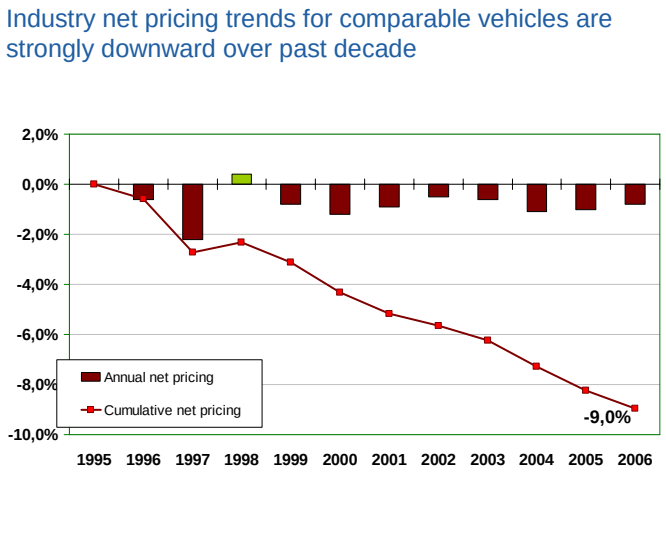
- GM continues to improve the efficiency of internal combustion engines. Over the next 5 years GM in Europe will be investing around 700 Million Euros in development and deployment of new power train and transmission initiatives.
- We are expanding our efforts to displace traditional high-carbon petroleum-based fuels with alternatives like E85 and CNG.
- We have significantly accelerated our already substantial commitment to the development of electrically driven vehicles, including fuel-cell vehicles, plug-ins and extended-range electric vehicles, (such as the Chevrolet Volt concept unveiled at the North American International

Auto Show this year). We have already devoted over $1 billion globally to develop hydrogen fuel cell capability, including substantial research work at our Fuel Cell Activities site in Mainz-Kastell, Germany.



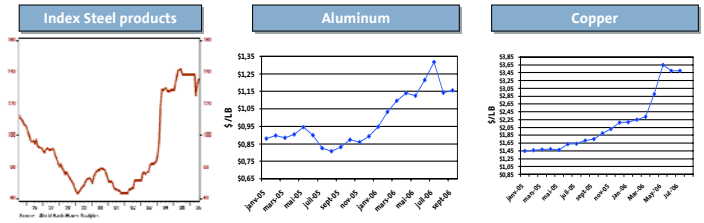
The State of the Industry (Volume Manufacturers)

The highly competitive European market has become increasingly challenging over the last years. We have experienced increased competition from offshore producers, often with lower cost production basis or subsidized by undervalued currencies.



Industry net prices for comparable vehicles are down 9% over the decade even while the cost of raw materials has escalated dramatically.

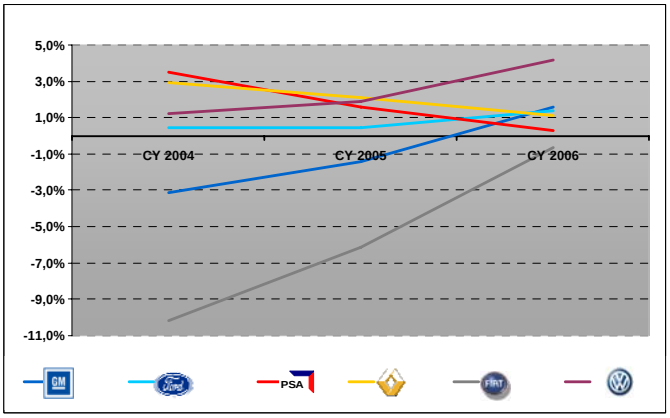
Raw Material Prices Have Increased Dramatically



- Metal prices increased drastically over the last couple of years
  - Price index of a combined 8 steel products increased by 72% over 5 years while automobile prices remained flat
  - In 2003, steel / precious metals / non ferrous metal represented 9% of the total material cost of an average vehicle, it now represents 12%

As a result of these and many other factors, the net profitability for GM and many other European auto manufacturers remains below sustainable levels.

