Proposition to the City Government
City of Oslo

[municipal crest] Oslo

**Oslo City Government Proposition 1014/25**

**Revised standard climate and environmental requirements for City of Oslo construction sites**

**Summary:**
The City of Oslo aims to cut 95 percent of its greenhouse gas emissions, and procurements are a key strategic measure in reaching this goal. A significant percentage of GHG-emissions in Oslo can be attributed to construction activities. The City of Oslo is a major construction client, and by imposing strict requirements on its own procurements, the City can achieve significant reductions in emissions.

In 2019, as part of its effort to attain the City's ambitious climate objectives, the City adopted standard climate and environmental requirements for the City's construction sites, cf. City Government Proposition 1091/19. In this proposition, the City aimed to make all construction sites emission-free by 2025.

In the period since these requirements were adopted in 2019, there have been considerable developments in the market. In 2018, no construction sites were emission-free, whereas in 2023, 77 percent of energy consumption in the City's construction sites was emission-free, and 98 percent was fossil-free.

It is now time to revise the requirements in response to the market situation, to promote emission-free solutions now and in the years to come. This entails updating the requirements to match the market situation to ensure increased climate and environmental gains at the lowest possible cost. The proposition includes a directive on how undertakings can use the requirements to ensure efficient and uniform application of requirements and restrictions. This includes making it possible for undertakings to grant exemptions from the requirements where the market situation so demands. With this approach, the City will have targeted climate and environmental requirements for the best possible climate and environmental outcome, without the requirements being imposed in projects there they would unnecessarily increase costs.

This proposition recommends shifting from a minimum requirement of fossil-free construction sites to a minimum requirement of emission-free construction sites by introducing a contract requirement under which all activities on the construction site must be emission-free. This requirement will be mandatory for all construction sites, and the threshold value for when to include this requirement in procurements is set to NOK 100,000.

The proposition also recommends a minimum requirement for biogas in mass hauling, but to reward emission-free transport. In addition, the proposition recommends implementing separate contract requirements for other transport, where vehicles under 3.5 tonnes must be emission-free or use biogas, and vehicles over 3.5 tonnes must, at minimum, be fossil-free.

This proposition replaces the guidelines that follow from City Government Proposition 1091/19: Standard climate and environmental requirements for City of Oslo construction sites.

**Presentation of proposition:**

## 1. Background

In its *Climate Strategy* (City Government Proposition 214/19), the City of Oslo adopted a goal to reduce the City's GHG-emissions by 95 percent compared to 2009 levels by 2030. The climate strategy furthermore outlines efforts to make construction activities in Oslo fossil-free, and then emission-free by 2030. Activities on construction sites are the third largest source of GHG-emissions

in Oslo. The City's own construction sites make up approx. one third of construction activity and therefore also a significant percentage of emissions. By imposing strict requirements in its own procurements, the City contributes to cuts in emissions, while simultaneously laying the groundwork for private developers to also implement emission-free solutions in the years to come.

In 2019, the City Government adopted the Standard climate and environmental requirements for City of Oslo construction sites (City Government Proposition 1091/19). The objective of these requirements was to cut emissions and to promote innovation and market development.

The current standard requirements for construction sites are composed of contract requirements, award criteria and minimum requirements. Contract requirements are requirements that must be met throughout the contract period. Minimum requirements describe the mandatory characteristics of the procured product or service. Award criteria describe the elements of each tender that shall be taken into consideration to determine the winning tender.

Under the current standard requirements, fossil-free construction machinery and fossil-free mass hauling are minimum requirements. Suppliers compete on the percentage of emission-free construction machinery, as well as on emission-free and biogas-fuelled mass hauling under the "Environment" award criterion. The minimum weighting for this criterion is 20 percent, but the recommended weighting is at least 30 percent. Undertakings can impose stricter climate and environmental requirements where appropriate.

The requirements only apply to relevant procurements exceeding NOK 500,000. The "Environment" award criterion is mandatory for all procurements exceeding NOK 5 million.

The standard requirements furthermore include a contract requirement, under which the City of Oslo, from 01/01/2025, requires the use of emission-free construction machinery and emission-free or biogas mass hauling in all construction procurements.

