

# The fiasco of the Russian electric vehicle industry

Vakhtang Partsvania explains why electric car production in Russia has no future



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Prior to February 2022, the electric vehicle market in Russia had been gaining momentum and the Russian authorities were increasingly adopting various acts of mass support and development of the national electric vehicle industry. The government [strategy](#) for the development of the automotive industry, approved in 2018, planned that by 2025 the share of electric cars in total car sales would reach 5% (compared to 0.006% in 2017) and their sales in the country would hit 100,000 units per year. The [Concept](#) for the Development of the Production and Use of Electric Vehicles, adopted three years later, set very ambitious goals indeed: to increase domestic production of electric vehicles to at least 10% of the total volume

of cars produced in Russia by 2030 (or about 220,000 electric vehicles), to launch the production of battery cells, and to install more than 70,000 charging stations across the country. Although the pace of development of the electric car market in Russia lagged several years behind the global pace, the country had all the prerequisites for establishing its own electric car production and even export, and some foreign car companies based in the country [were seriously considering](#) the possibility of producing their electric models at Russian car factories. The war in Ukraine has seriously altered these calculations. Despite the fact that [sales of electric cars in Russia in 2023 are breaking records](#) and local car plants are [planning to increase their production many times over](#), the prospects of developing the production of electric cars «made in Russia» are completely hopeless.

## Limits of production

All of Russia's major car manufacturers have at one time or another made plans to produce electric cars. However, the practical steps towards this goal have proved invariably unsuccessful: in the passenger car segment, the [LADA Ellada](#), the first mass-produced electric car produced by AvtoVAZ, failed with only 100 units produced in 2012, some of which never even left production facilities. In the light commercial vehicle segment, the GAZelle e-NN, Russia's first electric car produced by the GAZ Group, was [inaugurated](#) in 2020, but the scale of its «success» is evidenced by the miniscule volume of serial production: only [nine cars](#) came off the assembly line in the first half of 2023. In the truck segment, KAMAZ [had planned](#) to produce the «Chistogor» electric truck in 2023, but the plans were recently [postponed](#) by five years. Individual experimental projects to create a Russian electric vehicle ([Oka-electro](#), [Yo-mobile](#), [Monarch](#), [Zetta](#), etc.) were abandoned shortly after their launch.

The start of serial production of electric buses can be considered relatively successful: since 2018, 250 electric buses have been produced at the facilities of the LiAZ plant near Moscow, owned by the GAZ Group, and about a 1,000 electric buses have been produced at the NefAZ plant in Neftekamsk, owned by KAMAZ. Almost [all of these vehicles](#) are used in Moscow's passenger transport system and were purchased through the mechanism of state tenders. The Moscow government's plans to fill the city's bus fleet with electric buses were not affected by periodic [delays](#) in the delivery of vehicles. Neither was the Mayor's office very discouraged when on 1 September 2018 the electric bus that set off on its first ceremonial journey with the Mayor on board [stalled](#) before it could travel a single kilometer.

The difficulties in organizing the production of electric vehicles are related on the one hand, to their technological complexity, which requires expertise in the design of traction batteries and their components, electric motors, power and control electronics and other critical elements, and, on the other, to the limited availability of rare earth metals (lithium, nickel, cobalt, etc.), insufficiently developed charging infrastructure and battery processing facilities. In addition, no modern electric vehicle model is made of automotive components, parts and components whose production is concentrated exclusively in one country, which makes it necessary to organize uninterrupted logistical supplies from different parts of the world and to establish long-term partnerships with global players in the automotive industry. These challenges are common to all electric vehicle manufacturers, which is why the creation of a mass market and a competitive industry requires multi-billion dollar investments by car companies, combined with government programs to stimulate demand, with no guarantee of a return on investment. This is why Tesla, the world's most successful electric car maker, [achieved its first year-end profitability only 18 years after it was founded](#), while [General Motors](#), [Volkswagen](#) and others are forced to periodically limit production volumes of their electric cars and delay production schedules.

## Sanctions guillotine

In this context, sanctions of various kinds are absolutely devastating for the nascent electric vehicle industry, in particular the placement of car companies on the SDN list of the US Treasury Department's Office of Foreign Assets Control (OFAC). This type of sanction prohibits persons in a US jurisdiction from engaging in any transactions with the sanctioned person, but also exposes the third-country company to the risk of secondary sanctions, administrative and criminal prosecution.