Operating Profit Margins (*) for Volume Automakers Remain Below Sustainable Levels



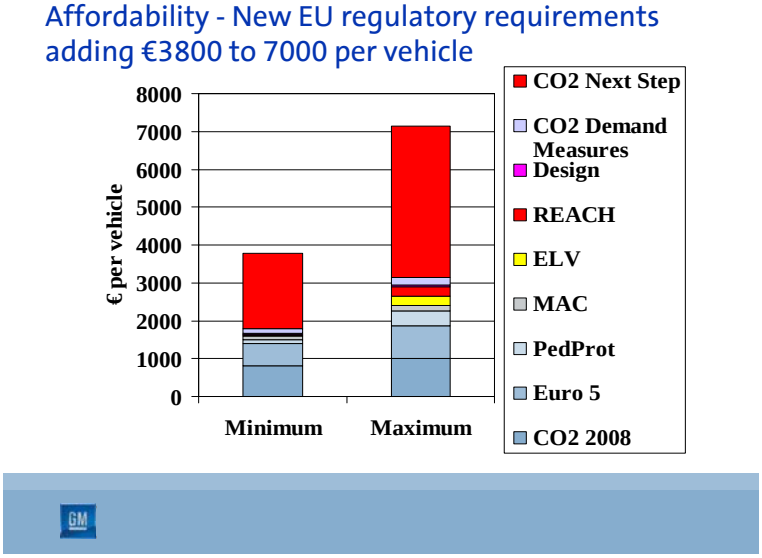
(*) Operating profit margin defined as EBIT / sale

While we have continuously introduced new fuel-saving technologies, customer demand and regulatory framework have driven conflicting requirements for vehicle manufacturers. For example, enhanced safety has been an increasing priority for policy makers and customers in Europe, resulting in significant increases in vehicle weight and size.

As disposable income increases, consumers are choosing to drive larger vehicles and ask for more options which add weight and detract from fuel economy. ACEA estimates that the auto industry would likely meet (or come very close to meeting) its voluntary commitment of achieving 140 g/CO2 average for new vehicles sold in 2008 but for the 6 grams of additional weight for mandated and quasi-regulated safety technologies and the 8 grams resulting from the shift in consumer preferences for larger vehicles with more features and benefits.

Total CO2 emissions from the total car fleet are strongly influenced by the choices that drivers make as to how frequently they use their vehicles and how they drive. One perverse effect of the fuel efficiency improvements made by auto manufacturers is the so-called "take-back effect" - by improving the fuel efficiency of our products, we have made it cheaper on a per kilometre basis to drive, resulting in consumers choosing to drive more because the marginal cost is low.

The significant new regulatory requirements which the EU is loading on vehicle manufacturers are negatively impacting vehicle affordability. In addition to the estimated additional costs of the proposed next step in CO 2 policy, the current voluntary agreement along with new mobile air-conditioning requirements, REACH chemicals legislation, end of life vehicle requirements etc are adding between €3800 and €7000 per vehicle today. This is putting newer, cleaner, safer cars out of the reach of millions of European consumers – sales in Western Europe today are flat and if volumes drop because the cost of vehicles goes up substantially, employment will be further impacted.

