

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSAL

• Reasons for and objectives of the proposal

Taxation of energy products and electricity in the Union is governed by Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity[[1]](#footnote-1) (the ‘Energy Taxation Directive’ or the ‘Directive’).

Pursuant to Article 19(1) of the Directive, in addition to the provisions laid down in particular in its Articles 5, 15 and 17, the Council, acting unanimously on a proposal from the Commission, may authorise any Member State to introduce further exemptions or reductions in the level of taxation for specific policy considerations.

France asked to be authorised to apply a reduced rate of taxation on final consumption of electricity to electricity directly supplied to maritime and inland waterway vessels (including fishing vessels), other than private pleasure craft[[2]](#footnote-2), berthed in ports (‘shore-side electricity’)[[3]](#footnote-3). The objective of this proposal is to grant that authorisation by means of a derogation valid, as requested, until 31 December 2025.

By letter dated 7 August 2019, the French authorities informed the Commission of their intention to apply the measure. Additional information and clarifications were provided on 4 March 2020 and 30 April 2020.

France is seeking for an authorisation to apply a reduced tax rate of EUR 0.50/MWh, equal to the minimum rate of taxation for electricity for business use as laid down in the Directive, to shore-side supply of electricity to vessels operating exclusively for commercial purposes in Union sea and inland waters (including fishing).

The requested period of validity is from 1 January 2020 until 31 December 2025, which is within the maximum period allowed by Article 19 of the Energy Taxation Directive.

This reduction aims to provide an economic incentive for the deployment and use of shore-side electricity in order to reduce air pollution in port cities, improve local air quality and reduce noise for the health benefit of inhabitants.

The objective of the measure to be applied by France is also to reduce the overall environmental impact of water-borne transport.

With the requested measure France wants to give an incentive for the use of shore-side electricity which is considered a less polluting alternative to the generation of electricity on board vessels lying at berth in a port. As indicated in the request, in France the standard rate of electricity tax is EUR 22.50/MWh. The requested tax concession stands at EUR 22.00/MWh. This means that as a result the beneficiaries would be charged at the applicable EU minimum tax rate for electricity for business use under the Energy Taxation Directive of EUR 0.50/MWh (as specified in Article 10(1) and Table C of Annex I to the Directive).

On the other hand, according to Article 14(1)(c) of the Energy Taxation Directive, Member States have to exempt energy products used to produce electricity -and electricity produced- on board ships at berth in ports. They may also do so in the case of energy products used to produce electricity -and electricity produced- on board ships for navigation on inland waterways according to Article 15(1)(f) of the Directive. France confirmed the transposition of this latter optional exemption[[4]](#footnote-4).

The French authorities have indicated that the tax reduction applies to all ships other than private pleasure craft, meaning that all ships involved in commercial navigation, regardless of size or flag, can benefit from the tax reduction. In certain cases, there can be an obligation for vessels to use shore-side electricity.

As indicated in the request, the estimated number of beneficiaries is around 7000 (including maritime and inland waterway transport companies, as well as the fishery sector). This is a maximum potential number of beneficiaries in the long term linked to an estimated increase in the deployment of shore-side electricity connection systems. The number of shore-side electricity terminals currently deployed is limited (approximately 230) mainly in the public inland waterway area and is intended for the transport of goods and passengers. There are currently no terminals for fishing vessels[[5]](#footnote-5).

As an estimation of the tax expenditures from the measure, the French authorities calculated the loss of tax revenue based on the amount of consumed electricity, the amount of the requested fiscal advantage and the number of terminals. The consumption of electricity from these terminals is around 12 000 MWh/year and the tax relief would amount to EUR 22.00/MWh (the standard tax rate, as mentioned before, is EUR 22.50/MWh): this results in a loss of tax revenue amounting to around EUR 270 000. Considering the increasing number of terminals (from the current 230 to around 256 in the near future), an actual loss of around EUR 300 000 is estimated for the coming period.

France requested the authorisation to be granted until 31 December 2025, starting from 1 January 2020, within the maximum period allowed by Article 19(2) of the Directive.

