POLICY PROPOSAL - 2021 No.1/2

HOW TO GET FRESH AIR? II.

The Equilibrium Institute's proposals for improving air quality in Hungary – Transportation sector

Equilibrium Institute

FRIEDRICH EBERT STIFTUNG
Büro Budapest

Future for Hungary

Equilibrium Institute

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EXECUTIVE SUMMARY

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An estimated 12,000-13,000 people die each year as a result of air pollution. Our goal is to save these lives and to improve the quality of life for Hungarians, to increase the number of years they get to enjoy in good health. It is also important to point out that air pollution is to a large extent an issue of poverty: We need to ensure that the poor do not become the victims in the struggle for clean air.

02

The most important air pollutants are particulate matters and nitrogen-oxides. Since a large portion of these are generated by transportation, this should also be one of our main areas of focus in the effort to combat air pollution.

03

Starting in 2030, new motor vehicles that rely only on internal combustion (petrol or diesel) engines should no longer be allowed to register.

04

Relying on our EU membership, we need to take an active part in scaling back the importation of the most pollutive vehicles, while at home we should get rid of the most pollutive cars by offering their owners benefits in exchange for scrapping these cars.

05

The use of electric cars and of smart solutions that reduce emissions should be incentivised.

06

Major cities need to create low-emission 'clean zones' and restructure their parking policies and route tolls to account for the environmental classification of the car in question.

07

State credit guarantees should be used to incentivise the replacement of ship engines.

1. WHAT IS THE PROBLEM?

Hungary has the fifth-lowest life expectancy at birth in the European Union. The average lifespan of a Hungarian citizen is almost five years shorter than that of the average European citizen**. We are also nearly three years behind the average in terms of the expected health years that Hungarians get to enjoy after the age of 65.**

Our bad health indicators are not the result of some unchangeable Hungarian quality. **The reasons are readily apparent** – they stem from our lifestyle, living patterns, the way our communities are organised and the health hazards in our lives.

Air pollution is **one of the main causes of public health harms** in Hungary. **Hungarians lose roughly two health years** because of air pollution – this is the third worst statistic in the European Union. **At least 12,000-13,000 people die in Hungary every year because of air pollution, while further tens of thousands of people suffer serious health damage.**

We could save these people by reducing air pollution, and as a result citizens' average quality of life, their health condition and life satisfaction would increase massively, not to mention the significant improvements we can expect from the reduced pressure on the healthcare system.

In the following, we will start by identifying the primary sources of air pollution in Hungary, and then we will put forward recommendations regarding the transportation sector that could help **save over 10,000 Hungarians each year.**

> At least 12,000-13,000 people die in Hungary every year because of air pollution, while further tens of thousands of people suffer serious health damage.

2. THE MAIN SOURCES AND CAUSES OF AIR POLLUTION

In addition to particulate matter generated primarily by residential heating, the main pollutants in Hungary are **nitrogen-oxides (NOx).** Nitrogen-oxides also play an important role in the emergence of ground-level **ozone,** which is also highly pollutive.

Nitrogen-oxides **can reach even the deepest pockets of the human lung**, where they accumulate and damage the cell membranes and the mucous membranes protecting the respiratory airways. As a result, they impair the lung's capacity to fend off infectious diseases, they worsen asthma symptoms and lead to increased incidences of respiratory health conditions, while they also increase the risk of many cardiovascular diseases.

Nitrogen-oxides are distributed into the air mainly through the exhaust fumes of **motor vehicles** and through **gas heating,** as well as through **agricultural activities.** Despite technological advances, the emission of nitrogen-oxides has remained basically unchanged in recent years.

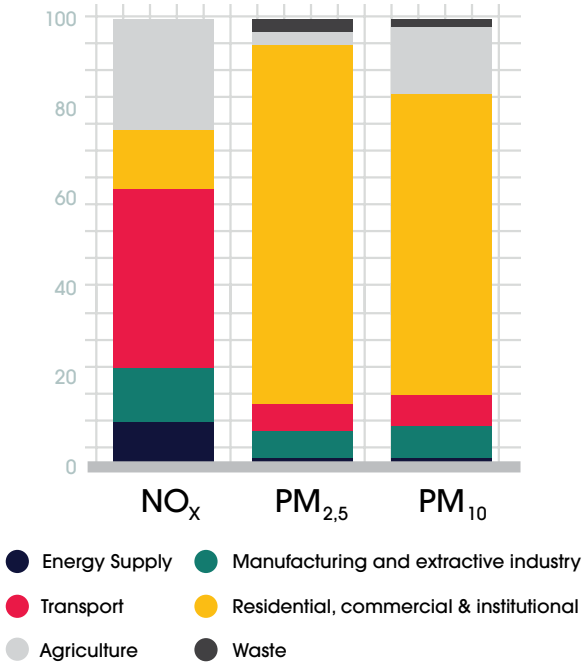

Chart 1: Sources of some air polluters by sector in Hungary (2018, %).[1]

