

## LIMUN 2023, ECOSOC: Research Report

Topic: The adoption of electric vehicles (EVs) and the phasing out of combustion engine vehicles  
By Chairs Zacharie Delorme and Hannah Snyder

*Is phasing out of combustion engine vehicles feasible, and if so, what steps can member countries take to encourage and facilitate the adoption of electric vehicles?*

The Economic and Social Council, otherwise known as ECOSOC, is one of six principal organs of the United Nations. Established by the UN Charter in 1945, ECOSOC is charged with the organization and direction of social, human, and economic UN activities. The committee's allotted leadership was amended in 1974, increasing the total number of committee members from 18 to 54, making ECOSOC the UN's largest and most complex subsidiary body.

ECOSOC allocates seats in relation to geographic representation with 14 seats to African, 11 to Asia, 6 to eastern Europe, 10 to Latin American and the Caribbean, and 13 to western Europe and other areas. The committee's presidency changes annually and the committee decisions are the results of simple majority votes. Today, ECOSOC is known for everything from conducting studies, to the coordination of certain UN organizations, to granting over 2,500 consultative statuses to nongovernmental organizations, or NGOs. Topics often discussed include but are not limited to human rights, narcotics, social development, technology, and women's rights.

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The topic that we will be addressing in this committee will be the adoption of electric vehicles (EVs) and the phasing out of combustion engine vehicles. EVs, contrary to popular belief, have existed for as long as combustion engine vehicles. As early as the 1830s, many inventors attempted to construct functional motorized vehicles, and with that, looked into different alternatives: on one hand electricity, and on the other hand fossil fuels. However, car manufacturers quickly discovered that burning fossil fuels was a much more practical source of energy to make cars function. With the invention of the combustion engine, EVs were put to the side for almost a century.

This lasted until the 1970s, when it became increasingly clear that the United States were becoming too dependent on oil from the Middle East. This came to a head with the oil embargo of 1973, when, because of the United States' support of Israel in the Arab Israeli War of 1973, all member countries of the Organization of Petroleum Exporting Countries (OPEC) blocked oil exports, to be able to gain leverage in the post-war peace negotiations. Automakers therefore became increasingly conscious of a need for an alternative source of fuel, and thus, the need to further develop electric cars. Nevertheless, numerous drawbacks in the manufacturing and functioning of electrical vehicles remained prevalent, such as limited range and low top speeds. Despite this, researchers and engineers recognised the importance of attempting to build more efficient and faster electric cars. Over the next 20 years, they sought to modify popular models to create electric variations which in turn helped bring EVs capacities closer and closer to their gasoline counterparts.

This slow but steady progress materialized with the invention of the Toyota Prius released in 1997, which became the first mass-produced hybrid vehicle, and became an instant success. With the beginning of the commercialisation of hybrid vehicles on the market, new concerns arose that accelerated this transfer from combustion engine vehicles to electric ones. First, a dwindling supply of petrol and gas

led to rising gasoline prices which slowly but surely made the creation of electric vehicles more profitable. Secondly, a growing concern about the impact of carbon pollution from gasoline cars, and the recognition of the potential detrimental impacts of climate change began to play a more significant role in the minds of consumers, researchers, engineers, and manufacturers.

However, this was but a first step in the process of a transfer away from combustion engine transport, and from this point on, markets began to slowly shift towards the production of EV. For example, a second step was achieved when Tesla motors was formed in 2003, which by 2006 had solidified the company's intention of making luxury electric sports cars with a range of at least 320 km on a single charge. This created even more competition in the market, and Tesla's success pushed other companies to accelerate the development of EVs, with Nissan launching the Nissan Leaf in 2010, a fully electric non-emitting car. This, in parallel with a drastic decrease in Lithium battery prices by 97% since 1997, has helped drastically reduce the price of EVs in the last 20 years.

