Levegő Munkacsoport

The state and possibilities of decarbonisation of transport – the Hungarian view

Interviews with stakeholders:

Hungarian Rail Association
Institute for Transport Sciences
Hungarian Auto Club
Hungarian Electric Vehicle Association
Ministry for National Development
Ministry of National Economy

by Pedro Nunes

under the supervision of András Lukács and Márton Vargha

Budapest, October 2015

Introduction

The European Climate Foundation (ECF) Transport programme's 'Winning Over the Member States' (WOMS) strategy intends to support effective advocacy towards European Union (EU) Member State governments in order to positively influence EU legislative processes on transport issues concerning climate protection. The WOMS strategy has succeeded to date by funding well-established national NGOs to perform activities in support of specific EU transport policies. Co-coordination of this strategy has been performed by the ECF grantee the European Federation for Transport & Environment (T&E), which is well suited for this task given its vast network of European members and contacts to other groups. The Clean Air Action Group (CAAG), a Hungarian member organisation of T&E, is also a grantee of ECF and active participant of the WOMS project.

I worked for four weeks at CAAG within the framework of the WOMS project, in agreement with the Pioneers into Practice 2015 Project of the Climate-KIC Program of the European Innovation and Technology Institute. My task was to make interviews with various stakeholders on the nowadays progress and possibilities of decarbonisation of transport in Hungary. The questions partly related to the situation and plans in Hungary, and partly asked about the position of the Hungarian government on the EU's policy on the topic. During these four weeks – after the initial preparation work – I succeeded to make interviews with six different stakeholders. On the following pages the main points of the interviews are highlighted (i.e. these texts are not word by word transcription of the interviews).

Pedro Nunes
University of Lisbon

Interview with
Mr. László Mosóczi, President of HUNGRAIL, the Hungarian Rail Association

14th October 2015

Pedro Nunes – According to the Eurostat, in Hungary from 2002 to 2012 the passenger travelling by train was reduced almost 30%, decaying from 14% to 10% of total passenger travelling. The transference was to the private car, since buses lost quota, as well. What is being done to prevent this tendency?

László Mosóczi – You are right. It decreased since 25 years ago from 215 million passengers per year to 115 million passengers, a loss of 100 million passengers. This was due to the change in the regime, which lead to the demolition of the busiest Hungarian industries, and so people lost their jobs and no longer had the need to travel. In the last 15 years there were two problems: first, a big tendency to private car transportation; second, the placement of railway stations in Hungary are not the best for the passengers, since in many cases they are at the outskirts of towns and villages..

PN – But, although, you have a very good density of railway stations.

LM – Yes, but in 70% of them they are not in the city center, contrary to bus stations. In the end, people choose the better for them, buses, because the price is almost the same. So, the private cars and the buses are big problems for railways, and until today the government didn't address this issue. But now the passenger transport company is working on better timetables, especially in the suburbs of Budapest, in order to offer trains every 15 to 30 minutes, offering better possibilities for passengers. Of course they need the necessary infrastructure to do this; for example, in single track lines the capacity of the line can be very low, and so it is needed to create two tracks lines, or better interlocking. The aim is to implement this.

PN – I believe in Hungary almost 70% of the railways are single track lines. Even if you want to reduce this by just 10%, it's a big investment. Are there funds for this?

LM – Two tracks are not needed everywhere. For example, between Budapest and some outskirts there are single track lines with good capacity, offering good service, because there are parts in that lines, strategically located, that are double tracked. In the rest, single track is enough. This has to be coordinated with an infrastructure based timetable.

PN – Changing for the Budapest-Vienna connection: It seems that it became quite popular. Can you use the experiences on this line to make other lines more attractive for the passengers?

LM – That is the most frequented line, not only of passengers, but also of freight. And it is only dual track. Cargo has a top limit of 100 km/h and passengers 160 km/h, but not every train reaches these speeds. It is an interoperable electrified line with max of 225 kton per axle load, and we want to modernize it with improved systems to increase its capacity. It is an example to other lines of what technical parameters are necessary, although there are other lines with the same parameters. But in some other lines 120 km/h is enough, which allows lower parameters.

PN – Hungary has a very good railways network density, one of the best in Europe. Why it does not take advantage of this for freight cargo?

LM – Before the crisis in 2008 the numbers were 55 Mton and it decreased to 45 Mton. There is one important thing that Hungary could not have avoided outside of Hungary: the

reconstruction of an important freight corridor after the Yugoslavia war, which diverted cargo from Hungary. The other important thing is that it ended the quite big amount of freight trains that we had before from Russia, because of their situation with Ukraine, that diverted that cargo to Slovakia. Let's hope this situation will be resolved. Also an important amount of cargo of iron from Ukraine was diverted to ship in the Danube.

PN – Is the railways freight cargo increasing due the introduction in 2013 of the truck electronic toll system in Hungary?

LM – Based on the international statistics, an increment of 6% was expected. However, it was insignificant, maybe 2%. There is for this an important question, not just in Hungary but in all Europe, which is the single wagon load transportation. A company chooses it when wants to dispatch one or several wagons at the time to a specific destination, but does not have enough quantity to fill a full train. This is very expensive, and the companies are always begging for state subsidies on that. This is why train is just used on distances over 100 km.

PN – That, as you said, happens in other countries, as well. Why on those other countries the increment in railway freight due to the e-toll was on average 6% and in Hungary just 2%?

LM – Maybe Hungary is a too small country. This e-toll does not add any big additional cost to the truck freight due to the size of the country, and the companies can internalize it in the price of transportation. Moreover, they don't have to pay on each road, and a lot of drivers avoid the paid roads.

PN – So, it seems that you are saying that the e-toll system was not properly implemented…

LM – I think it was properly designed, but the market can afford it. Of course the freight traffic is expensive, and that's why there is only a small transference. Everywhere in Europe the railway operators have to pay infrastructure access charges, which in the eastern part of Europe are much higher than in other regions. For example, in Sweden the railway operators pay 6% of the total infrastructure cost; in Lithuania 100%. Hungary is in the middle. The revenues from the e-toll system cover only the cost of the road maintenance.

