ZERO EMISSION BUSES

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APEEE Services

Schola Europæa – Bruxelles 1

APEEE Services asbl
Service Transport
Avenue du Vert Chasseurs, 46
1180 Bruxelles

N° entreprise : 0836 959 154
Compte en banque : BE77 3100 8642 2642

T'él : +32 (0) 2 374 70 46 (site d'Uccle)

1. Survey results

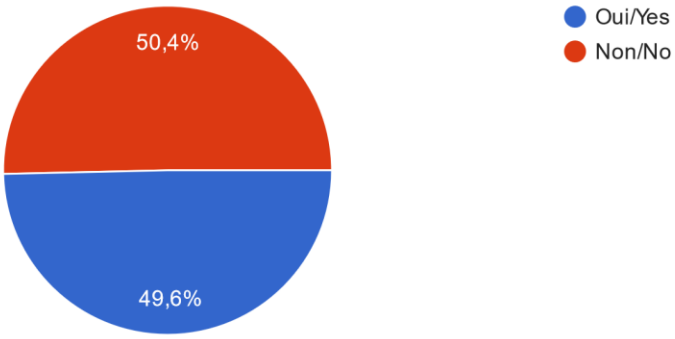
You will find below the raw results of the survey sent to parents on June 3, 2021 concerning "Survey on electric buses and transportation prices".
You can find the original message related to this mailing in Appendix at the end of this document.

Total number of emails sent: 4851
Total number of responses received: 993
Number of responses from non-paying parents: 725
Number of responses from paying parents: 268
Number of comments from non-paying parents: 191
Number of comments from paying parents: 81

And results of the 4 questions asked:

Question 1

Souhaitez-vous qu'un débat public soit organisé sur ce thème à la prochaine rentrée scolaire ? | Would you like to have more information in a dedicated open meeting early next school year?
993 réponses



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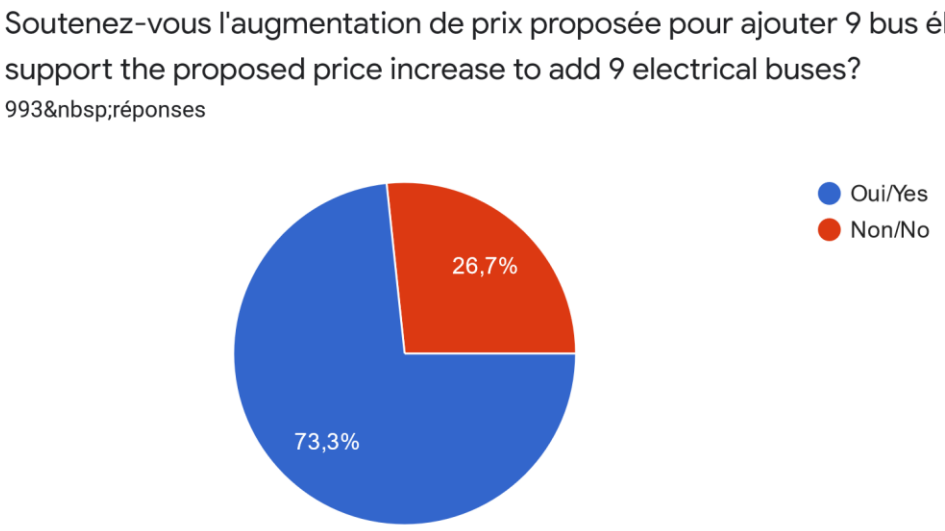
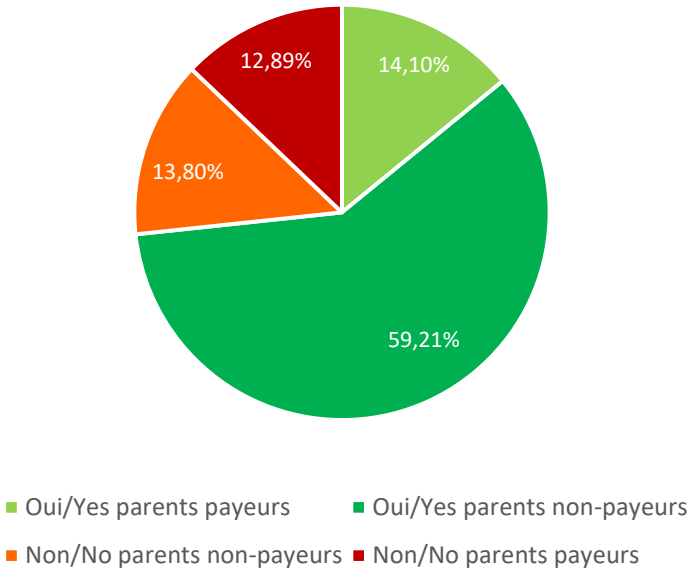
Question 2