Last year, SDN sanctions were imposed on [KAMAZ](#) and [GAZ Group](#), and in September this year sanctions against [AvtoVAZ, Moskvich and Sollers](#) followed. As a result, all manufacturers of automotive parts, components, raw materials and materials for electric vehicles that work with these companies face significant sanctions risks when conducting financial transactions with them. These risks primarily concern companies from the People's Republic of China, which have begun to actively fill market niches in Russia after many Western companies had left the country. It is no coincidence that shortly after KAMAZ was included in the SDN list, the engine manufacturer Weichai [discontinued](#) supplying engines to Kamaz's plants in Neftekamsk and Naberezhnye Chelny. After AvtoVAZ was included in the SDN list, the Chinese car company FAW is now preparing to [break off](#) cooperation and reduce its joint project to assemble Lada brand cars in St Petersburg. The situation with Western partners is completely clear and straightforward. For example, an Austrian company Steyr Automotive immediately [cancelled the project](#) to organize the production on its premises and under its brand of GAZ Group vehicles intended for the European market, including low-floor electric buses.

The sanctions put an end to the plans [to localize electric cars](#) at the Moscow plant Moskvich, formerly owned by the Renault group. Today, the plant produces the Moskvich 3e electric model using high-volume assembly technology, which is essentially a re-engineered version of the Chinese JAC iEVS4 car. Continued supply of components to Moskvich and financial settlements put JAC under direct threat of secondary sanctions and are likely to force the Chinese company, which is simultaneously involved in projects with the already sanctioned AvtoVAZ and Sollers, to reconsider its strategy for working in the Russian market.

The Kaliningrad car manufacturer Avtotor is no better off at present. Avtotor used to produce BMW, KIA and Hyundai cars at its site before the start of Russia's full-scale invasion of Ukraine, and afterwards, following the subsequent withdrawal of global car companies from the Russian market it switched to assembling Chinese models BAIC, Kaiyi and SWM and recently [announced](#) the imminent start of production of the first electric car of its own design. As with previous failed attempts to create a Russian electric car, Avtotor [started](#) by announcing obviously far-fetched plans to achieve unrealistic production volumes (50 thousand electric cars per year) and localization of a number of critical components and technologies (electric motor, traction battery, power electronics, body and body systems, etc.), set production start dates for 2024 and even [patented](#) the brand name for its electric cars («Amber»).

However, when assessing the prospects of the project, Avtotor's specialists seem to be completely uninterested in the paltry figures of actual sales of electric cars on the Russian market ([2,998](#) units sold in 2022, [2,254](#) units sold and [687](#) — in 2020). Neither do they take into consideration the sanctions risks. Although the company has not been included in the updated SDN list, it is in the crosshairs of the OFAC, which could at any moment force the Chinese partners to suspend the previously [announced](#) plans for joint detailing in Russia and ultimately ruin its business.

Against the background of growing sanctions pressure on Russia, which blocks its access to technologies of the global automotive industry, [the plans](#) of Almaz-Antey, a defense

corporation currently under all kinds of sanctions, look all the more fantastic. Almaz-Antey wants to develop an electric car E-Neva and to carry out an annual production of 55–65 thousand cars from 2026. The group has already [acquired](#) the former Toyota plant in St Petersburg and [is preparing to invest 37 billion rubles](#) reequipping and refitting the place so as to start production there. In addition to the restrictions and limitations imposed by the sanctions, the defense corporation is facing another challenge: it has never produced civilian vehicles (let alone an electric vehicle), has no experience of working under market conditions, has not been involved in the creation and development of a dealer network and is virtually unfamiliar with the realities of the automotive business. That is why, it is safe to say that this proposed project is doomed to fail.

### **New Russian «electric car manufacturers»**

The prospects for new players on the market also seem rather bleak. Just three years ago, KAMAZ [unveiled](#) an experimental sample of the Kama-1 small electric city car. However, instead of the promised rapid launch of mass production, the project was transferred to a separate start-up company, JSC Kama, co-owned by private individuals, and then it quickly became associated with [corruption](#). The new version of the electric car was called «Atom», and it was available for a pre-paid pre-order, which [raised many a skeptical brow](#) among journalists. Large scale production is scheduled to begin in 2025, but so far neither the final price, nor the specific production plant, and not even the car's technical characteristics are known. One of the company's co-owners is currently [in detention in](#) Azerbaijan, accused of financing terrorism, creating illegal armed groups and illegal border crossing.