But EVs still face many challenges that stop them from being more widespread. Firstly, the infrastructure with the battery stations necessary to recharge are often sparse, with only 95 charging stations available for 3 million people in the US state of Mississippi. There is a similar trend in many developed nations, that often have not invested to build a strong battery station network to fuel the development of EVs. In addition, many of these stations take a long time to charge up, with only around 18% of charging stations being fast charging stations. This often means that EV owners have to spend as much as 40 minutes to charge up their car, while their combustion counterparts only take no more than 10 minutes to fill up their gas. Then, there is the issue of the driving range of an EV at full charge, as maybe the range of EV cars has gone up, but on average, the median gas car range on one full tank was around double the range of that of an electric car with one charge in 2021. Finally, the upfront cost for the EVs is extremely expensive, and even though on average EV car owners save around 60% more on gas expenses, replacing the battery still stays very costly. This also means that EVs have not yet spread to developing nations, and the construction of infrastructure remains necessary for the expansion of EVs in these regions to even be possible.

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Before getting into individual countries' perspectives, it is important to note that the UN has a set of sustainable development. One of the UN's 17 goals for sustainable development is to "ensure access to affordable, reliable, sustainable, and modern energy for all". Transitioning to cleaner energy is a collective UN goal, even if the means and the arguments used are not necessarily unanimously agreed upon.

Switching over to EVs has many potential benefits. For several nations, especially EU countries, the transition to EVs is far underway. Countries such as Norway, France, The Netherlands, Sweden and Denmark have had significant success in terms of EV sales, with 80 percent of Norwegian cars sold in 2023 being EVs. In recent years, transportation has been responsible for more than a quarter of global carbon emissions, and consequently, had a weighty impact on climate change as a whole. Furthermore, with recent conflicts such as the Russian Ukrainian war, fluctuating gas prices make EVs a more substantial and cheaper option.

However, the transition to EVs is vastly more feasible within certain nations and economic situations than others. Importation taxes also make EV sales difficult for many countries. For example, EVs in South Africa undergo much higher taxes than conventional vehicles, making EVs a more

expensive and unrealistic option, despite the price of charging a vehicle being remarkably low in comparison to gas prices. EVs are considerably cheaper in countries such as China that are capable of manufacturing these developing vehicles and decades worth of effort to switch from combustion engine models.

Other nations benefit greatly from the sales of EU carbon allowances but have not shown much enthusiasm about taking concrete steps to make a transition to EVs happen. For example, in 2022, Poland sold nearly 5 billion EU carbon allowances, with only a small amount of the profit to finance energy transformation. Many countries are still hesitant to transition to greener energy, especially developing and smaller nations.

The accessibility of pricing of EVs, as well as implemented measures vary greatly from country to country. In order to be fully prepared for the conference, delegates will need to do prior research on their country's economic situation and policies to be able to fully participate in debate and resolution writing.

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In order to discourage the use of combustion engine vehicles, petroleum and fuel taxes can be implemented similar to ones that already exist in member nations such as the UK or the Netherlands. Raising fuel prices establishes a financial incentive for citizens to potentially purchase EVs instead of the more common combustion fuel vehicles. The exemption from certain taxes, or at least a decreased taxed rate, could be moreover encouraged.

On the other hand, whilst considering the significant technological advancements made over the course of the past few decades concerning the manufacturing of EVs, it is equally important to recognize that certain aspects of EVs remain rudimentary in comparison to their combustion engine counterparts. Recent studies indicate that owners of EVs are 79 percent more likely to encounter problems with their vehicle than those owning gas vehicles, with plug-in hybrids similarly having over 140 percent more issues. Part of decreasing the prominence of combustion vehicles needs to include encouraging the research, engineering, and continued amelioration of EVs. Initiatives to make charging ports and electricity more accessible, especially in developing countries and rural areas, are additionally crucial to making EVs more accessible to the general population.

Current list of delegations in this simulation: United States, France, United Kingdom, China, Russia, Norway, Sweden, Finland, Denmark, Germany, India, Pakistan, Canada, New Zealand, Brazil, South Africa, Japan, South Korea, Mexico, Spain, Thailand, Iceland, The Netherlands, Romania, Portugal, Italy

***Note: For this committee, please do some research beforehand for your country in order to gain time during committee sessions. Remember, you are writing the resolution and therefore, you need solid arguments and solutions to actually create clauses and amendments. Don't worry, we'll be there to help you guys along, especially considering there might be beginners among us. Don't hesitate to contact us through email if you have any questions or concerns.***

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