When we refine the responses to question 2 by refining the results between paying and non-paying parents, it gives the following result:



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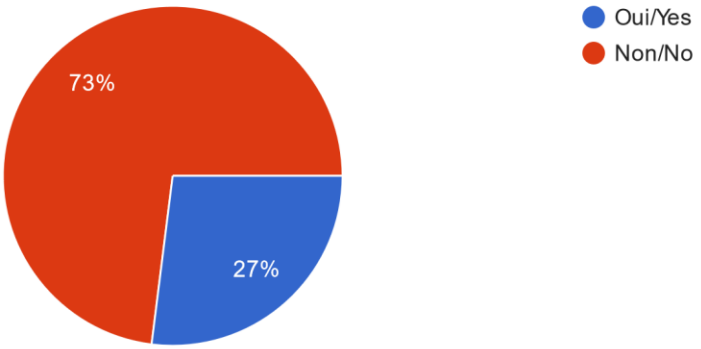
Question 3

Payez-vous directement le service transport pour un ou plusieurs de vos enfants ? | Do you pay directly for transportation service for one or more of your children?

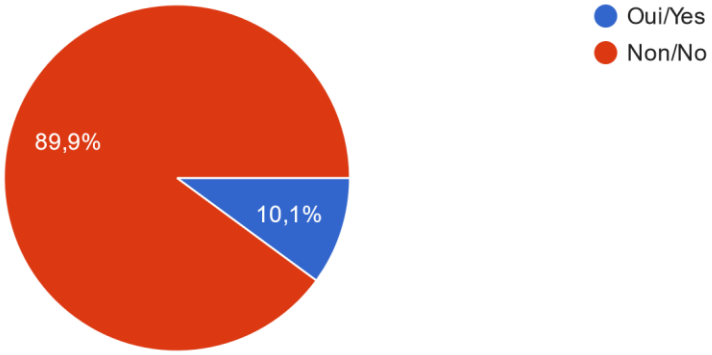
993 réponses



Question 4 (this question was only asked of parents who answered OUI/YES to question 3)

Ce paiement vous est-il partiellement ou totalement remboursé par votre employeur ultérieurement ? | Is this payment partially or fully reimbursed by your employer at a later date?

268 réponses



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2. Responses to key questions and comments identified

1. How come there will be more buses for the 21-22 school year? What about new routes?

The school in Uccle is composed of two sites: the historical site in the municipality of Uccle (Uccle site) and the annex site taken over 9 years ago in the municipality of Forest (Berkendael site). The Uccle site has reached its maximum capacity, but there is still some room for growth at the Berkendael site. Given the pressure on the capacity of the schools in the Brussels region, the APEEE Services, on the basis of the information provided by the school management, anticipates an increase in the number of pupils at the Berkendael site for the year 21-22 and therefore an increase in the number of registrations for the buses. Given the infrastructure and access to the Berkendael site, it is difficult to envisage larger buses and we must therefore increase the number of buses.

Routes are made on the basis of registrations to the transport service. It appears that for several years a growing number of parents have chosen to settle outside the city. This has put pressure on the transport service to increase the distances and areas covered by the service. In order to limit travel time for the well-being of the children, it is sometimes necessary to reorganize routes to make them more fluid.