With the tax reduction, France wants to provide an incentive for relevant operators to develop and use shore-side electricity in order to reduce airborne emissions and noise from the combustion of fuels by vessels at berth as well as CO2 emissions. The application of a reduced tax rate would strengthen the competitiveness of shore-side electricity relative to the burning of bunker fuels on board, which is tax exempt.

• Consistency with existing policy provisions in the policy area

Taxation of electricity is governed by the Energy Taxation Directive 2003/96/EC, in particular Article 10. Article 14(1)(c) provides for an obligatory tax exemption for energy products for navigation as well as for electricity produced on board a craft. Articles 5, 15 and 17 provide for the possibility for Member States to apply tax differentiations, including exemptions and reductions, to certain uses of electricity. However, as such, these provisions do not provide for reduced taxation of shore-side electricity.

The measure constitutes State aid and falls within the ambit of the EU legislation on this subject matter, in particular Commission Regulation 651/2014/EU[[6]](#footnote-6).

*Provisions under the Energy Taxation Directive*

Article 19(1), first subparagraph, of the Directive reads as follows:

*In addition to the provisions set out in the previous Articles, in particular in Articles 5, 15 and 17, the Council, acting unanimously on a proposal from the Commission, may authorise any Member State to introduce further exemptions or reductions for specific policy considerations.*

By means of the tax reduction in question, the French authorities pursue the objective to promote an environmentally less harmful way for ships to satisfy their electricity needs while lying at berth in ports and thereby to improve local air quality and reduce noise. The Commission has already recommended the use of shore-side electricity as an alternative to the generation of electricity on board the vessels at berth and thereby recognised its environmental advantages[[7]](#footnote-7). Currently the national standard rate for electricity is EUR 22.50/MWh; the requested tax concession stands at EUR 22.00/MWh. As a result, beneficiaries would be charged at the EU minimum tax rate for electricity under the Energy Taxation Directive of EUR 0.50/MWh and this can therefore contribute to the stated policy objectives.

The possibility to introduce a favourable tax treatment to shore-side electricity can be envisaged under Article 19 of the Directive since its purpose is to allow Member States to introduce further exemption or reductions for specific policy considerations.

France has requested that the measure should apply for the maximum period allowed by Article 19(2) of the Directive (i.e. 6 years). In principle, the period of application of the derogation should be long enough in order not to discourage port operators and electricity suppliers from starting -or continuing- to make the necessary investments in shore-side electricity facilities. This period will provide the maximum possible legal certainty also to ship operators, which have to plan their investments in on-board equipment.

However, the derogation should not undermine future developments of the existing legal framework and should take into account the upcoming revision of the Energy Taxation Directive and a possible adoption by the Council of a legal act based on a Commission proposal for amendment of the Energy Taxation Directive. This review follows the evaluation of the Energy Taxation Directive[[8]](#footnote-8) and the Council Conclusions on the EU energy taxation framework from 28 November 2019[[9]](#footnote-9). In its Conclusions, the Council invited the Commission to analyse and evaluate possible options with a view to publishing in due course a proposal for the revision of the Energy Taxation Directive; and called on the Commission to give particular consideration to the scope of the Directive, minimum rates and specific tax reductions and exemptions.

Under these circumstances, while it appears appropriate to grant the authorisation for the requested period, the validity of the derogation should be made subject to the entry into application of general provisions in the matter at a point in time earlier than the end of 2025.

The French authorities highlighted that additional measures (such as regulatory measures to decrease the connection costs or to allow, in certain cases, the introduction of an obligation to use shore-side electricity, as well as other legal instruments to further and more closely involve public and private sectors) are needed while certain regulatory measures are already in place. The objective of these measures is, among others, to improve the framework conditions for the use of shore-side electricity in ports.