# 2. Experiences from the current requirements

## 2.1. The City of Oslo's implementation of the requirements and positive market developments

Since the first pilot project with an emission-free construction site at Olav Vs gate in 2019, the City of Oslo has had plenty of experiences with emission-free construction projects. All of the City's large property developers have implemented the standard climate and environmental requirements.

The Municipal Audit's report 3/2024 *Grønne anskaffelser – klima og miljøkrav* shows that climate and environmental requirements were used in most construction procurements. A review of the City's notices of construction projects in Doffin (database for public procurements) shows that requirements for fossil-free and emission-free machinery and vehicles were included in more than 90 percent of relevant requests for tender in 2023.

There have also been positive developments in the market. There are currently a wide range of emission-free types and models of machinery available that did not exist when these requirements were adopted. The percentage of new zero-emission or biogas vehicles over 3.5 tonnes in Oslo was 42 percent in 2023, compared to 14 percent nationwide. In 2023, a whopping 98 of energy consumption on City of Oslo construction sites was fossil-free, and 77 percent was emission-free (according to the City of Oslo's climate and environmental reporting for 2023).

According to reporting for the climate budget, the Agency for Climate has calculated a reduction in emissions of 25,600 tonnes of CO2 in 2023, attributed to the use of biodiesel, biogas and electricity as

replacements for fossil energy in the City's construction projects. This is equivalent to the annual emissions from 12,800 fossil-fuel cars. Emission-free machinery also have other benefits, such as improved working environments on construction sites due to reduced noise, reduced vibrations and reduced emissions of nitrogen dioxides (NOx) and particles leading to localized pollution.

It has been important to share Oslo's experiences and promote increased demand in Norway and abroad, including through Nordic collaborations, the global C40 Cities network, and the European Commission's network for public procurements in Europe (EU Big Buyers Working Together). The City of Oslo is also an international pioneer in emission-free construction sites, contributing to green transitions, market developments and cuts in emissions far beyond Oslo.

## 2.2. Barriers to emission-free construction sites

Developments are moving in the right direction in terms of emission-free machinery and vehicles, and the City of Oslo's standard climate and environmental requirements have been a success. Even so, multiple barriers have been identified that slow down developments in terms of emission-free machinery and vehicles, and these must be overcome if the City is to attain its ambitious climate goals.

The market for emission-free heavy vehicles is still immature, the economy is down, and the construction industry is especially vulnerable to economic fluctuation. The costs of investing in electric machinery and vehicles are still significantly higher, which makes the market vulnerable. As an example, an electric excavator costs 2–3 times more than a conventional excavator. High investment costs are a significant barrier to more suppliers implementing emission-free construction machinery and heavy vehicles.

In addition, the shortage of charging infrastructure is a significant challenge. Transitioning to electric vehicles and construction machinery will require a significant expansion in charging infrastructure and temporary access to electricity on construction sites. A lack of access to electricity and shorter run-times for these types of machinery could increase costs and the risk of emission-free solutions not being implemented.

Electricity is significantly cheaper than fossil fuels, which reduces operating expenses. This is, however, not enough to off-set the added investment costs from a business perspective. These barriers can make it difficult for contractors to deliver zero-emission without additional incentives. When Enova discontinued its subsidy scheme for biogas trucks and changed its grant scheme for electric trucks, this created uncertainties in the market. According to Maskingrossisternes Forening, emission-free construction machinery only accounted for 4.5 percent of new sales in 2023. This is the highest percentage of emission-free machinery since registrations began in 2018, but fossil-based machinery still makes up 95.5 of sales.

It is important to ensure predictability to speed up mass production of emission-free machinery and vehicles. It is also important to keep up the demand for this technology. More clients demanding electric machinery and vehicles drives innovation and the development of new technology. Requirements in public procurements are a key tool in promoting the transition to emission-free construction sites. At the same time, other tools, such as subsidies, taxation, information and regulation, should also be reinforced and introduced, encouraging the market to move faster.