PN – The cost of the cargo ton-km by railway is cheaper than the one by road, right?

LM – It depends. For coal it is cheaper, but for living stock or food it is more expensive.

PN – In the last decades we have seen that goods are transported increasingly over longer distances, and that is in the longer distances that the train has advantages. Why even in these distances the road is preferred?

LM – First, the security is also important here. There are parts of Europe where it is more secure to transport goods by truck. Second, the travel time. It can be much slower by train. Third, accountability: if there is a delay by truck, the logistics company is responsible; by train, the responsibility cannot be attributed to someone in particular, because there are several parts involved.

PN – It seems you are saying that truck transport is better than train.

LM – Our association tries to have for the railways the same conditions that exist for roads. The e-toll was important, because before its introduction the road transport companies didn't have to pay for the infrastructure, as the railways companies always did. However, they still don't pay so much as in the railways. Concerning the deliveries of dangerous goods, we would like to have the same conditions as roads have; for the rail, the conditions are more demanding and expensive.

PN – Are Hungarian railways taking enough profit of being in the middle of an important freight corridor between Western Europe and Asia?

LM – The railway freight is a very profitable business. For the infrastructure company freight is very important, because it allows more traffic on the lines and with that the fixed costs of the infrastructure are better recovered. The state also benefits, because it subsidizes passenger trains, but not freight trains. If freight trains cover the fixed costs, the state has to pay less for the passenger trains for the use of the infrastructure. Our association is working so that those routes are made through Hungary. So, it is in the interest of the state that the railways have the proper capacity, and our association proposed a policy that favours security, competitive price and good traveling time. This way, the operators will choose the Hungarian direction, even though if they want they can avoid it.

PN – Are the technical disparities between the railways of Hungary and the ones of the surrounding countries being addressed?

LM – To have international traffic, it is necessary to have so-called inter operable systems in the corridors. Each member state has to have them installed, and so what counts is the condition of the lines, which determine their capacity and travel times. In Hungary the corridors are not as good as in Austria, but are much better than the ones in Serbia, Ukraine and Romania, and on pair with the ones of Croatia and Slovenia.

PN – How is the development of the single European Railway Area and what can it bring to Hungary?

LM – The goal of that is to increase the percentage of the railway traffic among the total traffic in a competitive and secure way. That's why the need for the interoperable systems and the unique common regulations between countries. In the past twenty years the EU could not stop the decline of railway traffic, but it decreased its rate. Without these regulations the situation would be worse. But it also implies expensive modifications that sometimes have no payback.

PN – Why are there no Hungarian plans in what concerns high velocity trains? Why Hungary didn't apply for EU funding to this?

LM – I do not understand it. It would make sense between Budapest and Vienna and between Budapest and Bucharest. The government thinks that there is not enough passenger demand. Anyway, it wouldn't make sense between Hungarian cities, because the country is small and has just 10 million people. It had to be between Budapest, which has 3 million inhabitants, and other big cities, but the only one is Vienna. It has to do also about the economics: the costs of high speed train are high, and the income of the families in certain parts are low.

PN – How do you plan to reduce the emissions of CO2 and other harmful substances from railways? Among others, do you plan to retrofit existing diesel locomotives with particle filters?

LM – First, we need to electrify the lines. In the next three years four more lines will be electrified, representing around 400 km. Second, we are planning the retrofitting of train stock.

PN – In your opinion, what are the biggest challenges that Hungarian railways face nowadays?

LM – The biggest challenge is to have a bigger participation in the international freight routes within Europe, like between Turkey and Europe, which is increasingly important. In the passenger side, particularly in the vicinities of Budapest, we should work to improve the service.

Interview with researchers of the Hungarian Institute for Transport Sciences (KTI)

19th October 2015

The KTI team taking part in the interview was led by KTI's Director for Transport Informatics and Environment, Mr. Richárd Szabó, and included head members of the different areas where KTI acts, namely technical legislation, research, measurements and environment. KTI is a research center of the Ministry of National Development, responsible for transportation.

A presentation about the transport greenhouse gases reduction measures in Hungary was made in the beginning. The main measures presented were:

- Minimizing traffic congestion;
- Minimizing route length;
- Biofuels;
- Electric vehicles charging network;
- Promoting non-motorized transported;
- Eco-driving (environment friendly driving behaviour)

Pedro Nunes – Hungary has about 30% of greenhouse gases emissions related to transports. It seems that there is space for this number to grow, since there is a big planned expansion of the highways network.

KTI – Not as much. First, that enlargement aims to decrease the traffic to the cities, acting as a bypass. Second, it will decrease the fuel consumption. For example, in transport, trucks have a great responsibility regarding CO2 emissions. If they have the chance to take shorter routes between east and west and north and south they will emit less CO2.

There is also a counterbalance, which is a big planned investment in railways, about 1 billion Euros in the next seven years. This is the main development regarding infrastructures.

Also, KTI is preparing a study about the development of a charging infrastructure for electric vehicles that will be delivered to the Ministry; it contains impressive goals, but their implementation in the end depends on the money.

PN – Do you plan to have tolls on those highways?

KTI – For cars, they are included in a flat rate fee that can be paid weekly, monthly or annually, depending on the region.. It not a gate system, like in some other countries. For vehicles with permitted laden weight of more than 3.5 tonnes, the toll depends on the distance traveled and (to a much lesser extent) on the environmental characteristics of the vehicle.

PN – Does it include for example plans to install charging stations on the highways? How many?

KTI – Yes. The type was adopted by the government just one or two months ago, and it is a big step. It is planned to create between 5000 and 6000 charging points, with a first installation of about 500. In the highways are planned fast chargers every 100 km.

PN – Do electric cars owners have some special benefits?

KTI – There is a new legislation in preparation, including free parking, use of bus lanes, special registration tax. But everything is being prepared.