2. Why doesn't the transportation department set up a flexible subscription system with a minimum base fee and then supplements based on options chosen by the parents?

The cost of a tour is largely related to fixed costs that are independent of the number of children actually on the bus: cost of the driver, energy, maintenance, supervisors (students and/or adults), permanent service staff. The only variable really related to the number of children is the capacity of the bus. However, even if a child theoretically takes the bus only a few times a week, we need to provide a bus with enough capacity to accommodate all the children enrolled on that route at any given time.
It is on this basis that the transport department of the APEEE services negotiates the contracts with the bus companies. A principle that would require monitoring on a daily or weekly basis the exact capacity needed would be counterproductive in terms of cost (time to manage changes) and also in terms of quality of service (risk of running out of buses or bus calibration errors) and safety (another bus usually means another driver and therefore less stability in the staff making the rounds with your children).

3. Why not differentiate fees according to the distance traveled?

The cost of a tour is largely related to fixed costs that are independent of the distance traveled (since we limit the length of tours even for those that go far): cost of the driver, maintenance, supervisors (students and/or adults), permanent service staff. The only variable really related to distance is the cost of energy, which has a proportionally small impact on the overall price of transport.

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Furthermore, a lower subscription cost for children living closer to the school would send a message that goes against a global vision of green mobility since it is preferable to encourage parents and children living close to the school to choose other green means of transportation such as walking or cycling.

4. Are the buses purchased directly by APEEE Services?

No bus is owned by the APEEE Services. The buses and drivers are made available to the APEEE Services on the basis of a service contract negotiated by the transport department with each bus company. The contracts and related specifications are renegotiated every year.

5. Why not reduce the number of buses that run half empty?

Last year and this year, buses actually ran with fewer students on board on average. There are three main reasons for this: parents' fear of health hazards on the buses, the prevalence of remote working among parents, and the organization of alternating classes for high school students.
The number of routes and the size of the buses is foreseen at the beginning of the year when the students register, the APEEE Service can adjust this during the year but only on the basis of the actual enrolment and/or the changes induced by the school management's decisions. For this year 20-21, the transport service has nevertheless received very few official cancellations, which means that it is not possible to make adjustments based on the reality on the ground.

6. Will the gradual shift to a 100% zero-emission fleet have an impact on small bus companies and on driver employment?

Like any paradigm shift, the fleet shift will have an impact on companies operating in the sector.
It is true that the global health crisis of 2020-2021 will have had a big impact on bus companies. Some of them are not strong enough to consider, in the short term, new large investments (electric buses, sheds with charging stations, specialized mechanics, ...) as required for the transition to an electric fleet and will not be able to work with us in the short or medium term.
The transport department will nevertheless keep a sufficient number of different service providers in order to limit the risks in terms of negotiation or provision of buses which would be real if only one or two companies shared all the routes.
As far as drivers are concerned, there will most probably be a larger shift than in a "classic" year. Indeed, for electric buses, the drivers will not be able to take the buses home as is generally the case at present, since they will have to be recharged with specific terminals adapted to this type of vehicle (power, speed of charge, etc.). For a certain number of drivers, this will pose a problem and they may not be able to make the requested rounds.

7. How will the e-buses be assigned? The ones that leave school last? To replace the routes with the most polluting buses?

Buses with Euro IV combustion engines have been discarded for next year because they are very polluting and do not have a particle filter (they are no longer eligible based on the tender specifications). Most of the new electric buses are small or medium capacity buses. Indeed, the market for electric school buses is still in its infancy in Belgium and the vehicles currently available on the market are either minibuses or city buses. Most of the new electric buses for the year 21-22 will therefore be small-

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capacity buses that are not suitable for the service in Uccle (the bus capacity at the Uccle site is already at its maximum in terms of numbers) and will therefore be deployed mainly at the Berkendael site.

8. Where will the buses and components be manufactured?

There were no criteria regarding the make or location of the proposed vehicles and their components. Following the negotiations with the different companies, it appears that most of the companies prefer to invest in European electric buses (mostly IVECO and Mercedes) in order to ensure a safer and faster supply of spare parts, battery management technologies, etc.