While barriers to emission-free construction sites have been identified, the City's experiences from the implementation of standard climate and environmental requirements show that these barriers to emission-free construction sites can be overcome. Oslo has come a long way, and the availability of emission-free machinery and vehicles is significantly higher here than in the rest of the country. This means that the City of Oslo has broken barriers, and the standard climate and environmental requirements have been a success.

## 3. Process leading up to the proposition for revised requirements

The proposition for revised requirements has been prepared based on recommendations from a municipal task force where all of the major property developers were represented, including Oslobygg KF (OBF), the Agency for Urban Environment (BYM), the Agency for Water and Wastewater Services (VAV), Boligbygg KF (BBY), the Port of Oslo (HAV), and the Fornebu Line (FOB). In addition, the Agency for Climate (KLI) and the Agency for Real Estate and Urban Renewal (PBE) provided feedback. The work was led by the Agency for Improvement and Development (UKE).

The revision also took into account feedback from the market. The City of Oslo has carried out multiple market dialogues on the standard requirements, to elicit feedback from the market on the transition to emission-free solutions. Contractors and transport service providers were well represented and have contributed valuable feedback. Market actors support the ambitious climate and environmental goals, and they want to deliver. Predictability as concerns the City of Oslo's climate and environmental requirements is important in terms of the market feeling comfortable to invest in new technology.

## 4. Definitions

*Fossil-free*
Non-fossil energy carriers. Fossil-free energy carriers are, in this context, biofuels (biodiesel, bioethanol, biogas), pellets, electricity, hydrogen and hydronic heating.

*Emission-free/zero-emission*
Energy carriers that do not yield particulate emissions when used. Zero-emission technologies do not have direct emissions of greenhouse gases and exhaust when used. Emission-free machinery/vehicles operate using electric energy, hydrogen or other zero-emission technologies.

*Climate and environmental requirements*
Climate and environmental requirements include requirements or criteria to reduce negative climate or environmental impact from performance, or promote climate-friendly solutions, and are specified in the request for tender or the supplier's tender.

*Bonus*
A predictable reward for performances beyond contract requirements, given to a supplier in the competition or execution phase. The bonus can be based on different factors, e.g. supplier performance, goal attainment or specific results.

## 5. Amendments and recommendations for new requirements

### 5.1. Requirement for emission-free construction activities

The current standard requirements include a contract requirement for all construction machinery and vehicles to be fossil-free. In addition, the City will give points under the "Environment" award criterion for the number and percentage of emission-free machinery to be used in contract fulfilment. The standard requirements furthermore stipulate that all machinery and all equipment used on construction sites must be emission-free from 01/01/2025.

It is proposed to continue the current guidelines, and the new main principle (contract requirement I) is to require emission-free execution of construction activities. This requirement is not focused on the machinery itself, but the work it performs on the construction site.

The requirement includes electric and hydrogen-powered machinery, but also permits hybrid machinery that uses electricity to work, but biofuel to move. This is the same interpretation of terms as that applied in the Norwegian Standard for emission-free construction sites, NS/TS 3770. The purpose of this approach is to expand the market and encourage a more rapid pace of transition, especially in terms of conversion of machinery. The arrangement with hybrid machinery will be evaluated after one year to see if the market is responding as intended, or if it would be better to return to a requirement for entirely emission-free machinery. It is pointed out that all activities on the construction site must be carried out using emission-free technology, and that the use of biofuel is only permitted in situations where the machine is relocating from one place to the next. Monitoring of compliance with this requirement is handled through the City's reporting system, see section 5.8.

## 5.2. Mass hauling

It is proposed to amend the current requirement for fossil-free mass hauling to a contract requirement stipulating that biogas is the only alternative fuel permitted for mass hauling if emission-free solutions are not used. This means that liquid biofuel cannot be used for mass hauling activities. The requirement will cover the entire transport distance, from loading to unloading.

In addition to requiring biogas as a minimum for mass hauling, it is furthermore proposed to reward emission-free mass hauling. This recommendation is based on biogas and emission-free mass hauling being considered equal from 2025 under the current requirements, and it is proposed that this is continued in the revised requirements. As biogas is cheaper, it could lead to suppliers opting to use biogas in contract fulfilment, with the result that developments in electric mass hauling stall. By rewarding emission-free solutions, the City of Oslo is able to offer an incentive that hopefully means more suppliers choose to invest in emission-free mass hauling solutions.