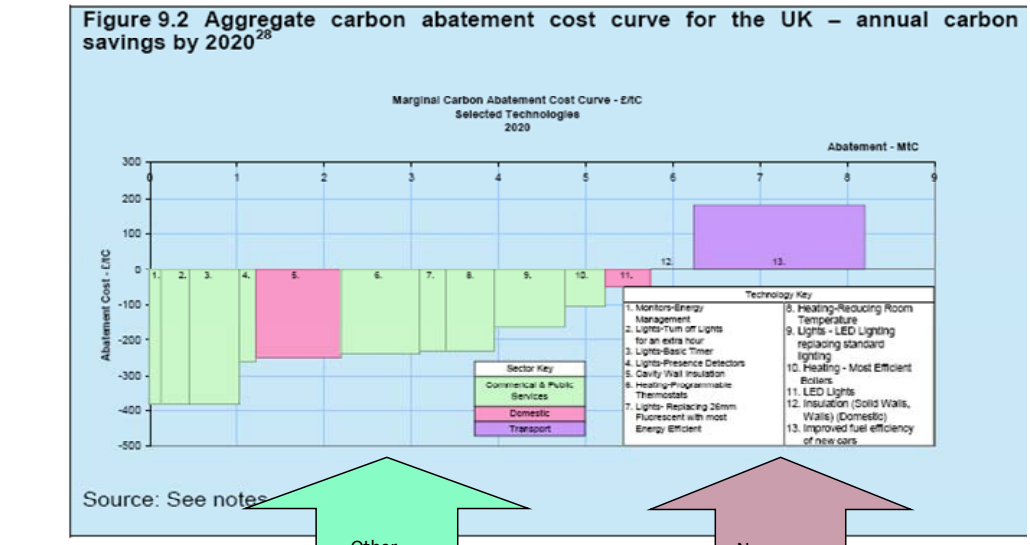


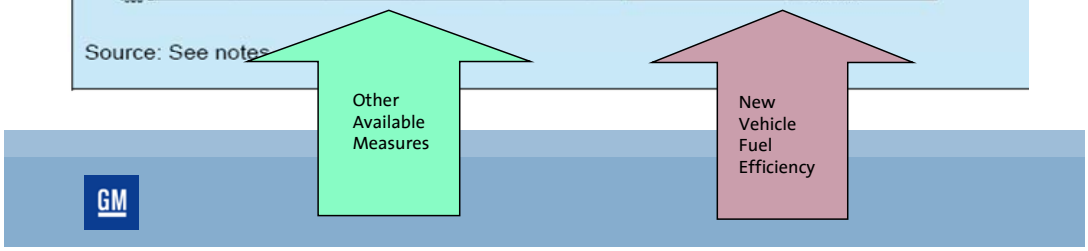
It is critical that any new CO_2 policy in Europe not drive compromises in safety and respect the need for an overall balanced and affordable approach.

The Community target of 120 g/km

GM supports continued CO_2 emission reductions in the EU. However, we note that the discussion is currently very narrowly focussed on vehicle technology which the Stern Report demonstrated are much more expensive than other available approaches including infrastructure improvements and eco-driving which competing economies such as Japan are utilizing in much greater proportion to accomplish their CO2 reductions. This will clearly have a disproportionately negative impact on European auto makers and the European economy, given the importance of the auto sector to our economy.

Stern Report Estimated Costs of CO2 Reduction Approaches





An Integrated Approach requires exploiting all CO_2 reduction potentials

Based on its impact assessment, the Commission is proposing to implement a target of 120 g/km by 2012 through a vehicle technology target and a set of complementary "demand measures" for which it proposes to provide credit of 10 g CO2/km.

However, the ECCP2 program concluded that a cumulated potential of Mobile Air Conditioning (MAC), Gear Shift Indicators (GSI), Tire Pressure Monitoring Systems (TPMS) and Low Rolling Resistance Tires (LRRT) was 6.9Mt, or the equivalent of 10g/km. In addition, we regret that the impacts of some measures, such as the gear shift indicator, are underestimated due to conservative assumptions. Thus, we urge the Commission to further assess the full value of these measures. We believe that the 5 g/km credit for low-blend biofuels is also understated, with their contribution limited to a 1% penetration according to ECCP figures.

Clearly, these measures offer a CO_2 reductions equivalent to or even more than 15g/km (and significantly more in the long-term through a fully Integrated Approach). Particularly given that customers will not be willing to pay additional funds for these technologies, we believe that automakers should be given full credit for the CO2 reductions that will result.

Full Credit of 10 g/CO2 should be given to "Demand Measures"

Demand Measure	[Mt CO_2]	[g CO_2/km]
Gear Shift Indicator:	1.5	2.0 – 2.5
Tire Pressure Monitoring System:	2.0	2.7 – 3.3
Air conditioner efficiency:	1.0	1.4 – 1.7
Low Rolling Resistance Tires:	2.4	3.3 – 4.0
Total		**9.4 – 11.5**

In addition, there are considerable cost-effective opportunities to further reduce CO2 emissions from the entire on-road fleet through eco-driving and infrastructure measures which the Commission has left out because they are not easily monitorable. However, the benefits of these initiatives have been demonstrated in several European programmes and the estimated CO_2 reduction potential of up to 50Mt from eco-driving easily balances far more costly measures such as a policy on N_1 vehicles.

Nevertheless, the industry is proposing an ambitious technology target of 135 g/km for 2015 – which will still require car technology to contribute more than 75% of the reduction from today's level.

Proportionality

The EU is attempting to reduce CO2 emissions by 20% from the 1990 baseline by 2020**.** Vehicle manufacturers have already achieved a 20% improvement in vehicle fuel efficiency; however, we are prepared to continue to contribute to further reductions in a fair and balanced way. The proposed objective will require approximately 4% per year improvement on average in new vehicle fuel efficiency between now and 2012 – or 8-12% per year between the time the legislative requirements are expected to be fully specified in 2009 or 2010 and the proposed effective date. This is much, much higher than the reductions demanded of any other industry sector. We believe that unless the European Commission wants to unduly impact the European auto manufacturing sector, it should establish a principle of fairness and proportionality in terms of its targeted CO2 reductions over the next decade.