9. How can we be sure that the buses will run on "green" electricity? The price of electricity is less than that of diesel, so why is there an increase?

At this stage, there is no guarantee that the electric buses will be powered by "green" electricity. Indeed, charging stations must be planned and installed in the companies' own infrastructures and the specifications do not include specific criteria concerning the type of electricity used. As indicated in question 3, the direct cost of energy is relatively small and therefore has a limited impact on the overall cost. For more details on cost see question 17.

10. Why not consider other energy sources such as hydrogen?

The tender was for zero-emission buses, which includes electric, hydrogen, and other types of buses. Despite the expressions of interest received, no company offered a hydrogen bus or any other technology than electric.

11. Has there been a global reflection on mobility? Is there a global mobility plan in which the bus service is included? Why not invest the money for the electric buses in the promotion and safety of cycling? The access to the school by bike is dangerous, what can be done?

The transport department only has responsibility and authority for the bus issue. Nevertheless, the department works in collaboration with the various parties involved in mobility: the school, the building authority, the municipalities, the STIB, etc.
There is also an audit in progress concerning the issue of mobility. This is being carried out by the company VIAS as part of a Brussels Environment project. The transport department remains at the disposal of those responsible for the project.

12. Has there been a feasibility study concerning charging stations, charging time, space for charging points, ...?

It is not foreseen that the companies' buses can systematically stay on the school sites to ensure the recharging of their vehicles. However, the school, the building authority and the service are discussing the possibility of installing some charging points for the buses so that they can be recharged on an ad hoc basis to avoid possible breakdowns. Some bus companies have started to restructure their depots to be able to charge during the night.

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13. Is this project done in collaboration with European institutions and other schools? Why not finance the project through an EU budget (within the framework of existing calls for projects)?

The project is being carried out with the support of the PMO (Pay Master's Office of the European Commission) as well as the paying bodies of the other institutions. The transport department is in regular contact with the other European schools and has invited the other schools for global discussions. Nevertheless, each school and each APEEE (services) has its own functioning and remains independent for the management of its transport service.
Buses and infrastructure investments are made by private bus companies, which if they wish can respond and call on EU budgets such as Benefic for the charging points. The APEEE Services cannot therefore directly call for EU funds in the framework of this project. Moreover, as more than 80% of the subscriptions are paid directly by the institutions, the project is de facto already financed by the EU.

14. Why not consider a subscription system based on income? Why not share the extra cost on all parents, not just those who pay? Why such a high price when European institutions pays so much?

In case of difficulties, paying parents can always contact the transportation department to consider solutions and accommodations.
The price of the pass will be the same for everyone, regardless of the person or institution that actually pays, because the PMO prohibits a differentiation in pass prices between parents, especially for paying parents. As far as a solidarity fund is concerned, the contours and procedure for the concrete implementation of such a system will be studied by the competent bodies for these questions within the APEEE Services.

15. Why link an essential and inevitable transition (cfr. mobility policy in Brussels for the coming years) to a direct question of individual costs?

The APEEE Services is directly organized by the parents of the European school. Although a transition to a green fleet is indeed inevitable, it seemed essential to the parent representatives to allow the community to be informed and to give its opinion.
It would be counterproductive for too many parents to decide to stop using the bus service in favor of private cars if they do not agree with the policy and the prices.

16. Why not start with "simple" measures like asking drivers to turn off their engines on site?

The obligation to turn off the engines on school sites is included in the specifications of the contracts signed annually with the companies and is also included in the "driver's book" that is given to each driver at the beginning of the school year.
During the year, the service staff ensures that this rule is respected and reminds drivers who do not comply. Nevertheless, the service authorizes the engines to run a few minutes before the actual departure of the buses in case of high heat (for buses equipped with airco) or extreme cold (for heating).

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17. What is the percentage of paying parents?

Here is the number of orders for the 3rd quarter of the year 20-21 and the proportion of paying parents (kindergarten, category III) and non-paying parents (i.e. subscriptions paid directly by the employer) in Uccle and Berkendael.