Rewarding emission-free technologies for mass hauling is mandatory, but the City's undertakings can choose whether they want to use award criteria in the request for tender, or bonuses during the contract phase. If award criteria are used, suppliers compete on the percentage of emission-free transport. Bonuses are intended as a predictable reward for the percentages of emission-free mass hauling during the contract period.

The wording of requirements and criteria will vary for each procurement. UKE is in the process of preparing guidelines, which shall be applied insofar as they are relevant.

## 5.3. Requirements for other transport

The current standard requirements include an award criterion called "Other transport". The term other transport refers to transport activities where goods and services are delivered to the construction site, e.g. materials, equipment, personnel, etc. With this criteria, supplies are rewarded for their ability reduce the use of fossil-fuelled vehicles in this kind of transport.

It is proposed to replace the current award criterion with a contract requirement, which is stricter than the current award criterion. In addition, it is proposed to distinguish between vehicles under and over 3.5 tonnes. The background for distinguishing between vehicles under and over 3.5 tonnes is that the market situation differs considerably in terms of maturity. The availability of emission-free vehicles is very high for lighter vehicles, but lower for heavy vehicles.

For transport of goods and services using vehicles under 3.5 tonnes, it is proposed to require the use of vehicles that are either emission-free or biogas-fuelled.

For transport of goods and services using vehicles over 3.5 tonnes, it is proposed to require the use of fossil-free transport. For these vehicles, it is further proposed to use award criteria to promote the use of emission-free or biogas-fuelled vehicles. It is furthermore proposed to make the requirement stricter from 01/01/2027, by requiring all vehicles to be emission-free or biogas-fuelled from this date. This date was selected based on analyses of the market situation, which indicate that the market will be able to meet this requirement from 01/01/2027.

## 5.4. Contract areas where the main principle cannot be applied in the competition phase

For some contracts, it will be highly uncertain whether it will be possible to obtain certain vehicle or machinery types with zero-emission or biogas technology. In these cases, exemptions from the standard requirements can be made. Please note that undertakings should be restrictive in granting such exemptions. Exemptions should only be made when climate and environmental requirements in accordance with the main principle are not possible or practical in consideration of ensuring sufficient competition. This must be documented in the procurement documents.

The right of undertakings to grant exemptions also include the requirements concerning other transport, under which all vehicles over 3.5 tonnes must be emission-free or biogas-fuelled from 01/01/2027. If the undertakings find that the availability of such vehicles in the market is not sufficient by 01/01/2027, they can set a later date for when this requirement shall take effect. It is pointed out that undertakings may not set a date further into the future than dictated by the market situation. If the undertakings set a later date in the competition phase, they shall apply an award criteria, so that the suppliers that are able to deliver emission-free or biogas-fuelled vehicles are rewarded for this.

When an exemption is granted from contract requirement I, II, or III, the use of vehicles compliant, at minimum, with Euro 6/VI and sustainable, palm oil-free biofuels beyond the turnover requirement shall be required (contract requirement V).

It is important to note that climate and environmental requirements for construction sites must always be applied, and that this is especially important in contracts where a market transition to zero-emission or biogas technologies can be challenging. It must also be noted that public procurements must have climate and environmental requirements, cf. Section 7-9 of the Public Procurement Regulations.

## 5.5. Exemptions from requirements concerning construction activities and mass hauling during the contract period

It is proposed that the opportunity to grant exemptions is restricted and clarified from the current exemption clause. The new clause provides clear requirements for what an application for exemption must include, but the list is not exhaustive. In addition, it is pointed out that exemptions require client approval before the supplier can implement the measure. This clause will apply to changes made during the contract phase, after a tender has been submitted, and requirements and conditions have been accepted.