Back in 2022, a little-known company «Motorinvest» set up an assembly line for the production of electric vehicles under the «Evolute» brand, which is an analogue of China's Dongfeng Aeolus E70, at a plant in Lipetsk. With the [declared](#) production capacity of the plant (100,000 cars per year) and plans to produce 10,000–15,000 electric cars this year, no more than 1,200 cars were actually assembled in the first half of this year. It appears that the government's proposed [subsidy of a 35% discount on the purchase price](#) will do little to boost sales of Evolute electric cars. Against the background of the extremely low sales volumes of these cars and the generally small Russian electric car market, Motorinvest's plans for further localization of its electric cars look completely unrealistic: according to the [signed](#) Special Investment Contract (SPIC), the company has committed itself to launching production of batteries and an electric motor, to stamp, weld and paint body parts using Russian steel, and to carry out a number of other very capital-intensive operations, with a total investment of just 13 billion rubles over 11 years. Just to compare: a special investment contract [previously signed](#) by Volkswagen in Russia, with fewer localization obligations, provided for investments of more than 60 billion rubles over the span of 10 years and estimated sales of at least 200,000 cars per year to ensure payback of the announced projects.

Without real localization, the Evolute today is not a Russian but a Chinese electric car, assembled in a factory in the Lipetsk region, and is likely to remain such until Dongfeng deems the Russian market too risky in terms of sanctions and stops supplying its components. All the more so considering that the Chinese carmaker has a lot to lose: the annual global sales of Dongfeng vehicles have reached [3 million cars](#), of which [about 470,000](#) were electric cars, and exports have reached [240,000 cars](#).

It is worth paying attention to another new player — the company called «Electromobiles Manufacturing Rus», on which the authorities are pinning their hopes to create, as they say, [«the first electric truck fully manufactured in Russia»](#). In 2022, this company also signed a Special Investment Contract, under which [production activities](#) are now being developed on the site

of the Technopolis Moscow special economic zone (SEZ). However, a closer look at the project reveals that critical components, such as battery cells and electric motors, will be imported from China, and a significant part of the plant's equipment bears Chinese labels. In other words, the project's market prospects depend — in the very least — on the willingness of the Chinese partners to continue cooperation, especially after Technopolis Moscow SEZ was recently [included](#) in the SDN list. Other success factors do not look very promising either: the company «Electric Vehicles Manufacturing Rus» [was founded](#) in June 2021, has a charter capital of 10,000 rubles (approximately 100 euro), and is registered as a micro-enterprise. Its founder is the president of another company whose main activity is the production of sporting goods.

## Pipe dreams

On February 8, 2023, a «strategic meeting on electric transport» was [held](#) by the Russian government under the chairmanship of the First Deputy Prime Minister. From the opinions expressed, the comments made and the proposals put forward, one got the impression that the participants in the meeting live in a fairytale country that is not involved in a war and does not currently [top the global ranks](#) in terms of the number of sanctions imposed, a fairyland country where domestic car industry is developing in line with the trends of the global car industry. They acted and sounded as if it were enough for the government to simply give orders for the domestic electric vehicle production to miraculously jump into high-gear and start developing faster than it does in other countries. At the beginning of the event, the chairman of the meeting admitted that in 2022 Russia produced only a handful of electric cars, «about 2,000 vehicles in total», but he also expressed full confidence that this year the production of electric cars will increase nine times, and next year — 18 times. Whereas in 2022 there were «439 fast charging stations», in 2024 their number, he believes, «should reach about 3,000.» One of the heads of the Ministry of Industry and Trade noted that «the production of domestic electric cars has significant development potential», and a minister of the Moscow City Government added that the Russian capital is becoming «the center for the development and production of electric cars».

Such predictions and wishes are already shattered by harsh reality: in the first seven months of 2023, only [3,187 electric cars](#) were produced in Russia (or 17.7% of the expected total for the whole year), and reliable data on installed charging stations is not publicly available. It should be added that Russia does not currently produce its own batteries and electric motors, has not developed electronic control units for anti-lock braking systems (ABS), electronic stability control (ESP) and airbags, and many other critical components of an electric car. International experience shows that their development from scratch requires the coordinated efforts of experienced engineering teams and R&D, which is costly and time-consuming, and which Russian carmakers, isolated, facing market crises and financial shortages, cannot afford.

We would like to remind these daydreaming, optimistic officials that the government first paid attention to the issue of developing electric vehicles in Russia back in 2007, when the then mayor of Moscow [called for it](#) to be «not experimental, but operational, which will require the purchase of a sufficient number of cars, the creation of easily replaceable batteries for them, as well as electric recharging stations.» He even signed [an order](#) to that effect, but no significant progress in implementing his vision has been made in the country ever since.