It seems a logical principle that "he who consumes the energy should bear responsibility for the resulting CO2 emissions" – yet the proposed CO2 policy for cars places no responsibility whatsoever on the drivers who consume the energy nor does it propose to establish any signals to consumers to encourage them to make lower CO2 vehicle and driving choices. Similarly, there are no obligations proposed for those responsible for the roadway infrastructure to make improvements to ease congestion, thereby reducing emissions. Again, while we are prepared to be part of the solution in providing lower CO2 technologies on a source to wheels basis, a truly integrated approach would place proportionate responsibilities on all elements of the equation to achieve a truly balanced and more cost-effective approach.

Insufficient lead time

The CARS 21 process clearly determined that industry needs sufficient lead time to properly develop and validate new product designs. This does not mean that industry is not planning to and/or will not be able to introduce some additional technology within this time frame, but we do not have the ability to fundamentally alter the size, shape, material composition and powertrain technologies for all of our vehicle platforms by the 2012 timeframe.

Normally vehicle programs take seven years from concept initiative to start of production and are in the market for seven years on average. Powertrains are generally in the market for a run of about 15 years. These powertrain and vehicle programs are carefully cadenced to allow a fairly level schedule of work each year for each company's engineering staffs. For a company such as GM with many models and powertrain combinations, the cost and human resource burden to substantially redesign all of our vehicles within the allotted timeframe is prohibitive. And while aspirational targets have been generally expressed for some time, there is as yet insufficient specificity of what will be required of each individual carline for us to commit the hundreds of millions of dollars required to comply with any best guess of what the final regulatory framework might look like.

We note that in the same timeframe as the proposed CO2 policy, the industry already has a heavy engineering burden to comply with other new regulatory requirements, including REACH, mobile air conditioning requirements, Euro 5 and 6 emissions, and anticipated regulatory requirements yet to be specified such as Pedestrian Protection, Stability Control, etc. It is critical that the Commission take account of all of the competing priorities that is loading onto automakers and their customers in the same time period in terms of cost, engineering & supplier resources required and ensure reasonable lead-time,

In terms of timing of the regulatory process, the EU Council has asked the Commission to come forward with a regulatory proposal in 2007. If there should be further delays, there will be no official

proposal prior to 2008. Given the political process in Europe this means that legislation will likely not be adopted before early 2010.

Thus, industry will not have a firm basis for its plans before 2010, leaving 2 years for implementing all technologies. This will mean that the economic impact will be very severe and the risk of non-compliance (even with best intentions) will be high, while the incremental CO2 benefit will be relatively low. While we might consider a voluntary agreement to phase in certain measures beginning in 2012, we call on the Commission to establish 2015 as the date for full compliance with the vehicle target to allow a realistic and effective implementation of the future EU legislation.

Biofuels have a critical role to play

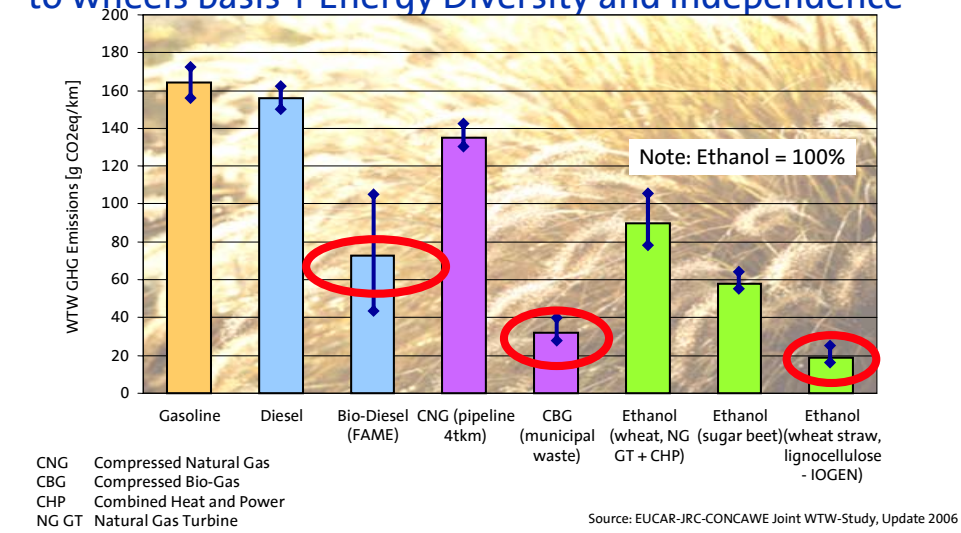
Some EU countries have already set greater energy independence as a key policy goal. With ever-increasing demand globally for personal and goods transportation, GM believes that this can only be met affordably and sustainably through the increased use of biofuels. We believe that Europe needs a strong EU biofuels policy today. In addition to environmental benefits, greater use of these fuels would reduce our vulnerability to geo-political conflicts, could add value to Europe's agricultural sector and assist in addressing other important environmental issues such as waste management.