The clause is intended as a very narrow exception, and it is limited to situations where it will not be possible to comply with the climate and environmental requirements of the contract, and where the situation is not due to circumstances the supplier ought to have been aware of when submitting the tender. It is pointed out that exemptions must only be granted insofar as they are necessary. For example, in the contract phase, it may be necessary to grant an exemption from the requirement to use emission-free or biogas-fuelled vehicles over 3.5 tonnes for other transport activities from 01/01/2027 if it will not be possible for the supplier to comply with this requirement. If so, the undertaking may grant an exemption, but this would only be valid until such time that it would be possible to comply

with the requirement for emission-free or biogas-fuelled vehicles, and not for the remainder of the contract period. This proposition must be seen in context of the option to grant exemptions in the competition phase, see section 5.4 above.

## 5.6. Non-compliance with and sanctions for climate and environmental requirements

The current sanctions clause has been primarily focused on daily penalties. In some cases, this has not been an appropriate response. The revised sanctions clause has taken into consideration the revised sanctioning system established in the Oslo Model and has coordinated the clauses where appropriate. It is proposed that penalties can be imposed for non-compliance with climate and environmental requirements. The penalty must be proportionate, and the supplier's total liability for penalties is limited to 5 percent. This limitation of liability does not apply if the supplier's non-compliance with climate and environmental requirements is intentional or caused by gross negligence. The background for the proposition to include a limitation on total liability for penalties is to make the City's sanctioning more transparent and reduce risk for the suppliers, which is presumed to contribute to a lower risk premium in competitive tenders. The undertakings may specify another limit than 5 percent based on a specific assessment. This proposition for a revised sanctions clause will give undertakings greater flexibility to find suitable sanctions for non-compliance with environmental requirements in each individual case.

The new sanctions clause covers all climate and environmental requirements in the contract and is not limited to the machinery and transport requirements. This means the clause can be applied to all non-compliance with climate and environmental requirements in the contract and is not limited to the standard requirements adopted in this proposition.

## 5.7. Documentation and reporting

The City of Oslo uses a digital system for supervision and reporting of consumption and emissions from the City's construction sites. A new requirement for suppliers to connect to this system is proposed. The digital reporting solution is web-based and automatically collects data from machinery and vehicles in use on construction sites. The undertakings may use this information in their reporting on climate and environmental goals in connection with the Climate Budget and annual reporting.

## 5.8. Requirement for registration in the Machinery Register

It is proposed to continue the requirement that all machinery used on construction sites must be registered in the Machinery Register. This requirement ensures that the client will be able to verify that the machinery specified in the tender actually are in use on the construction site. In addition, it documents that the machinery has been insured and inspected.

## 5.9. Requirement for energy and power consumption planning

A new requirement is proposed, under which the supplier must prepare a plan for energy and power consumption on the construction site. This is to ensure good progress and prevent project delays caused by insufficient capacity in the power supply. Good planning in terms of energy and power needs can also reduce costs and limit unnecessary strain on the power grid.

## 5.10. Requirements proposed removed

It is proposed to move two requirements. The first concerns the award criterion related to reduced mass hauling based on distance and tonnage. This is because the requirement has not had the intended effect, and it has been difficult to monitor compliance. It is also worth noting that the incentive to

reduce the number of trips already exists with suppliers, because fewer trips are more cost-effective. This award criterion is proposed replaced with a contract requirement for biogas as fuel in mass hauling for the entire distance.

The second requirement proposed removed is the requirement that all machinery must be CE certified. This can be removed because it is already covered by the requirement for registration in the Machinery Register.

## 6. Directive for the City's undertakings on how to incorporate climate and environmental requirements in construction contracts

It is proposed to introduce a directive that provides guidelines for how undertakings can incorporate climate and environmental requirements in procurement processes and contract follow-up, including options to exempt certain types of projects, machinery or vehicles from the requirements. The directive aims to ensure efficient and uniform application of requirements and restrictions, and to ensure the best possible climate and environmental outcomes at the lowest possible cost. The directive is found in Annex 1.

According to the directive, undertakings must, among other things carry out market dialogue or market surveys on climate and environmental requirements and the availability of emission-free technology. This must be carried out as part of the dialogue undertakings have with the market about their specific projects. In addition, there are arrangements for joint knowledge acquisition led by UKE. Regular dialogue is especially important, as the technological advancements happen at a rapid rate.