PN – Pollution is a major health hazard and in consequence a financial burden, originating in Europe 600 000 premature deaths each year and a cost of about a tenth of the GDP,

according to the World Health Organization (WHO). Diesel exhausts alone account for a great part of this. Numbers of this kind are known since many years, and yet in Europe we have a car certification system of emissions that is a farce, where the companies that do the tests are paid by the car makers, something which corrupts the system and gives origin to practices such as cars being tested without wing mirrors to reduce drag. All of this legal. What's your take on this? What should the Hungarian government do in order to change this situation?

KTI – At the moment there is in preparation the new European test, in real driving conditions, which is quite independent. The discussions about it started in 2008, that is, much before the VW scandal. The discussion is in course, with big fights between the environmental protection agencies and the carmakers. I believe we are approaching the final formulation of the new test procedure, and Hungary supports it. This is the so called type approval. It is not included in the periodic technical control of the vehicles. But there is here a problem, because Hungary imports many old cars from the Western Europe.

PN – Do you think it's reasonable to impose limits on the exhausts of the imported cars?

KTI – Yes. There are already some legal aspects that started to go in that direction. For example, the registration fee is dependent on the Euro level. Of course it is important to strengthen this dependence. But in practice there are some cars that are prohibited to import because the tax on them is so high.

PN – The recent VW scandal arose a problem that was very well known before, but that was swept under the carpet. I'm talking about the fact that diesel cars pollute much more than the figures tell, on average. Moreover, they emit much more CO2. Do you think that the new WLTC test procedure will be the answer? What does the Hungarian state do just now for the decreasing of the gap between the test emissions and the real drive emissions? What is the role of the KTI in the preparation of decisions in this field?

KTI – The role of KTI is that we are participating in the preparation of the legislation, in the context of the EU. Of course. we can try to influence the Hungarian stakeholders, but we have to represent the Ministry to which we belong. In practice, before every session in the EU, we make a long table meeting here with experts that we invite, collecting suggestions.

We also have equipment to do full cycle driving tests, having participated in many EU projects related to these tests, testing for example the emissions and consumption of cars with the air conditioning turned on.

András Lukács – But that test is not on the road…

KTI – That's different. What you mean is the European cycle standard test, which do not simulate real driving conditions; instead, its purpose is to compare different cars, or different engines, with different ages, and so on. It gives a comparability, nothing else, under standard conditions. It was created late in the decade of 80s, early 90s, and represent the driving conditions at that time.

Nobody said these tests deliver exact truthful results. Later will be introduced the PEMS test, Portable Emissions Measurement System, able to measure the real life consumption and emissions of a car. Of course it is very difficult to standardize it all over Europe, and that's the issue in discussion.

AL – Are you able to do that test?

KTI – Next week will meet with a supplier of that instrumentation in Graz, Austria.

PN – Even after the introduction of the WLTC procedure it is believed that the cars will emit in average real life conditions at least 15% more than on tests. This brings out an important question, which is the drivers' behaviour. Indeed, if they wanted, or if they knew, they could

achieve much better emission figures. So, this could be an important field to act upon. But how?

KTI – The problem is that we can standardize roads, engines, and so on, but we cannot standardize the thinking and behaviour of drivers. A standard behaviour doesn't exist. We have the Eco-driving program, which aims to act on the drivers' thinking in order to reduce fuel consumption. We have here at the Institute an eco-driving center equipped with an appropriate driving simulator to teach what is eco-driving.

PN – In Budapest it is often seen drivers inside their cars stopped but with the engine running for nothing. This happens to with buses. Do you plan to act on this?

KTI – We have investigated this, and it must be said that if the time stopped is less than half a minute then it is better to not turn off the engine, since its restart implies more emissions than the running. The new cars also have the engine stop and go system.

We did an experience in a railway intersection, where the truck drivers had to be stopped waiting for up to ten minutes, with an average of five minutes. We found that half of the drivers didn't turn off the engine, even with appropriate weather. With a sign that we put up, that share was reduced to 30%.

PN – Don't you think eco-driving should be mandatory in the driving schools? Is the government doing something in this line?

KTI – Yes. There is a traffic safety center in high schools, in where, besides security, we think to teach about eco-driving.

PN – In 2014, the average van sold in the EU emitted 169 g CO2/km (preliminary data). This is significantly below the 2017 target, of 175 g CO2/km, which was already reached in 2013, four years ahead of schedule. It seems that the legislation is permissive regarding vans. Why this and what is your opinion on how this legislation should be?

KTI – It has to do with dieselization, where vans did a transference from petrol to diesel. It has to do also with the fact that the engines of passenger cars, with tougher standards, are also used in vans.

PN – CO2 emissions from heavy duty vehicles are unregulated in the EU. The United States by contrast in June proposed tighter standards on truck CO2 emissions. Recently, Britain and three other countries have joined calls for mandatory EU limits on the amount of CO2 pumped out by trucks, which account for 30% of road transport emissions. In your opinion, what could be done to reduce the CO2 emission of trucks?

KTI – We are working on that regulation, starting in 2020. The testing banks, computer simulations and so on are being conceived. It is difficult to define a standard, since the heavy trucks are very different between themselves, with different capacities, different axles, different length, etc.

PN – That is also true for the US, and they did it.

KTI – Yes, it's true…

PN – We saw during the last decades a transference of freight transportation from trains to trucks and of passengers from trains to the private car. Do you think the train is condemned to a small share of transportation in the modern countries? What is the cause of this process in Hungary, and do you have any plans for increasing the share of railways in freight transport?

KTI – It has to do with the speed of the cargo trains. There are several lines where passengers share the line with cargo, having the former priority over the latter, implying that the cargo trains are sometimes stopped several hours to not disturb the passenger traffic.

PN – What do you think is the future of transportation, in medium and long term? Driverless cars? The Hyperloop concept that it is being promoted by Elon Musk, which is a high speed transportation with reduced-pressure tubes in which pressurized capsules travel on an air cushion? It is said that a pilot in California will start soon.