Currently regulations allow for the direct blending of ethanol (replacing petrol) and biodiesel (replacing diesel) to 5 % by volume. Vehicle manufacturers such as GM have invested in the necessary technologies to enable all our vehicles to operate on these vehicles – but the Commission has estimated in its biofuels progress report that the market penetration of these fuels at the end of 2005 was only 1%. The first priority should therefore be for the EU and its Member States to ensure widespread availability of E5/B5 to fully utilize the technology cost which has already been expended by vehicle manufacturers.

Moving to the next step, such as 10% ethanol (E10), could also be accomplished under certain conditions – and again offers the opportunity to significantly reduce CO_2 emissions from passenger cars provided that a coordinated policy is established that addresses vehicle technology and fuel availability on a complementary timetable with adequate lead-times and provides continued widespread availability of E5 so that existing vehicles on the road are not misfueled.

GM strongly believes that the environment and the objective of the EU to reduce total CO2 emissions are best served by using cost effective vehicle technologies that run on high blend biofuels that are already available now. Bioethanol and biogas offer significantly lower CO_2 emissions from passenger cars on a source to wheels basis. The vehicle technology to use these fuels is available and cost-effective. For example, the vehicle technology cost to operate on E85 comes at a technology cost well below € 1000 and offers CO_2 reductions of over 70% on a source to wheels basis depending on the pathway. This compares to over €5000 for hybrid technology which enables fuel economy improvements of only 25% over conventional gasoline powertrains. Similarly, monovalent CNG vehicles are optimized to run on CNG and are capable of running on biogas (bio-methane) without any change (within reasonable quality parameters for the fuel). According the JRC WTW-study, both E85 and biogas are very favourable pathways in terms of CO_2 emissions reduction and cost efficiency.

Biofuels offer significant CO2 reductions on a source to wheels basis + Energy Diversity and Independence



What is needed are policies to ensure widespread availability of refuelling infrastructure and to encourage the rapid commercialization of very low CO_2 second generation biofuels (although we should not wait for second generation biofuels to be widely available before moving forward). GM notes the successful Swedish model which has very quickly provided widespread availability of high blends of E85 and biogas and a wide variety of vehicles that can operate on these fuels in the market. GM encourages the Commission to consider the key elements of this successful strategy in developing a pan-European strategy.

GM notes that wider availability of E85 and biogas could be an important element of the CO_2 Policy for Cars. We do not expect that E85 and biogas will represent the levels of current market penetration enjoyed by gasoline and diesel. But we do believe that its proportion can be increased significantly – and continued fragmentation of the internal market for these technologies caused by widely varying Member State policies makes it difficult to achieve the economies of scale which could make these low CO2 solutions even more affordable.

A supportive policy framework should contain elements to stimulate both supply and demand through:

1) A strategy to ensure that there is European-wide significant availability of the high blend fuels to provide an unfragmented internal market and allow manufacturers to make the vehicles available on a pan-European basis, and for consumers to obtain the necessary fuels wherever they travel within the EU;

2) Consumer incentives, such as reduction of registration / circulation Tax, fuel tax based on source-to-tank CO_2 emissions and exemptions from congestion and parking charges, that reflect the significant CO_2 reductions available on a source to wheels basis and which send strong signals to consumers to make the lower CO_2 choices

3) The CO_2 Policy for Cars should provide credits reflecting the source to wheels CO_2 reductions available from these vehicles. This could be done, for example, by adjusting the fuel economy rating for these vehicles by a factor reflecting the source to wheels reductions in the existing European CO_2 monitoring process. This would encourage vehicle manufacturers to make the necessary vehicles widely available in the market.

Longer term, biofuels such as E85 could be combined with plug-in capability to offer extremely low CO_2 solutions when operated on the battery charge for daily commuter/short-range applications (using unused power from the grid during off-peak hours with no net increase in CO_2 from this generation) and to power the vehicle engine when longer range capability is required.