Feedback from the market and the City's own experiences suggest that there are some types of projects, as well as some types of machinery and vehicles, where it will not be possible in practice to impose minimum requirements concerning emission-free or biogas solutions in the near future. The directive therefore includes a recommendation for undertakings to make their own specific assessment of relevant needs before the request for tender goes out. Based on such assessments, the undertakings can make exemptions from requirements if they can see that it will not be possible in practice for the market to comply with them. In such cases, the use of award criteria for certain types of machinery or projects could lead to emission-free solutions being phased in more quickly. It is considered expedient to establish a centralized overview of machinery, equipment and activities where emission-free solutions are not available. This should be updated regularly, and the undertakings should maintain an active dialogue on the status of the market.

## 7. Scope of application for the requirements

The current requirements apply to construction procurements exceeding NOK 500,000. In addition, the "Environment" award criterion is required for procurements exceeding NOK 5 million. It is proposed to expand the scope of application f or the standard requirements to include all of the City's construction procurements exceeding NOK 100,000. This value is equivalent to the current threshold value for the public procurement regulations.

The directive allow undertakings to grant exemptions from climate and environmental requirements for machinery and vehicles where compliance with such climate and environmental requirements is not possible or appropriate in consideration of competition. Exemptions should be granted sparingly.

In procurements where the criteria for imposing requirements have been met, but where no requirements will be imposed, the undertakings must apply for an exemption from their superior department. The vice mayor for the relevant area is authorized to approve exemptions. Exceptionally

compelling circumstances must be present to grant an exemption from imposing climate and environmental requirements, and this is intended as a very narrow exception.

## 8. Public Procurement Regulations and weighting of climate and environmental considerations

Section 7-9 of the Public Procurement Regulations establishes that climate and environmental considerations shall be weighted at 30 percent in public procurements. The award criteria can be replaced by climate and environmental requirements in the specifications if it is clear that these will lead to a better climate and environmental impact, cf. Section 7-9 (4).

It is proposed that the City of Oslo's standard climate and environmental requirements for construction sites largely be comprised of contract requirements. In the City's assessment, it is clear that the procurement can achieve a better environmental impact by imposing climate and environmental requirements on construction sites than by weighting climate and environmental requirements as award criteria. One must nevertheless make a specific assessment in each procurement, cf. Section 7-9 (4) of the Public Procurement Regulations.

In cases where undertakings grant exemptions from the City of Oslo's standard climate and environmental requirements, the undertakings shall specifically assess whether the standard requirements shall be combined with a weighting of climate and environmental issues at no less than 30 percent, Section 7-9 (2) and (3) of the Public Procurement Regulations. These assessments must be documented in the procurement documents.

## 9. The vice mayor's assessment

While developments are moving in the right direction, one must encourage a more rapid pace of transition if the City is to achieve its adopted climate goals. Activities on construction sites are the third largest source of GHG-emissions in Oslo, and a significant percentage of these emissions can be attributed to the City's projects. In order to achieve a 95-percent reduction in emissions by 2030, stricter requirements must be imposed on the City of Oslo's construction sites.

The City of Oslo has had plenty of experience with climate and environmental requirements on construction sites since the current requirements were adopted. With 77 percent of energy consumed on the City's construction sites was emission-free as early as 2023, this shows that the requirements have been effective. In order for the requirements to remain relevant and accurate, they must be revised.

In the vice mayor's assessment, it is important for this revision to focus on predictability by continuing to require emission-free construction sites. It is the vice mayor's opinion that absolute requirements have a bigger impact than award criteria, as compliance with these requirements is not optional for suppliers. This entails considerable climate gains and emphasises the City's ambition to be seen as a serious, predictable and responsible procurer.

At the same time, the vice mayor believes it has been essential to adjust requirements to the market situation to avoid unnecessarily costly requirements. By rewarding emission-free solutions, the requirements facilitate reductions in GHG-emissions from the City's construction sites and promote market development.

It is important that the undertakings prioritize the effort to ensure access to infrastructure and electricity. This is necessary in order to prevent delays and increased project costs.