KTI – If we consider that Euro 6 and, later, Euro 7, are to be introduced, and that cars lifetime is ten to fifteen years, the background is given to have in 2040 or 2045 a clean car stock.

PN – The target is to lower the emissions in EU by 80% to 95% in 2050… Do you think that is enough to reach this?

KTI – There are lots of new futuristic ideas that are abandoned in favour of more classical transport ways, but improved. It is the case of the electric engine. If combined with ultra-capacitors, they are a promising option. Regarding the targets, they are given, but not the ways to achieve them. The white paper for transportation does not give the ways to achieve them outside the classical means of transport.

There is the EU Quantify project, quantifying emission factors for different parts of the world. One can make a very good forecast until 2050 about the technical possibilities to reduce emissions. Hybrids is a part of the solution, but there are much more ways to reduce emissions, because the efficiency in the engines is still very low. In the end, everything depends on the economic development of the world and of disruptive events. If nothing happens, then probably electricity will rule.

Also, in ten or twenty years we imagine the cars will not be more a private asset, they will be part of a growing sharing economy. But even if we reduce emissions in Europe, we have to know that our old cars go to Africa and other regions and live decades, sometimes almost indefinitely. It means that what we will achieve in Europe in 2040 they will achieve much later.

Interview with Mr. Tamás Vörös, General Secretary of the Hungarian Electric Vehicle Association (Jedlik Ányos Klaszter)

20th October 2015

Pedro Nunes – What does your association do and how?

Tamás Vörös – It promotes the electric vehicle (EV) and tries to figure out the steps for the government to spread the electric mobility. It provides counselling and suggestions to the government on that matter.

PN – In practice how do you achieve that?

TV – We have for workgroups in our association: transportation, innovation, laws and energy. The members are making guidelines in these sectors, not just for the government, but for the public as well, which is similarly important. We are working on the Jedlik Ányos Plan, an e-mobility ambitious plan, where the Hungarian government describes accurately the steps in order to spread this technology, and we support it, making suggestions and providing counselling, as well as organizing events to promote the EV. We act also on qualifications.

PN – How many collaborators do you have in your association?

TV – It is a pyramid shaped cluster of several organizations, which on the top is our nonprofit association, acting as an umbrella.

PN –Where do you get funds from?

TV – For the members: there is an entering fee and a membership fee, which is the basis of the funds. We don't depend on state money.

PN – What are the plans and measures of the Hungarian government to promote e-mobility in Hungary and the EU?

TV – We will know that exactly at the end of November when the Jedlik Ányos Plan would be known in detail. I can tell you about our suggestions. The biggest obstacle to the EV market uptake is its price, and we proposed measures to reduce the price. It may occur through a deduction in the VAT or registration tax or in indirect donations to future owners. The second obstacle has to do with its use, and right now there is no infrastructure, with just about 60 regular public chargers installed and very few rapid chargers. We would like to see 150 rapid chargers installed during the next year. We would also like to see in the city centers regular and rapid chargers installed. We haven't defined an exact goal for this, but in the future we think that the EU objective of one charger for each ten EVs is a good goal.

PN – How many EVs do you have in circulation right now and how many are foreseen for the future?

TV – We have about 100 right now and we foresee, optimistically, 30,000 EVs in circulation in 2025.

PN – In the beginning you'll need far more chargers than the market needs. Who'll pay that?

TV – We won't find a player willing to invest in 150 chargers to install them by next year, so it must be the state. It's this way everywhere.

PN – Are EU funds available for that?

TV – Yes. A quarter of the financing needs In the Jedlik Ányos Plan comes from that.

PN – Have you proposed the installation of a specific charger model? How will it be the model to their use?

TV – No, we believe that the market will decide that. About the use, what's important is to be simple and user friendly. This is the first layer. The second is how the system operator will get the money, but that's not defined yet.

PN –Did you purpose something about the EV battery commercialization model? For example, a battery leasing model?

TV – We believe the market will have in the future better and more affordable batteries. It's difficult to know what will be the best model.

PN – Based on the current electricity mix, what are the current CO2 emissions per km of an EV in Hungary?

TV – We don't have that information.

(Answer: if the CO2 emissions are 0.6 kg/kWhe[1], and the EV consumption is on average 0.15 kWh/km, the average EV emission will be 90 g/km.)

PN – Do you think the EV sales will benefit from the VW diesel fraud? Is your association trying to exploit this scandal to the benefit of EV sales?

TV – One of our members is the Porsche group, a very important investor and manufacturer in Hungary, with the Audi factory. We don't want to ride this wave.

PN – Do you promote also hybrid vehicle?

TV – We want to make more popular the pure EVs. That's the technology we mostly believe in, our number one technology. Secondly, we support the extended range EV, with an internal combustion engine that can charge the battery when needed. We don't support the original hybrid vehicle, just the plug-in version, which is the third technology we support.

PN – Given this polemic, will you support a future diesel hybrid?

TV – Yes. We believe in the diesel technology, particularly the ones based in the Euro 6 norm. There are some diesel engines with fewer emission than, for example, a Porsche plug-in model.

PN – Are there any parking benefits and other for EV owners in Budapest and other cities?

TV – Not yet, but there are plans to provide free parking and permission to use bus lanes. We would like to see this for three or four years, until we a have a reasonable penetration of the EV in the market.

PN – Did you purpose the EV to be exempt from the new congestion toll to be introduced next year in Budapest?

TV – No, because the congestion toll doesn't exist yet and we don't know how it will work

PN – What is your Association position on the supercredits that are given to carmakers for sales of ultralow carbon vehicles? In a way it promotes the EV, and in the other way it allows for sales of more polluting carbon vehicles. In the balance, is this good or bad for the EV sales?

[1] http://ecometrica.com/assets/Electricity-specific-emission-factors-for-grid-electricity.pdf

TV – I think the EU is interested in promoting these technologies, not just for the sake of the environment, but also for economic reasons. It's legitimate.