Transport orders 3rd quarter 20-21*

	# Total	# Berkendael	# Uccle
a) Direct orders from non-paying parents	2728	328	2400
b) Direct orders from paying parents	378	111 (29,37%**)	267 (70,63%**)
TOTAL	3106	439	2667

**Selection = "All but cancelled" minus alternating custody*
*** relative % between Berkendael and Uccle among paying parents*

This table shows that 12.17% of all orders are for orders that must be paid directly by parents. Of the paying parents who responded, 90% stated that they were not reimbursed for these costs by their employer.

18. What are the details of the price and expected increase?

On the basis of an overall positive feedback, the Board of the APEEE Services has fixed the price of the annual subscription for the year 21-22 at 1700€ (against 1710€ initially announced). For non-paying parents, this amount will be paid directly by the employer. For paying parents, they will receive 1 payment request per quarter.
As indicated in the information document sent with the survey link, the price increase is related to 3 factors, which are detailed below:

A. Revision of prices following the call for tenders: the share in the global increase is +89,4 € per year (instead of 93€ initially announced)

Usually, the transport department does not call for tenders for the following year's contracts. The price increase is therefore negotiated on the basis of the price indexation provided by the FBAA (Belgian Federation of Bus and Coach Contractors). This indexation is mainly due to the indexation of salaries as well as to the variations in the price of energy. In addition, there are annual adjustments based on the fixed costs of the service (indexation of salaries, computer equipment, ...) and the number of registrations for the following year. In this context, the annual increase is relatively low.

The risk in the context of a call for tenders is obviously that the base price is revised upwards for the same service requested. In this case, even without the variable of electric buses, prices were pushed up

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because the specifications require newer and less polluting diesel vehicles than in the past (EURO VI or EURO V less than 10 years old).
Without a call for tenders and a significant change in the specifications, the anticipated increase would have been about 44€ per annual subscription. After the tender and the stricter specifications for diesel buses, this increase will be 89.4€ per yearly subscription after negotiations with the different companies.

B. The addition of 3 extra school buses in Berkendael due to the growth in the number of children enrolled in the school: the share in the overall increase is +40.4€ per year (instead of 42€ initially announced)

As indicated in questions 2 and 3, the annual cost of a tour is not completely correlated to the number of children and/or the cost of energy. The biggest impact is the salary cost of drivers and adult supervisors. The price ratio between a small bus (less than 40 seats) and a large bus (more than 40 seats) is therefore not equal to the capacity ratio between a small bus and a large bus. This means that the cost of small buses per child user is actually higher. Since the logistical conditions at the Berkendael site do not allow for the implementation of routes with large capacity buses, the addition of small capacity buses will have an impact on all subscriptions in order to be able to absorb this additional cost and to respect the PMO rule, i.e. the same price for all.

C. Operation of 9 routes with electric buses

The cost of providing an electric school bus of similar capacity to a fossil fuel school bus is higher for the following 4 main reasons:

1. Amortization of the purchase of an electric bus over 5 years rather than the traditional 10 years (see question 19)
2. Longer empty running time with more round trips between the place of service and the recharging place(s) (see question 6)
3. Spare parts and repair channels are being developed
4. Fewer kilometers that can be driven/fewer rounds that can be made in a day

Furthermore, as mentioned under question 7, most of the electric buses currently available for school transport are small capacity buses. This means, as indicated in the point above about adding the 3 buses, that the pressure on prices is also increased by this simple fact.

19. Why not use the price increase to improve the existing service?

The transport department is in a process of continuous improvement. Investments are made every year to improve performance. As an example, let us note :

1. a common order management system for all APEEE Services and APEEE has been implemented and continues to be improved,
2. a test phase in 2020-2021 and a deployment (total for Berkendael and progressive for Uccle) approved for 2021-2022 of the TOGETHER SCHOOL security project
3. improvement of the environmental performance of diesel buses

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20. What will the price be in 5 years when the 100% electric goal is reached? What has been done to anticipate these changes that have been coming for some time? The bus companies have known about this transition for a long time. Why should we have to bear the burden of their investments on our shoulders? Has there been any competition between the companies?