## 10. Assessment of the proposition's climate impact

This proposition will encourage further cuts in the City's emissions from construction activities. Construction procurements have direct GHG-emissions from the burning of fossil fuels by construction machinery and vehicles used in mass hauling, waste management and materials transportation. In 2023, 98 percent of energy used by machinery and vehicles was fossil-free, and 77 percent was emission-free. This includes all energy used to replace fossil energy on the City's construction sites, i.e. electricity, biogas and sustainable biofuel. With the new requirements, an increased percentage of energy used on construction sites will be emission-free.

The revisions proposed here will not significantly affect the estimated cut in emissions. This is because the change from fossil-free as the minimum requirement to emission-free as the minimum requirement was adopted in 2019 and therefore had been included in most existing contracts that continue into 2025 and beyond., With the new requirements, however, an increasing percentage of the energy consumption will be emission-free. The climate accounting will not reflect a higher cut in emissions compared to fossil fuels, as bioenergy is considered climate-neutral.

The fuel technology requirements that apply to the entire transport distance in mass hauling, and the vehicle requirement in materials transport, are stricter requirements that may yield an increased climate gain. It is, however, difficult to quantify this gain.

## 11. Laws and regulations, past decisions

National legislation:

- Public Procurement Act of 17 June 2016
- Public Procurement Regulation of 12 August 2016
- Regulations on Procurement Rules in the Supply Sectors of 12 August 2016

Municipal regulations:

- City Council Proposition 109/2020 *Climate strategy toward 2030*
- City Council Proposition 432/2023 *2024 budget, document no. 3 (Climate Budget 2024)*
- City Government Proposition 1104/17 *City of Oslo procurement strategy*
- City Government Proposition 1091/19 *Standard climate and environmental requirements for City of Oslo construction sites*
- City Government Proposition 1036/22 *New directive for city governance*
- City Government Proposition 1004/25 *Revised standard climate and environmental requirements for transport in City of Oslo procurements of goods and services*

## 12. Economic and administrative consequences

Shifting to emission-free construction sites could increase the City's construction project costs temporarily. This is because emission-free machinery and heavy vehicles currently cost more than fossil fuel alternatives. At the same time, energy consumption on the City's construction sites is already 77 percent emission-free. The City's suppliers have gradually transitioned to more emission-free operations, and the economic consequences of this revision are therefore presumed to be limited.

Added costs associated with fossil-free and emission-free construction sites often accounts for a limited percentage of total project costs (contract costs). In 2022, SINTEF performed an impact

analysis of the City of Oslo's standard climate and environmental requirements as they concern emission-free construction activities on behalf of the Agency for Climate. SINTEF estimates that the added costs attributable to the current requirements are less than 1 percent (pessimistic estimate) of total project costs. This estimate does not include any added costs related to power supplies, and the comparison was not against fossil fuels, but fossil-free fuels. SINTEF furthermore estimates that electric construction sites could be competitive on price by 2030.

The market determines the costs of each project after the tendering process. In most of the tenders for City of Oslo projects it has been difficult to identify any major prices differences related to emission-free construction activities. Sometimes, the lowest bid also had the highest percentage of emission-free project execution. This is true, for example, of the project for a new water supply to Holmenkollen, where the lowest bid also was completely emission-free. There are also examples of the opposite. In the project Stovner bad, Oslobygg found that the costs associated with emission-free machinery was higher when increased complexity and delays were taken into account. In large construction projects with complicated groundwork, the added cost of completely emission-free operations could therefore lead to added costs exceeding 1 percent of construction costs.

It is presumed that suppliers incorporate some of the risk associated with their investments in fossil-free and emission-free vehicles and machinery in the price of their projects. Predictability in terms of the City's requirements is therefore an essential point in terms of economic consequences. Standard requirements offer predictability, which reduces risk. Lower risks could then, in turn, lead to lower added costs in the form of lower risk premiums from suppliers. The suppliers furthermore need clients to demand emission-free machinery and vehicles. It is therefore positive that the national government, in its green paper, announced that they intend to introduce minimum requirements for zero-emission and fossil-free construction sites in all public procurements.