These biofuels offer the promise of significantly increasing Europe's energy independence as well as offering greater value for European agricultural products (such as when second generation E85 is produced from the waste of European agricultural crops) as well as combining waste management strategies with energy independence (biogas).

The European Commission has indeed a critical role to play in establishing a policy framework to promote the necessary refuelling technologies and encourage consumers to purchase the new technologies that will contribute to lower greenhouse gas emissions and higher energy diversity and security of supply.

N_1 vehicles to be removed from the equation

GM strongly opposes the inclusion of this vehicle category in this policy at this time. We believe there a number of issues that have not been properly addressed in the impact assessment:

- No accurate baseline data on current CO_2 emissions from these products for target-setting is available
- Fuel consumption is already a key consideration for fleet customers meaning that this is already a highly efficient fleet
- Diesel engine penetration is currently far beyond 90% which means that this segment has already incorporated available fuel efficiency technology
- Payload capacity, box volume for utility, greater torque and intensive duty cycle requirements make it very difficult to improve fuel consumption
- Additional cost would be a significant burden on European businesses

The factors driving LCVs are very distinct from passenger cars and should only be considered - separately - when adequate data is available. To illustrate, the impact assessment has revealed only half of the CO_2 reduction for an N1-30g/km scenario when comparing it to LRRT at almost the same €/tonne CO_2 abatement cost. Moreover, we believe the assumptions on N1 reduction potentials are overly optimistic and this measure does not render reasonable results.

A regulatory framework

GM does not support a uniform fleet average target. We believe that it is essential that all vehicles contribute to further CO_2 emissions, but the regulatory framework must take into account affordability issues as well as the principles of physics which dictate that a certain amount of energy is required to move a vehicle of any size.

It is important that any regulatory scheme preserves the market diversity in Europe. Consumers have different vehicle needs based on family size, how much cargo they need to carry, where they live, how they use their vehicle, as well as based on tastes and desires. It is critical that the policy respect the principle of affordability in two ways:

1) Between segments - It must ensure that the cost of compliance is not so great on smaller vehicles that they become proportionally much more expensive, squeezing out customers who can no longer afford them on the one hand (so that they keep older, higher polluting, less safe vehicles on the road longer) and encouraging those that can afford them to move up in segment size (so that the fleet is shifted to the higher end), completely to the detriment of the CO2 reduction goals;

2) Within segments - It must ensure that there is not such an increase in cost for the most affordable vehicles in each segment that customers migrate to the higher cost offerings for which the marginal cost increase is much less.

On the target, the industry agrees that policy should seek ambitious –but **realistic** levels. As outlined above, complementary measures deliver higher CO_2 reductions than recognized by the Commission. Therefore, those potentials have to be equally considered in the target setting. We therefore do not see that a figure of 130g/km for the fleet average is neither a cost effective nor an achievable target.

Further, the EU policy should avoid lifestyle regulation, such as the ban of certain high CO_2 emitting vehicles. Usually, these vehicles are sold in limited volume with negligible CO_2 impact.

The properties of a weight-based proposal

Vehicle weight has been discussed most often as the appropriate metric for an attribute. A weight-based system can be designed to address some of the concerns about the interaction between safety and CO_2 goals that make a uniform fleet average target problematic.

We are not in favour of other proposed options such as using vehicle size (e.g. shadow area) or a combination (e.g. vehicle weight and shadow area). In our view, weight is more strongly related to the CO_2 emissions of the vehicle than any other attribute; it enables continued safety improvements; and it is an attribute widely available, understood and studied. For example, curb weight is far better correlated to CO_2 than shadow area. In looking at the best "fit" of a mathematical "curve" through a data set of a (non-sales weighted) trend for curb weight and CO_2, this correlation provides for a significantly better quality ("r-squared value") than compared to CO_2 as a function of the shadow area. Furthermore, other attributes tend to act as surrogates for weight in any analysis, and relying on them for a CO_2 regulatory scheme is likely to create incentives to "distort" the characteristics of product offerings in unforeseen ways. In addition, trade-off exists between the simplicity of a system based on a single attribute, such as weight, and a more complicated multi-attribute system. Most of the advantages of such a system – safety improvements, economic impacts and social equity -- could be achieved through a single-attribute system.

We support a continuous function approach (rather than step-function) because it would make the standard-setting process more robust and removes arbitrary determination of how many weight classes are defined and the "cut-points" necessary to define the end points for each class. A continuous system can, and should, be modelled upon the actual relationship of CO_2 emissions and weight.