*State aid rules*

The reduced tax rate of EUR 0.50 per MWh envisaged by the French authorities is equal to the EU minimum level of taxation for electricity for business use pursuant to Article 10 of Directive 2003/96/EC. The measure thus seems to fall under Article 44 of Commission Regulation 651/2014/EU, which stipulates the conditions under which aid in the form of reductions in environmental taxes under Directive 2003/96/EC can be exempted from the State aid notification requirements. However it cannot be established at this stage whether all the conditions set in this Regulation are fulfilled and the proposal for a Council implementing decision does not prejudge the Member State’s obligation to ensure compliance with State aid rules, in particular, in case of exempted aid, falling under Commission Regulation 651/2014/EU.

• Consistency with other Union policies

*Environment and climate change policy*

The requested measure concerns mainly the EU's environment and climate change policy. To the extent that it will help to reduce the burning of bunker fuels on board the vessels in ports, the measure will in fact contribute to the objective of improving local air quality and reducing noise. Directive 2008/50/EC on Ambient Air Quality[[10]](#footnote-10) requires Member States to ensure that the levels of several air pollutants are kept below the limit values, target values and other air quality standard established in the Directive. This obligation requires Member States to find solutions to problems such as ship emissions at berth in ports where this is relevant and it is conceivable that in ports where these problems exist the use of shore-side electricity will be encouraged as one element of the overall air quality strategy. The use of shore-side electricity is also encouraged under Directive (EU) 2016/802[[11]](#footnote-11) regulating the sulphur content in marine fuels.

According to the French authorities, the measure is also likely to lead to an overall reduction of pollution, which is estimated based on the actual consumption of shore-side electricity in 2019.

In the maritime transport, this consumption was around 10 400 MWh; the equivalent consumption of heavy fuel oil according to the available data would have generated:

• 4 472 kgSOx of SOx emissions,

• 135 200 kgNOx of NOx emissions,

• 5 919 kgPM2.5 of particulates.

In terms of greenhouse gas emissions, an equivalent consumption of heavy fuel oil would have emitted 3 369 600 kg of CO2.

For inland waterway transport, as the shore-side electricity consumption was 1 800 MWh, an equivalent consumption of non-road diesel would have resulted in pollutant emissions of the order of:

• 155.56 kg of SOx,

• 1 101.6 kg NOx,

• 584.56 kg of fine particles (including 553.71 kg of PM2.5).

As regards greenhouse gases, the equivalent consumption of diesel would have generated 553 780 kg of CO2.

On the other side, concerning the electricity from the onshore grid and the estimated impact of renewable energy sources, France underlined that in the national energy mix the share of renewable energy has increased by about 4 points over the last ten years, from 6.6 % in 2007 to 10.7 % in 2017. Renewable energy is thus the fourth source of primary energy in 2017, behind nuclear (40.0 %), petroleum products (28.9 %) and gas (15.7 %). Beyond this trend, the primary consumption of renewable energy varies from one year to another, according to different factors[[12]](#footnote-12).

*Energy policy*

The measure is in line with Directive 2014/94/EU on the deployment of alternative fuels infrastructure[[13]](#footnote-13), which addresses the issue of installing shore-side electricity supply facilities in ports where there is demand for such facilities and the costs are not disproportionate to the benefits, including environmental benefits. It has also been recognised as an objective of common interest for the granting of State aid under Article 107(1) of TFEU[[14]](#footnote-14).

It has to be recalled at this point that one important reason for the unfavourable competitive position of shore-side electricity lies in the fact that the alternative, i.e. electricity produced on board the vessels while in maritime ports, currently enjoys a full net tax exemption: not only is the bunker fuel burnt for generating the electricity exempt from taxation, which corresponds to the normal situation under Article 14(1)(a) of Directive 2003/96/EC, but also the electricity produced on board the vessels is itself exempt (cf. Article 14(1)(c) of Directive 2003/96/EC). Although the latter exemption could as such be considered difficult to reconcile with the environmental objectives of the Union, it mirrors considerations of practicability. In fact, taxation of the electricity produced on board would require a declaration by the ship owner -often established in a third country- or operator of the amount of electricity consumed. The declaration would furthermore have to determine the share of the electricity consumed in the territorial waters of the Member State where the tax is due. It would create a huge administrative burden for ship-owners to make such declarations for every Member States whose territorial waters are concerned. Analogous considerations apply to inland navigation and the optional tax treatment provided by Article 15(1)(f) of the Directive (actually implemented by France). Under these circumstances, it can be justified not to penalize the less-polluting alternative of shore-side electricity by allowing France to apply a reduced rate of taxation.