PN – What are the main barriers do you think the EV have right now? You mention the high price and the lack of infrastructure. What about the range?

TV – It is just the third obstacle. The price is by far the main barrier. The payback of owning an EV is 10 years or more. We are mostly focused on this.

PN – When do you think EV will be competitive without subsidies?

TV – Five to ten years, depending on the global market and on the price of the oil. The mass production will make its price decrease. In that period of time the EV will be a rational choice.

PN – In your opinion where is the place of the EV inside the personal mobility now and in the future? What about the role of the EV in the growing sharing economy?

TV – I guess everybody likes to own a car; it's more comfortable. It is not foreseeable that everybody will use shared cars, unless in city centers, or for transporting furniture, for example.

PN – But the young generations cannot afford to buy cars like the old ones…

TV – It depends on the level of the economies. If the countries return to have enough wealth so that everybody can own a car, everybody will own a car again.

PN – So far electromobility is an enormous success as far as two-wheelers are concerned. For example, there are 2 million e-bikes in Germany, and more than 200 million in China. What work are you doing in order to promote e-bikes and e-mopeds in Hungary?

TV – Yes, we support e-bikes. We will have a member in our association with specifically that role. It is an important and legitimate way of transportation. But the new technologies of e-bikes are very expensive, almost 2.000 Euros for an e-bike, around the price of a used car. People in Hungary will chose to buy the car, so the prices must decrease.

PN – Do you propose any measures to restrict the use of very polluting scooters and motorbikes?

TV – We don't. We acknowledge the problem, but we don't have plans concerning that.

PN – Are you doing any work concerning electric buses?

TV – Yes. In the capital we will have soon around 20 full electric buses. In the Jedlik Ányos Plan that is very important. The Hungarian bus manufacturers declined after the end of the socialism, and we believe that e-buses can be a way to revitalize that industry.

Interview with Mr. János Kenderesy, Vice-President of Magyar Autóklub (Hungarian Auto Club), and with Mr. Ferenc Mészáros, Board Member of Magyar Autóklub

26th October 2015

A presentation about the club was made in the beginning. The club was founded in 1900. The club's main goal is to "represent the drivers' interests", which is done through the following vectors of activity:

- Annual tests of vehicle safety, roadworthiness and exhaust emissions required in Hungary;
- Car assistance, directly to the members or through manufacturers to the so-called assistance members;
- A magazine distributed to the members, issued eight times per year;
- A vehicle circuit in the headquarters (Budapest), where the drivers can get training in safe and eco-driving;
- The partnerships with several companies that provide benefits to the members;
- A "road-show", whereby a truck which travels through the country aims to bring to the populations, namely the youngsters, training in road safety and eco-driving, replicating what is provided with the mentioned vehicle circuit in the headquarters;
- Sport activities;
- Old timer vehicles section.

Pedro Nunes – How many members do you have? How has been their evolution in the recent years?

Auto Club – Presently we have around 100.000 members. It's been declining in the last years, due to the crisis, except since last year, where we had a stabilization in the number of members. The assistance members are more than 300.000, but they don't know who provides in practice the assistance.

PN – Do you feel in your members any particular preoccupation about the environmental performance of their cars or they are mostly concerned with performance in the traditional sense and so on?

AC – Not particularly. Unfortunately, the traffic culture needs to be improved in Hungary. We do our most in order to promote that. We think our message reaches our members, by articles in the magazines, for example. But the culture change is a very slow process. One of the main problems is the basic education, i.e., the training in the driving schools, which lacks ecological concerns.

PN – Do you think the government should act on that, making that mandatory?

AC – We would highly support that. The Auto Club tries that by his means, as seen in the presentation. In the Jedlik Ányos Plan that line of action is foreseen by the government. It starts by the education of the children, so, again, it is a very slow process.

PN – You are very involved in the mandatory by law regular technical tests of cars. We know that diesel cars emit much more harmful pollutants than what is allowed, namely NOx. Do the technical centers measure this gap? How do they deal with this?

AC – This is a very important question. Unfortunately, there are lots of old cars in Hungary, which fifteen or twenty years ago complied with the regulations, but not anymore, it's impossible. We are proud that in our technical stations we measure very precisely the emissions, and we can repair the cars in order to get better emissions. We are very serious about this question; although the law is very strict, its fulfilment may be not so strict. And so the Auto Club promotes the moral requirement to the certification well.

PN – I now want to ask the following: do the technical centers are able to measure the more than allowed emissions of a VW model which has the cheating software installed, or the centers are also fooled by this system?

AC – The centers cannot detect that gap. We cannot measure it, and we have the same figures as in the certification. But the problem is not at the centers, but at the test procedure that certifies the vehicles.

PN – Many old cars are imported to Hungary from the West. In your opinion what should be done to halt this process?

AC – It is a very interesting issue. But these cars are mostly premium cars; although they can be old, they tend to have better emissions than more recent used cars from Hungary. Also, with the recovering of the economy the sales of new cars are improving, and the importation of old cars is decreasing.

PN – Have you been contacted by VW owners about their more pollutant cars than they thought? If yes, what kind of questions are posed and what do you answer?

AC – Volkswagen owners didn't specifically contact the Auto Club. In the next number of our magazine there will be an extensive cover of this issue, and maybe after that we will have more feedback from our members. We have however in general a preoccupation from our members, since it is a broader problem, which affects all diesel cars.

PN – Do you know the plans of the Hungarian government concerning the VW cars in circulation that emit more pollutants than the allowed limits? Did you do some recommendations about it?

AC – We have not received any details concerning any plan of the government. What people are preoccupied about is about the recalls of the cars, and whether the cars will become different in performance. After that there might be place for legal procedures.

PN – Do you think VW sales are to be damaged by this emissions issue? Do you have already some feedback from the sellers since the scandal?

AC – We don't have that information.