Flexible Implementation to safeguard diversity and reduce overall cost of compliance

Flexibilities allow all key players in the market place to reach targets most cost-effectively. As already outlined above, GM supports a continuous function which would remove "edge" effects and supports setting weight-based standards. Another aspect of setting weight-based standards is whether to use a system that is model specific or a system that is based on manufacturer fleet average weight calculations. Providing sufficient flexibility helps to resolve a series of difficult issues that would otherwise exist with model specific standards. As an example, this approach avoids the need to ban specific higher CO_2 emitting vehicles sold in limited volume, which have negligible impact on the environment.

Averaging provides needed flexibility to balance higher and lower CO_2 emission models within a manufacturer's fleet as well as allowing portfolio flexibility to meet market needs. Without fleet-wide averaging or credit trading, manufacturers would be pushed in the direction of making costly incremental CO_2 emission improvements in all of their models, rather than allowing larger CO_2 improvements on individual models or powertrains at regular product-cycle change points. Flexibilities encourages manufacturers to invest in technologies, which can be applied throughout many models, to gain substantial CO_2 improvements that can be averaged across a manufacturer's entire fleet – or to reach for “moon-shot” vehicles that are relatively more expensive but extremely low in CO2 to continue to move technology development forward. Use of fleet averaging solves this issue since different discrete weight classes are not used and the "class" can be defined as the entire weight spectrum, e.g., one class of vehicles from the very lightest to the heaviest. Fleet average weight when coupled with a continuous relationship decreases the sensitivity of the standard to the slope or shape of the curve. This is because manufacturers' fleet average weights appear to cluster around the industry average, so standards become less sensitive to the lower weight and higher weight regions of the curve.

We would also like to see “Banking” which would allow OEMs to comply with legislation over a “rolling” time-period, by carrying forward credits or debits. We believe this could significantly reduce compliance cost as it allows to buffer single market events such as product run-outs, model shifts, and seasonal fluctuations in car sales.

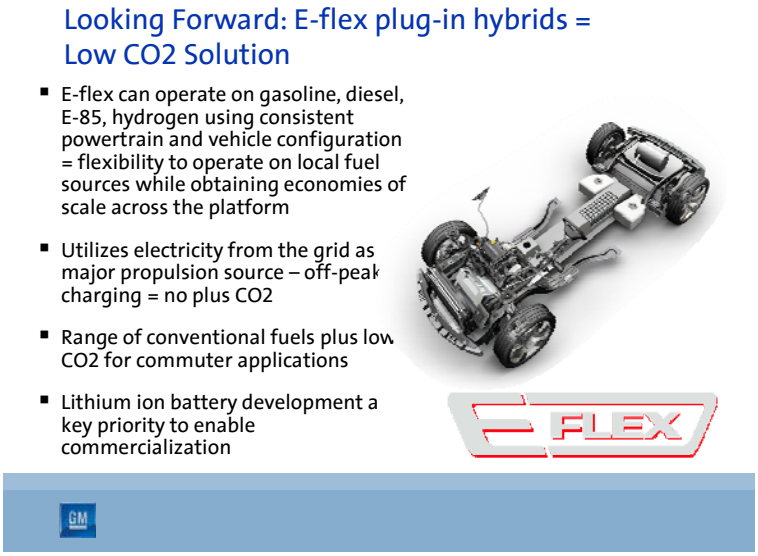
Another key enabler is the ability to earn credits for putting on the market alternative fuel vehicles, such as E85 flex fuel vehicles or biogas vehicles. As previously indicated, biofuels have potential to reduce CO_2 emissions to almost zero on source to wheels basis, depending on feedstock, production method, transportation distances, etc. They also offer energy diversity, energy independence and added value to European agricultural producers. If appropriate credits are provided, reflecting the source to wheels reduction potential, automakers will be encouraged to spend the necessary funds to make vehicles which run on these low-CO_2 technologies available. Thus, GM proposes that for CO_2 policy compliance purposes, a reduction factor is applied to the type approval fuel economy rating to reflect the low source to wheels CO_2 emissions of these vehicles.

The EU Council in its conclusion of 28 June supported a long-term strategy and invited the Commission to propose a long-term objective for 2020. Thus, the EU Strategy should also consider credits to pull-ahead technologies which are still in the early stages of development and commercialization but which may offer very significant CO2 reduction opportunities in the longer term. Given the constrained profitability of volume automakers and the significant resources that will be required to

comply with the proposed CO2 policy, there is a very real risk that these longer term technology development programs will be "crowded out" by the cost of near-term incremental gains to achieve compliance with the policy.