*Transport policy*

The measure is in line with Commission recommendation 2006/339/EC on the promotion of shore-side electricity for use by ships at berth in Union ports[[15]](#footnote-15) and with the Commission Communication Strategic goals and recommendations for the EU's maritime transport policy[[16]](#footnote-16).

*Internal market and fair competition*

From the point of view of the internal market and fair competition the measure only reduces the existing tax distortion between two competing sources of electricity for boats at berth, i.e. on board generation and shore-side electricity, caused by the tax exemption for bunker fuels.

As regards competition between vessel operators, it first has to be mentioned that there are currently few vessels that use shore-side electricity on a commercial basis. Significant distortions in competition could therefore only arise between vessels benefitting from the measure requested by changing to shore-side electricity and others that would continue to use on-board generation. Although precise cost projections depend crucially on the development of the oil price and are therefore very difficult, the latest available assessments indicate that overall even a full tax exemption would in most cases not reduce operational costs of shore-side electricity below the costs of on-board generation[[17]](#footnote-17) and would therefore not, in any event, represent a significant competitive benefit for vessel operators using shore-side electricity as opposed to those using on-board generation. In the present case, a significant distortion of the above mentioned kind can all the less be expected since France will respect the minimum level of taxation prescribed by Directive 2003/96/EC for electricity for business use.

Moreover, as already mentioned, the ship operators, receiving shore-side electricity taxed at the minimum level provided for in Directive 2003/96/EC, do not in principle gain an economic advantage over operators generating their own electricity on board because this electricity is exempted from taxation. According to the French authorities substitution of own generation on board by shore-side electricity taxed at the applicable minimum level would not lead to an overall significant cost advantage[[18]](#footnote-18).

Furthermore, access to shore-side electricity will be available for the ships concerned regardless of their flag without leading to a more advantageous tax treatment of national economic operators over their competitors from other EU Member States.

Concerning competition between ports, it can be expected that any potential impact on trade between Member States, which could result if vessels alter their routes because of the possibility to consume shore-side electricity at a reduced tax rate, will be negligible. In a situation where, as stated above, the use of shore-side electricity is, at least in the short term, unlikely to become more economic than on-board generation in spite of the tax reduction, this tax reduction for shore-side electricity is also unlikely to significantly distort competition between ports by inducing vessels to change their itinerary according to the availability of this option. The French authorities argue that other factors (such as destination of the cargo) play a role in the selection of ports, so that the mere availability of shore-side electricity subject to a reduced tax rate does not seem decisive.

The timeframe for which it is proposed the authorization to apply a reduced tax rate, unless there will be significant changes in the current framework and situation, makes it unlikely that the analysis conducted in the preceding paragraphs will change before the date of expiry of the measure.

2. LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY

• Legal basis

Article 19 of Council Directive 2003/96/EC.

• Subsidiarity (for non-exclusive competence)

The field of indirect taxation covered by Article 113 of TFEU is not in itself within the exclusive competence of the European Union within the meaning of Article 3 of TFEU.

However, pursuant to Article 19 of Directive 2003/96/EC, the Council has been granted an exclusive competence, as a matter of secondary law, to authorise a Member State to introduce further exemptions or reductions within the meaning of that provision. Member States cannot therefore substitute themselves for the Council. As a result, the principle of subsidiarity is not applicable to the present implementing decision. In any event, since this act is not a draft legislative act, it should not be transmitted to national Parliaments pursuant to Protocol No 2 to the Treaties for review of compliance with the subsidiarity principle.