PN – Do you feel in your members any particular preoccupation about the environmental performance of their cars or they are mostly concerned with performance in the traditional sense and so on?

AC – As you can see on the streets, in Hungary the drivers are more concerned about the performance of the vehicles. Unfortunately, the eco-driving culture is not very developed here.

PN – The fuel consumption of many cars during real driving conditions is higher (often much higher) than those which are indicated in the official test results of carmakers. How do you protect the interests of car owners concerning fuel consumption of their cars?

AC – There is a difference, yes, and in the garages the information is provided about whether the fuel consumption is good or not.

PN – Are you someway involved in the preparation of the congestion charge to be introduced next year in Budapest?

AC – There will be studies published soon, and after that we'll take a position. Right now, regarding the congestion charge we are still in an early stage. We do not know yet even what parts of the city will be affected. There should be a balance between the price of public transportation and the level of the charge, but a lot of other parameters should be weighted. The most important parameter in our opinion is the timeline to be implemented. And of course we are very keen on the completion of the last 30 km of the outer ring road eastern part, which will reduce the traffic going into the inner city.

PN – Do you provide for your members some special support if they have an electric vehicle? Do you sense in them any special interest concerning this technology?

AC – We probably don't have any member with an electric car, since there are only 200 altogether in circulation in Hungary. We show however our commitment to EVs through an installed EV charging station here at the headquarters and through EV driving tests in our center. They can experience there the advantages of these vehicles.

PN – In Europe the transport sector accounts for 25% of total CO2 emissions, and it still is a growing source of GHG emissions with a substantial 36% increase over the past two decades, putting it presently 8% above the 1990 level. However, the objective of the European Commission is to reduce transport emissions by 60% by 2050. What is the Auto Club sensibility about how to fulfil this target?

AC – The state should implement drastic changes; without those, the targets cannot be accomplished. The electric energy sector must be changed. Until 2050 we'll have surely combustion engines, but they must be subject to stricter regulations, and eco-driving should be generalized.

PN – Measurements (including those made by CAAG) show that air pollution inside the car is often very high due to the fact that the exhaust gases of scooters, motorcycles, cars, vans and trucks which are moving before it, enter the car. What do you propose in order to reduce this health threat car drivers?

AC – We promote the regular change of cabin air filters within our members. We offer promotions on air filters throughout the year, where members and non-members can buy them with discounted prices. We also put flyers promoting the renovation of air filters in the fuel stations.

Interview with
Mr. János Fónagy, Parliamentary State Secretary of the Ministry for National Development

29th October 2015

Pedro Nunes – In Europe the transport sector accounts for 25% of total CO2 emissions, and it still is a growing source of GHG emissions with a substantial, 36% increase over the past two decades, putting it presently 8% above the 1990 level. However, the objective of the European Commission is to reduce transport emissions by 60% by 2050. How do you think this can be accomplished? What measures would you like to see on EU level, and what are your plans concerning Hungary?

János Fónagy – First of all, you should now that the topic of environment is currently a work in progress by several secretaries of the ministry. But as you probably know, Hungary has a decarbonisation plan which includes a reduction in the primary energy use by 10% until 2020. For Hungary the objectives are less strict than for the Europe Union as a whole, because we have to be realistic, otherwise we will never fulfil anything. We intend to accomplish our aim by the use of alternative energy and energy efficiency. One of the plans involved is developing transport on rails, making it more competitive as a means of public transport. The main goal is to develop public transportation, as opposed to private transportation, and within it develop preferentially transport on rails. As far as we know, Hungary is the only country which put such a plan on paper, in 2012. For the years 2014-2020, we have 1500 billion forints as support from the EU for transport development, of which 1000 billion forints are for railways and railways connected transport. This is very important, since before this kind of money was mostly to develop roads and highways.

PN – But Hungary has also an ambitious plan to expand its highways, right?

JF – That is for the parts that lead to the borders of the country, and also bypasses to the cities. The most important part is in the surroundings of Budapest, which is a great challenge, since it is a very populated region, implying several tunnels and, so, a lot of money.

PN – According to the Eurostat, in Hungary from 2002 to 2012 the passenger travelling by train was reduced almost 30%, decaying from 14% to 10% of total passenger travelling. The transference was to the private car, since buses lost quota, as well. Do you think that plan to expand the railways is enough to prevent this tendency?

JF – The fact is that 70% of the passenger train transport is made in the agglomeration of Budapest. This is why the development of lines in the Budapest suburbs has been preferred, as well as the implementation of a regular and unified schedule, and a common price and ticket system for all the different transports. In the parts modernised 12 years ago the number of rides has increased 2.5 times, which are real results.

PN – Why didn't Hungary try to develop a high speed railway line in the country?

JF – We have also a line connecting Budapest to Munich, which is a high speed line. There were previously in Europe, until 12 years ago, very ambitious plans regarding high speed railway lines, but since then there was a slowdown in these initiatives. I was the Transport Minister fifteen years ago, and at that time there were working groups just working on that. There was a real task and plans to build in Hungary high speed lines, but it was clear that our own money was not enough, and so we relied on EU funds, but that was halted. But if these plans are revived, it is the aim of the Hungarian government to take part on them, at least in the direction West-East.

PN – Trucks and buses are responsible for about a quarter of CO2 emissions from road transport in the EU, but today these emissions are not subject to a g/km limit, as it is with cars. Why is this and what is Hungary doing within Europe to correct this?

JF – We do not produce trucks, so we can just influence the purchase of companies. Now there are companies in Hungary that renovate their truck fleets each three years or so and sell the used trucks to other Hungarian companies. It is not an ideal situation, since some of the trucks imported are not new, but they are much better than previously. However, there are still lots of very old trucks in circulation. We are assisting to a rapid change in the truck fleets. The heavy duty vehicles are the youngest.

PN – That happens also with cars: many old cars are imported to Hungary from the West. In your opinion what should be done to halt this process? Do you think it's reasonable to impose limits on the exhausts of the imported cars?