1 Source: Air pollutant emissions data viewer, Gothenburg Protocol, LRTAP Convention, European Environment Agency, 2020.

2.1. WHAT IS THE PROBLEM WITH TRANSPORTATION?

Forty percent of Hungary's entire nitrogen-oxide emissions and 5% of its particulate matter emissions are generated by transportation.

The number of cars in Hungary has increased by 28% since 2010. That is why despite the advances in automobile technology, **the level of air pollution produced by this sector is not actually declining; instead, it has been stagnating for a decade.**

A growing number of automobiles – imported primarily from Western European countries – is being put into circulation, and we spend more time driving than ever.

> The amounts of the registration taxes and excise duties which need to be paid when a car is imported depends in part on the environmental classification of the automobile in question; but the fee is also influenced by the age of the car and the size of its engine. Thus, if someone buys a fairly old car, the fees and taxes will be less likely to motivate him to choose an environmentally friendlier model.

Seen as a share of total emissions across Hungary, the emissions by internal combustion engine automobiles make up a relatively low level of the total air pollution. **In inner city areas, however – and then fanning out from there – transportation on public roads constitutes the biggest problem despite its relatively low share of national-level emissions.**

One of the reasons behind the increased air pollution is a change in our lifestyles. People **use their cars for transportation** more often than previously, and this is not only caused by the fact that a growing number of people can afford to drive their own cars. Another key reason is the **increasing sprawl of our cities,** in other words the fact that many people move from the inner city towards the metropolitan areas surrounding the urban centre – often precisely on account of the bad air in the city – and they use their cars to commute back downtown. The **infrastructure of the suburbs that thus emerges (schools, stores, etc.) is relatively sparse, and for lack of quality transportation alternatives, cars are often the most practical methods for getting around in these areas.**

At this point, electric cars do not work as a real alternative because of their excessively high prices, the lack of a broad selection in the market for such vehicles, and the underdevelopment of the relevant infrastructure to serve these vehicles (charging stations and maintenance/repair services). Technological progress will probably resolve the first two problems within a few years, but in the absence of powerful enough incentives, improvements in the relevant infrastructure will be slow.

> "A growing number of automobiles – imported primarily from Western European countries – is being put into circulation, and we spend more time driving than ever."

Apart from the emissions generated by cars, the emissions from ships also constitute a massive health hazard. **The primary problem in this context are the soot, sulphur-dioxide and nitrogen-oxides emitted by diesel engines.** Some 80% of the roughly 100 ships that move about in Budapest are in urgent need of an engine replacement – which is highly expensive, however.

3. THE RECOMMENDATIONS OF THE EQUILIBRIUM INSTITUTE

3.1. DEVELOPING ACCESS TO ALTERNATIVE TRANSPORTATION METHODS

SPEED UP THE TRANSITION TO ELECTRIC CARS WITH STATE AID!

In line with the relevant EU requirements and from EU money, **a network of charging stations needs to be built which can ensure that electric cars with a driving range of 100-200 kilometres can safely get to the next charging station.**

The **currently operating charging station networks and filling stations need to be involved** in the creation of this network.

The installation of significantly cheaper **domestic charging stations** should be subsidised by the state either with **zero-interest loans or the partial assumption of the costs.**

The **benefits currently associated with the green number plates** (which are currently used for electric and hybrid cars) should be retained, but in a way which ensures that such **plates are only available for cars with low emissions**.

Legislation needs to be adopted to mandate that **starting in 2023, all state and municipal bodies, as well as the companies owned by the latter, only be allowed to buy electric motor cars.**

AS AN ALTERNATIVE TO COMMUTING AND SOME OF THE BUSINESS TRIPS, PUBLIC TRANSPORTATION AND BICYCLE INFRASTRUCTURE NEED TO BE IMPROVED.

(The Equilibrium Institute plans to publish a separate policy brief on the subject in the near future).