Support for Longer Term Technologies

As indicated, GM is pursuing a multi-fuel strategy that leads to wider vehicle electrification. We have significantly expanded and accelerated our commitment to the development of electrically driven vehicles, including fuel-cell vehicles and extended-range electric vehicles, like the Chevrolet Volt. The CO2 policy should ensure that the anticipated actual very low plus-CO2 emissions from these vehicles operating in real-life should be reflected in the type approval fuel economy rating so that automakers are encouraged to accelerate their introduction to the market.



Looking further ahead, Hydrogen Fuel Cell Vehicles offer zero smog-causing emissions, and zero CO_2 emissions (depending on H_2 source). GM has several hundred engineers deployed in Europe in developing and bringing this technology to market.

Ultimate Solution: GM's Fuel Cell Program

Unfortunately, progress in establishing a private-public partnership approach to funding hydrogen fuel cell technology development under FP-7 has been slow in Europe compared to other auto-producing countries which are already partnering with automakers on the next generation of fuel cell technology development. Other jurisdictions have also established a "super credit" approach that incentivizes early introduction of these types of extremely expensive technologies which are still in their infancy by counting every hydrogen fuel cell vehicles as equivalent to a large number of normally-powered vehicles for compliance purposes. The practical effect in real CO_2 emissions is very small, but automakers have been encouraged to put significant volumes of hydrogen fuel cell vehicles in market very early as a result.

The EU risks being left behind in development of these important technologies for the future if it does not establish strong policies to encourage their development within or as a complement to this relatively short-term CO2 policy for cars.

Role of taxation as a critical enabler

The EU Council called on the Member States to examine whether a CO_2 based vehicle tax and other fiscal measures can be given greater weight. GM regards car and alternative fuel taxation as significant policy levers in steering the new vehicle demand to fuel-efficient technologies and consequently to achieve sizeable CO_2 reductions (as distinct from pure taxation measures whose primary or exclusive purpose is to raise revenues). Linking taxation and alternative fuels to CO_2 emissions offers an opportunity to reduce transport-related CO_2 emissions immediately and to complement the efforts of automakers to offer lower CO2 technology vehicles by sending the right signal to customers to choose lower CO_2 vehicles and to make lower CO2 driving/mobility choices. This will serve to drive customer awareness on the CO_2 issue

While we recognize that taxation is a Member State competency, we ask the Commission to take a leading role in this discussion to drive as much as possible to a pan-European approach. The automotive industry is already suffering from fragmentation of the internal market through widely varying tax and vehicle technology incentive policies. To cost-effectively achieve CO2 reductions will require a market the full scale of the entire EU.

Summary

As a leading global auto manufacturer, GM is committed to developing alternative sources of propulsion to meet the world's growing demand for mobility, while addressing climate change, energy diversity and other key sustainability priorities such as safety and affordability. We are committing massive resources to this effort – but we cannot do it alone. We need a constructive public policy environment that rewards and encourages lower CO2 vehicle technologies in a realistic regulatory framework, with reasonable timelines and with the requisite lower CO2 fuels.

In the near term, there is considerable untapped potential for significant cost-effective reductions in CO2 emissions through increased use of bio-fuels such as E-85 and biogas. The CO2 policy needs to provide appropriate credit for these technologies, reflecting their source to wheels emissions and the Commission needs to ensure the fuels are widely available, the rapid commercialization of even lower CO2 second generation biofuels and that consumers are sent the right signals to uptake these technologies.

GM is making a major commitment to electrically driven vehicles, including development of plug-in hybrids, range-extended electric vehicles like the Chevy Volt and hydrogen fuel cell vehicles. While not yet ready for "prime time," in our view these technologies are getting closer to commercial reality and a constructive public policy should encourage their continued development and commercialization.

We call for a policy that provides full credit for demand measures, and sets a fleet average target of 135 g/CO2/km in 2015 as being an ambitious – but achievable – target, considering the volume of other regulatory requirements coming in this same period, severely constrained profitability for mainstream manufacturers and the fact that millions of Europeans today cannot yet afford a vehicle.

GM calls on the Commission to pursue a solution implementing an Integrated Approach and thereby allowing manufacturers to sustain their business in Europe. At the same time we are committed to developing and bringing to market technologies that will make a significant contribution to CO_2 emission reduction.

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