JF – We cannot prohibit it, since there is an EU rule that says that any car sold in the EU can be sold again in any other country, in a unified market.

PN – But you could impose higher taxes on those cars?

JF – There are already such taxes, but surely they are not high enough. But these cars go yearly to the technical check-up, where emissions are tested. Besides, tendentiously these cars are high end cars, with already good emissions standards from origin, at least comparing with the Trabants from the Socialist era which they substitute, and they are not driven too much, just a few thousands of kilometers per year. Also there is a strict control over the spare parts that could be installed on those cars which makes the operation of those cars quite expensive.

PN – Nitrogen oxides emissions from traffic has serious direct impacts on the health of the urban citizens, which accounts for almost half of EU citizens, and is growing. What measures would you like to see on EU level, and what are your plans concerning Hungary to fight against NOx emissions?

JF – We have the Jedlik Ányos Plan for electromobility, and we are doing much more on this than the surrounding countries. With time, the Jedlik Ányos Plan will help to have reduced NOx emissions in the private and public transport. It is also planned to differentiate the planned Budapest congestion charge according to the NOx emissions of the vehicles.

PN – Will the electric vehicles be exempt of the congestion charge?

JF – The Budapest Municipality is working to provide all benefits for the electric vehicles, and we agree the EVs should be exempt from charges to enter the city. We do not however agree that EVs use bus lanes, since that causes delays to buses, and associated increased emissions.

PN – Do you know the plans of the Hungarian government concerning the VW cars in circulation that emit more pollutants than the allowed limits? Will VW be fined?

JF – The government is not planning that. We just hope that VW recovers from this crisis as soon as possible, and solve the problems within the company.

PN – But they have cars in circulation here in Hungary emitting much more than they are allowed to.

JF – We have to wait first for the developments in the situation. In Hungary we have factories from the VW group, with which we have a connection more than 100 years old, so let's hope that the group recovers. Moreover, the type approval for VW cars was issued by the German Transport Authority, and according to EU law, we must accept all type approvals issued by the transport authorities in other Member States. This means that we have to wait for the new decision of the German Transport Authority before taking any measures ourselves.

PN – A T&E study has shown that the excise duty on motor fuels in real terms have been constantly decreasing in the EU. In Hungary, for example, between 2004 and 2014 the excise duty on petrol 95 decreased by 37%, and that of diesel oil by 29%. This means that today the Hungarian government is receiving from this source about 300 billion Forints less revenue in 2014 than it received in 2004. This is also an enormous subsidy to car owners and huge incentive for environmental pollution. We know that it is difficult to raise fuel taxes in Hungary alone. Do you plan other measures, for example, extending the distance-based toll to more roads and even to cars?

JF – If possible, please put that question to the Ministry of Economy, because they are responsible for the matters related to taxes. It's them who can give you the government opinion.

PN – Even after the introduction of the new procedure test in 2017 it is believed that the cars will emit in real driving conditions on average at least 15% more than on tests. This brings out an important question, which is the drivers' behaviour. Indeed, if they wanted, or if they knew, they could achieve much better emission figures. Do you think training for eco-driving should be mandatory in the driving schools, and that such training should be mandatory for all drivers who professionally drive a lot, e.g. bus drivers, truck drivers, taxi drivers?

JF – My opinion is a firm yes; it should be mandatory. In the legs of the cars drivers there is much more potential than in all the regulations one might implement. To make it clear, we are currently preparing material which addresses that question. But in Hungary the professional drivers are required to take part in eco driving programs. Moreover, KTI is developing a program for these drivers, which is a small equipment they should put in the car which observes the driving behaviour and produces a report about and they have been driving and what can be done to improve it.

PN – So far electro-mobility is an enormous success as far as two-wheelers are concerned. For example, there are 2 million e-bikes in Germany, and more than 200 million in China. What work are you doing in order to promote e-bikes and e-mopeds in Hungary?

JF – Our electro-mobility program includes the promotion of electric bikes, and further developing the bicycle infrastructure. It is a big part of the program. We also promote and support companies that produce e-bikes, because they are small or medium size companies, which is the type of companies that constitutes the core of the Hungarian economy.

Interview with
Mr. Tamás Tóth, Head of Division for Regulations and Defense Industry at the Hungarian Ministry of National Economy

30th October 2015

Pedro Nunes – In Hungary with the current electricity mix an electric vehicle has associated 90 g/km of CO2 emissions. It is not much less than the limit imposed for new traditional cars which will be sold in Europe from 2021. However, with the right electricity mix, based namely on renewables, an EV could be much cleaner. What's your position on this and what is being done to correct it?

Tamás Tóth – In a couple of months there will be new regulations about these ecological cars. We are not taking into account the electricity mix, and we are not the right Ministry to ask that question, because we are Ministry for National Economy.

PN – But you promote the e-mobility, right?

TT – Yes.

PN – But e-mobility is something that cannot be detached from the electricity mix. In the end, the e-mobility is as clean as the electricity mix used to fuel the vehicles...

TT – I know. But the Hungarian electricity comes mainly from nuclear, the pollution of which is not as big as the one from coal power plants. Since the cars charge during the night, and during the night there is an excess of nuclear power, they do not imply big emissions.

PN – In Europe the transport sector accounts for 25% of total CO2 emissions, and it still is a growing source of GHG emissions with a substantial 36% increase over the past two decades, putting it presently 8% above the 1990 level. However, the objective of the European Commission is to reduce transport emissions by 60% by 2050. How do you think this can be accomplished? What measures would you like to see on EU level, and what are your plans concerning Hungary? You mentioned nuclear power, with which Hungary is committed to expand; do you think this is the right strategy, even though it's not a matter from your ministry?

TT – We have power plants since the mid-seventies, and we are planning to increase the nuclear share with a recently contracted new power plant starting to operate from 2025. Of course there are some plans to introduce renewable energy, which has plenty of possibilities in Hungary, such as geothermal energy.