> Electric cars need to become real alternatives for those who use automobiles for transportation.

THE CENTRAL GOVERNMENT AND THE MUNICIPALITIES NEED A LONG-TERM STRATEGY TO MANAGE THE PHENOMENON OF URBAN SPRAWL.

The superfluous use of automobiles needs to be counter-incentivised through the development of the suburban infrastructure and the mass transportation systems. Alternatively, city life needs to become more attractive to prevent people from fleeing the downtown areas. Either way, it is imperative that action be taken in this area since the failure to act will result in the worst possible consequences. *(The Equilibrium Institute plans to publish a separate policy brief on the subject in the near future).*

3.2. SCALING BACK THE USE OF THE MOST POLLUTING VEHICLES

FROM 2030, LET'S BAN THE SALE OF CARS THAT ONLY HAVE INTERNAL COMBUSTION (PETROL OR DIESEL) ENGINES!

The importation of the most polluting cars into the European Union needs to be scaled back.

In setting import fees, we need to make use of our EU membership to fight for a more prominent role of environmental considerations, in order to ensure that it is not commercially worthwhile to import massively polluting cars into the EU. To achieve this, we either need a sliding scale which features rising fees for more polluting cars or we need to completely ban the imports of certain types of vehicles (the most polluting Euro categories or diesel engines).

A SCRAPPAGE SCHEME FOR THE OLD CARS NEEDS TO BE LAUNCHED.

This will allow us to progressively phase out the oldest and most polluting cars (those classified as Euro 1, Euro 2 or worse). A good model to follow may be the Romanian 'Rabla' program, in which the state subsidised the replacement of 60,000 outdated automobiles.

IN ORDER TO REDUCE THE POLLUTION EMITTED BY SHIPS, STATE CREDIT GUARANTEES NEED TO BE PROVIDED TO INCENTIVISE THE REPLACEMENT OF OUTDATED SHIP ENGINES, AND SUCH SUBSIDIES SHOULD PRIMARILY AIM AT THE ELECTRIFICATION OF WATER TRANSPORTATION.

Once they have docked, ships should be banned from using diesel generators to provide for their electricity needs and they should be required to plug into the port's electric grid. To this end, the state should support the development of the electric grids in the ports.

3.3. REGULATING URBAN MOTOR VEHICLE USE

THE CITIES NEEDS TO ESTABLISH CLEAN ZONES, WHICH ARE LOW-EMISSION ZONES.

The most polluting cars should not be allowed to enter these designated inner-city zones or only in exchange for a high fee. Examples to follow can be the models used in Berlin, Madrid or London.

> All Hungarian municipalities should extend free parking to cars with green number plates, along with the free use of motorways and tax incentives.

PARKING FEES AND ROAD TOLLS NEED TO BE RESTRUCTURED TO TAKE ENVIRONMENTAL CONSIDERATIONS INTO ACCOUNT.

Large cars and/or heavily polluting cars need to pay higher fees while those that are especially environmentally-friendly need to be offered discounts. **All Hungarian municipalities should extend free parking to cars with green number plates, along with the free use of motorways and tax incentives.** There are many examples for similar policies starting from other cities, like London and Madrid.

In order to reduce the time people spend looking for parking (and the emissions generated during this time), municipal governments should offer benefits – parking-related or other types – to incentivise the use of **apps that support smart parking.** The examples of London or San Francisco, among many others, illustrate that these could be used to substantially reduce the emissions from motor vehicles. *(The Equilibrium Institute plans to publish a separate policy brief on the subject in the near future).*

THE SPEED LIMIT SHOULD BE LOWERED TO A UNIFORM 30 KM/H ON ALL MINOR AND LOCAL ROADS.

Just like in many major European cities, in Hungarian cities, transit traffic must be reduced and the drivers must be rerouted to the major motorway routes, for example by blocking transit traffic. Reducing the speed limits in residential areas could also contribute to this goal, and the latter would also serve to reduce noise pollution and harmful emissions. This would not only reduce greenhouse gas emissions and air pollution but also significantly lower noise pollution.