The revised requirements propose to introduce bonuses to reward emission-free mass hauling. When bonuses are used, it is possible to put a cap on how much one is willing to pay, e.g. in kroner per tonne CO2, and the added costs would therefore be more visible than if award criteria are used. It is unclear how large a bonus will have to be for a supplier to choose electric mass hauling, but it should likely cover the majority of the added cost to ensure it has the intended effect. If award criteria are used, it can be more difficult to predict what the added costs will be. It will be up to the undertakings to decide whether they want to reward emission-free solutions through award criteria or bonuses. It is proposed to end all bonus schemes by 01/01/2030, when it is expected that the price difference between electric and biogas solutions will eliminated within 2–3 years.

In the revised requirements it is also proposed to be more clear on when the undertakings can grant exemptions from the emission-free requirement. This could reduce added costs and the administrative burden of monitoring compliance with climate and environmental requirements. Facilitating for more equal treatment could improve predictability while simultaneously reduce cost and administrative burdens.

The digital reporting solution is a cost-saving measure. The City will incur some minor administrative costs if all municipal undertakings implement the City of Oslo's reporting solution for monitoring of compliance with climate and environmental requirements. Suppliers will incur no costs when connecting to the system. The exception is when machinery manufacturers require a low monthly fee for data transfers via API. This will only apply in a limited number of situations, and the amount will be borne by the suppliers. The benefits of more efficient contract follow-up and reporting will in any case outweigh any costs the City and the suppliers incur in connection with their use of the system.

More procurements could be included in the requirements if the threshold value is reduced. However, out of 334 construction projects announced by the City of Oslo on Doffin between 2020 and 2023, only one procurement had a value of less than NOK 500,000. It is therefore unlikely that the reduced threshold value will lead to any added time use for the undertakings.

It is important to note that the Public Procurement Regulations now stipulate that climate and environmental concerns shall have a weighting of at least 30 percent in public procurements. If the City of Oslo does not impose its own requirements, as proposed here, the City's procurements would still have to include climate and environmental requirements. On this basis, it is therefore proposed that the revised requirements would not lead to significantly higher costs for the City of Oslo, and less than those estimated by SINTEF, considering that the City cannot not include climate and environmental requirements in its procurements.

It is presumed that all of the City's undertakings will implement the measures described in this proposition within the framework of their budgets.

## 13. Reporting

Reporting will be handled by the ordinary reporting systems, there are no propositions for a special reporting system.

## 14. Decision-making authority

In accordance with Section 10-2 (4) of the Local Government Act, the city council may delegate decision-making authority to the city government in all cases, if not prohibited by law. In the rules for the City Government, the City Council delegated to the City Government the authority to adopt administrative regulations that pertain to administrative support functions, cf. City Council Proposition 187/19. It has been found that the decisions pertaining to this proposition fall under the authority of the Vice Mayor.

**The Vice Mayor for Finance recommends that the City Government make the following decision:**

1. The directive on climate and environmental requirements in the City of Oslo's construction procurements is adopted as presented in Annex 1.
2. The revised standard climate and environmental requirements for City of Oslo construction procurements are adopted as presented in Annex 2.
3. The individual vice mayor is authorized to approve exemptions from standard climate and environmental requirements where the subordinate undertaking in a specific contract has documented a special need for an exemption, but where the undertaking itself does not have the authority to grant an exemption.
4. The Vice Mayor for Finance is authorized to make amendments to the standard climate and environmental requirements for City of Oslo construction procurements as is deemed necessary to comply with relevant laws, regulations and overriding municipal decisions, as amended, as well as minor amendments of a non-fundamental nature. This also applies to amendments where requirements are made stricter in response to market developments.
5. Decision sections 1–12 of City Government Proposition 1091/19 are annulled.

Vice Mayor for Finance, on 06 March 2025

Hallstein Bjercke

The City Government adopted the recommendations made by the Vice Mayor for Finance

City Government, on 13 March 2025

Eirik Lae Solberg

Annex:

1. Directive on the application of climate and environmental requirements in construction procurements from the City of Oslo
2. Standard climate and environmental requirements for City of Oslo construction sites