PN – But, as I see, you don't have very well defined objectives and policies to introduce renewable energy in Hungary.

TT – We have a renewable energy strategy until 2030 with goals.

PN – Do you know those goals?

TT – I'm sorry, but I'm not aware enough of this strategy.

PN – About the Jedlik Ányos Plan, can you advance some of the plans and measures of the Hungarian government to promote e-mobility in Hungary?

TT – First of all, we have planned a charging infrastructure. The EU, by means of the 94/2014 Directive on fuel infrastructure, decided that every Member State must implement an EV charging infrastructure, and another one for natural gas, optionally a third one for hydrogen, until 2020. The Hungarian government started to develop this strategy last year, and we finished the first part in July 2015. The first part is about the supported legal environment, because there are some laws and so on which we had to think on how to

change them to support the electric mobility. After July we started to make new laws, creating the way to implement the strategy and obtain a majority in the parliament.

PN – How big will it be the network?

TT – There are three types of chargers: with a normal plug, for home use; with 22-30 kW, a fast charger; and finally, lightning charger, usually with 45-50 kW. There is additionally the Tesla solution, with 90 kW, but that's other discussion. Right now there are around 10 lightning chargers and 60 fast ones in Hungary. We made different scenarios for the EV penetration; the most ambitious says that in 2020 there will be around 50.000 EVs, including vans, buses and motorcycles. Based on the estimated number of the vehicles we can estimate the required number of the public chargers, which is around 3000

PN – Will the Hungarian government pay for that?

TT – Yes, of course, in the beginning. The government has to lead the way. In the end of 2016 the pilot project will end, aiming to have 150 50 kW charging points by then. The idea is to be possible to go anywhere in Hungary with an electric car charging in public spaces.

PN – What is your Ministry's position on the supercredits that are given to carmakers for sales of ultralow carbon vehicles? In a way it promotes the EV, and in the other way it allows for sales of more polluting carbon vehicles. In the balance, is this good or bad for the EV sales?

TT – Every car manufacturer has to produce EVs in order to reach the environmental targets. This is the time to increase or spread these new technologies, and who develop such cars should be awarded. But in the end, the consumer will tend to choose the most economical solution, and will not buy a 4.2l SUV because of that.

PN – It doesn't seem so... If people have money to buy a big car, they will.

Márton Vargha – It's true, but the question is not the possibility to buy these cars, its their share in the overall fleet. And that is changing.

TT – There will always be a share of consumers looking for big shining gas guzzlers. This is because car is a status symbol, and because of that around 10% of consumers who buy cars do not care about the money or emissions. But right now there is the Tesla Model S, or some BMWs, that are as performing as the traditional best cars.

PN – What you are saying is that in the future the car owners will have in one car the best of both worlds, a performing and clean vehicle at the same time?

TT – The EVs are very fast, even a mid-range EV. This technology is developing very fast, with the models having increasingly bigger batteries, etc. This technology will naturally win.

PN – So far electro-mobility is an enormous success as far as two-wheelers are concerned. For example, there are 2 million e-bikes in Germany, and more than 200 million in China. What work are you doing in order to promote e-bikes and e-scooters in Hungary?

TT – I can't say that this Ministry has a strategy plan focused on electric bikes. Unfortunately, in Hungary they are quite expensive, like 1000 Euros or much more, and if you leave such a bicycle in the street it is likely that it will get stolen. This is one thing. The other one is that the average citizen doesn't have the money to buy an e-bike.

PN – It is the same with electric cars...

TT – Yes, of course, but to steal a car is more difficult.

PN – That is something where the government could act, like installing secure infrastructures to park e-bikes.

TT – That would be also for traditional bikes, which in Budapest already exists. In Hungary there are at least two companies developing e-bikes, but they are quite expensive, and their market is mostly in Western Europe and the USA.

PN – Returning to electric cars, did you propose that they should be exempt from the new congestion toll to be introduced next year in Budapest?

TT – Yes. If you have green plate number, like the EVs can have if the owner asks it, you'll have benefits, like the possibility to use the bus lanes and free parking, and also be exempt from the toll.

PN – In your opinion how could intelligent and public transport solutions be used to mitigate the CO2 emission on the roads? For example, is the government incentivizing car-pooling solutions?

TT – Not car-pooling, but the car sharing system. As we know, from the second quarter of 2016, there will be a project of that kind here in Budapest.

PN – You will support directly the EV car sharing companies? And how?

TT – Not companies, but one company. The parking spaces in the city belong to the local governments, and it is not easy to convince them to give for free, let's say, 1000 parking spaces to the car sharing company. That is under discussion, and the central government is thinking to give some incentives to the local governments to compensate them for that. This is the first part. The other part is to develop a software to optimize the solution, which has legal issues implied.

PN – Are there any government plans to buy electric cars to serve some state services, as the Estonian government has bought several hundred such cars for the social workers?

TT – I am familiar with the Estonian model. Yes, there will be a strategy on how to increase the e-car part of the state owned cars. We already made some steps in that direction, such as a pilot project to provide electric vans to civil servant engineers.

PN – What about working at distance, from home, in the Ministry and State Administration, avoiding the sometimes unnecessary commuting of workers?

TT – There is no such a possibility, for security reasons, like having access to confidential information. People must be at the office. It's official.

PN – To finish, what are the main barriers do you think the EV have right now?

TT – The main barrier is the price. Lots of consumers don't buy them, because they are not aware of the total cost of ownership. They must be educated, since the yearly cost of using an EV, provided that you use it for 20 or 25k km per year, is much lower than that of traditional cars. Their payback period can be as low as four or five years. In October a taxi company started here in Budapest operating with 75 Nissan Leafs, a big investment, because of that.

PN – In your opinion where is the place of the EV inside the personal mobility now and in the future?

TT – For me, the future is not to have, is to share. But I am aware that this is not the answer of the typical Hungarian person. I think the renting, sharing model is the future. Also because the youngsters typically don't have enough money to buy a car, but they may have enough money to rent it.