It seems difficult to say today what the subscription price will be in 5 years if further electrification takes place. What is certain, however, is that the technology for "large" electric vehicles is in full development, so we can expect prices to fall in the coming years. Bus companies are well aware of the transition that will have to take place. However, given the COVID environment and the relative uncertainty of the alternative energy market for large vehicles, companies are being relatively cautious about investments and are planning for shorter amortization periods (5 years) than they have traditionally done (10 years).

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3. Implementation for 2021-2022

Following the feedback from the implementation of the 2 electric buses during the year 2020-2021, the analysis of the survey results, the evolution of the electric vehicle market and the expected changes in the Brussels-Capital Region in terms of mobility, the Board of Directors of the APEEE Services voted on Thursday 17 June 2021 the following decision:

- Continue with the two existing electric buses (line 17 in Uccle and line 97 in Berkendael)
- Replacement of 7 diesel buses by electric buses (impacted lines not yet confirmed)
- The price of the annual subscription is fixed at 1700,00 €. The payment is spread out and will be done in three times :
    - for the 1st quarter (710,00 €)
    - for the 2nd quarter (570,00 €)
    - for the 3rd quarter (420,00 €)

The deployment of the 7 electric buses will take place during the school year 2021-2022 on the basis of the deliveries of the electric buses by the manufacturers to the companies that responded to the call for tenders and whose offer of electric buses was selected by the Transport Management Committee.

4. Prospects for the future

During the school year 2021-2022, the Transport Management Committee and the transport department will organize a large information and exchange meeting with the objective to define the main guidelines for the further deployment of a zero-emission bus fleet at EBB1 for both Uccle's and Berkendael's sites.
A communication will be sent in due time to the entire parent community to invite them to this session.

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5. Appendix

Dear Parents,

As announced at the APEEE and APEEE Services GA in December 2020, the Transportation Management Committee and the Transport Department are working diligently to **help improve air quality and contribute to climate solutions**. Air pollution is not only a concern for the city, but the high peaked related to many buses on school sites are a real concern, especially for smaller children directly exposed to air pollution.

As you may be aware, the Brussels region is tightening air quality standards so that by 2030, all diesel and petrol buses will be forbidden in the city. The school fleet, which is mostly made up of diesel buses, must therefore also start its transition. The overall goal of our Committee, supported by the board of directors, is to have 100% zero-emission buses by the 2025/26 school year.

Our Transport Management Committee has therefore launched the phasing out of the most polluting diesel buses (without particle filters) and accelerated the electrification of the school bus fleet.

This year (2020/21), we have launched a pilot project with 2 electric buses with no direct impact on the subscription price as it was financed by the APEEE Service's own funds: 1 large bus in Uccle and 1 smaller in Berkendael. Based on the positive results of this first test phase, the Committee has launched a call for tenders to increase the number of electrical buses for the school year 2021/22 by 20%.

After negotiations conducted by our transportation department to reduce the proposed prices, **we are proposing for the 2021/22 school year to continue with the use of the existing 2 buses and the addition of 7 more electric buses bringing the total of electric buses for the 2021/22 year to 9 electric buses.**

As far as the annual subscription price is concerned, this would mean a global increase of 260 euros per child. This increase is linked to 3 factors:

- Price revision following the call for tenders: share in the overall increase is +93€
- The addition of 3 more school buses due to the growth in the number of children enrolled in the school: share in the overall increase is +42€
- Exploitation of 9 lines with electrical buses: share in the overall increase is +125€

Parents whose costs are covered by the institutions will not be impacted by this increase. Nevertheless, we are aware of the impact this may have on those of us who pay effectively for bus services ourselves.

We want to be able to continue to count on the support of the whole parent community for the electrification of the school bus fleet, so we are asking you to complete the following survey (maximum 1 minute of your time) before Monday June 7 at 6:00 pm:

Click here to access the survey