THE EQUILIBRIUM INSTITUTE'S AIR QUALITY RECOMMENDATIONS

AREA	RECOMMENDATION
DEVELOPING ALTERNATIVE MODES OF TRANSPORTATION	**The currently operating filling stations need to be involved in the creation of a national network of stations for charging electric cars!**
	The installation of significantly cheaper domestic charging stations should be subsidised by the state either with zero-interest loans or the partial assumption of the costs!
	Starting in 2023, all state and municipal bodies, as well as the companies owned by the latter, should only be allowed to buy electric vehicles!
	Mass transportation and bicycle infrastructure need to be developed! *(The Equilibrium Institute plans to publish a separate policy brief on the subject in the near future.)*
	A long-term strategy needs to be adopted to manage the phenomenon known as "urban sprawl"! *(The Equilibrium Institute plans to publish a separate policy brief on the subject in the near future.)*
SCALING BACK THE USE OF THE MOST POLLUTING VEHICLES	**Starting in 2030, the sale or registration of new cars that only have internal combustion (petrol or diesel) engines should no longer be allowed!**
	The importation of the most polluting cars needs to be scaled back at the EU level!
	A program should be launched to subsidise the scrapping and replacement of old motor vehicles!
	A state-provided credit guarantee should be used to incentivise the replacement of outdated ship engines!

CONCERNING THE TRANSPORTATION SECTOR

AREA	RECOMMENDATION
REGULATING URBAN MOTOR VEHICLE USE	**Clean zones, in other words low-emission zones, need to be established in major urban areas!**
	Cars that pollute less should pay lower parking fees and route tolls!
	In the interest of reducing transit traffic, cars need to be redirected from residential areas towards major motorways!
	The current speed limit on minor/local roads needs to be lowered to a uniform 30 km/h everywhere!
	All Hungarian municipalities should extend free parking and free access to the municipal clean zones to cars with green number plates, along with the free use of motorways and tax incentives for such vehicles!

ABOUT US

The Equilibrium Institute is Hungary's largest independent, future-oriented policy think tank.

In line with the vision of Hungary's future presented in our publication entitled Hungary 2030, the Equilibrium Institute works on creating a smart and environmentally cleaner nation rooted in a strong community. To this end, we write widely appealing and practical policy proposals that serve the development of our country, and we discuss these jointly with the best domestic and international experts.

Our goal is to ensure that the current and future political, economic, and cultural decision-makers learn about our recommendations, come to agree with them and implement them.

The staff members of the Equilibrium Institute and the members of its Advisory Board are renowned experts in Hungary who are considered to be among the best researchers and analysts in their respective fields. The work of the Institute is helped by more than 30 experts, including economists, sociologists, political scientists, lawyers, urbanists, and climate researchers.

OUR EXPERTS

TAMÁS BOROS

Executive director and co-founder of the Equilibrium Institute

He serves as a member of the Scientific Council of a leading European think tank, the Brussels-based Foundation for European Progressive Studies (FEPS). He is the co-founder and co-owner of Policy Solutions, a consultancy and research institute. He is a recurring guest on a variety of political talk shows and often comments about public affairs for leading international media. He previously worked for the European Commission and the Hungarian Ministry of Foreign Affairs as an expert on communication and EU affairs. His research focuses on Hungarian and EU political communication and populism.

GÁBOR FILIPPOV

Director of Research

Previously he worked as an expert advisor in the Hungarian National Assembly and then as a political analyst and senior analyst at the Hungarian Progressive Institute. His analyses and op-eds have been published by numerous domestic and international media outlets, and he is frequently invited to talk about politics on television and radio shows. His research focuses on the European and the Hungarian far-right, on the histories of anti-Semitism and Islamophobia and their present-day manifestations, as well as the workings of contemporary authoritarian regimes.

DÓRA CSERNUS

Senior Climate and Environmental Policy Expert

As an expert in environmental issues, she has worked for the Ministry of Environment and Water, the Office of the Parliamentary Commissioner for Future Generations and the Ministry of Public Administration and Justice, representing the Hungarian position in different EU, UN, and OECD fora. She later worked as Director for International Policy Development at Klímapolitika Research and Consultancy Ltd, and as an independent expert in climate and environmental issues. Her main focus is on climate policy, air-quality control and water policy.

ZSOLT BECSEY

Senior Economist

Zsolt Becsey started his career as an economic planner at the Ministry for National Economy, then worked as an economic analyst and later as a modeller at the Central Bank of Hungary. His areas of interest are industrial policy, input-output analysis, macroeconomics, SME policy, and competitiveness.

Equilibrium
Institute

Address: **H-1026 Budapest, Szilágyi Erzsébet fasor 73.**
Telefon: **+36 1 249 5238**

Website: **www.eib.hu**
E-mail: **info@eib.hu**

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