• Proportionality

The proposal respects the principle of proportionality. The tax reduction does not exceed what is necessary to attain the objective in question.

• Choice of the instrument

The instrument proposed is a Council implementing decision. Article 19 of Directive 2003/96/EC makes provision for this type of measure only.

3. RESULTS OF EX-POST EVALUATIONS, STAKEHOLDER CONSULTATIONS AND IMPACT ASSESSMENTS

• Ex-post evaluations/fitness checks of existing legislation

The measure does not require the evaluation of existing legislation.

• Stakeholder consultations

This proposal is based on a request made by France and concerns only this Member State.

• Collection and use of expertise

There was no need for external expertise.

• Impact assessment

This proposal concerns an authorisation for an individual Member State upon its own request and does not require an impact assessment.

The information provided by France suggests that the measure will have a limited impact on tax revenues (as mentioned before, an actual loss of around EUR 300 000 is estimated for the coming period) and the tax rate for shore-side electricity will still be above the minimum level of taxation set in Directive 2003/96/EC. France expects the measure to have a positive impact on the achievement of its environmental goals and in particular on the reduction of emissions (the estimation is reported above), improvement of local air quality and reduction of noise in port cities.

• Regulatory fitness and simplification

The measure does not provide for a simplification. It is the result of the request made by France and concerns only this Member State.

• Fundamental rights

The measure has no bearing on fundamental rights.

4. BUDGETARY IMPLICATIONS

The measure does not impose any financial or administrative burden on the Union. The proposal therefore has no impact on the budget of the Union.

5. OTHER ELEMENTS

• Implementation plans and monitoring, evaluation and reporting arrangements

An implementation plan is not necessary. This proposal concerns an authorisation for a tax reduction for an individual Member State upon its own request. It is provided for a limited period until 31 December 2025. The tax rate that will apply will be equal to the minimum level of taxation set by the Energy Taxation Directive. The measure can be evaluated in case of a request for a renewal after the validity period has expired.

• Explanatory documents (for directives)

The proposal does not require explanatory documents on the transposition.

• Detailed explanation of the specific provisions of the proposal

Article 1 stipulates that France will be allowed to apply a reduced taxation rate to electricity directly supplied to vessels, other than private pleasure craft, berthed in French ports (‘shore-side electricity’). The tax rate must not be less than EUR 0.50 per MWh, i.e. the minimum level of taxation for electricity for business use set by the Directive. It will not be possible to supply electricity at a reduced rate to private pleasure craft as defined in Article 14(1)(c), second subparagraph of Directive 2003/96/EC.

Article 2 stipulates that the authorisation requested is granted with effect from 1 January 2020, until 31 December 2025, as requested by France, within the maximum period of 6 years allowed by the Directive.

2020/0255 (NLE)

Proposal for a

COUNCIL IMPLEMENTING DECISION

authorising France to apply a reduced rate of taxation to electricity directly provided to vessels at berth in a port in accordance with Article 19 of Directive 2003/96/EC

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity[[19]](#footnote-19), and in particular Article 19 thereof,

Having regard to the proposal from the European Commission,

Whereas:

(1) By letter of 7 August 2019, France sought authorisation to apply a reduced rate of taxation to electricity directly provided to maritime and inland waterway vessels, berthed in ports (‘shore-side electricity’) pursuant to Article 19 of Directive 2003/96/EC. The French authorities provided additional information and clarifications on 4 March 2020 and 30 April 2020.

(2) With the reduced tax rate that it intends to apply, France aims at further promoting the deployment and the use of shore-side electricity. The use of such electricity is considered to be an environmentally less harmful way to satisfy the electricity needs of vessels lying at berth in ports than the burning of bunker fuels by those vessels.

(3) In so far as the use of shore-side electricity avoids emissions of air pollutants originating from the burning of bunker fuels by vessels at berth, it contributes to an improvement to the local air quality in port cities and to noise reduction. Under the specific conditions of the electricity generation structure in France, the use of shore- side electricity instead of electricity generated by burning bunker fuels is in particular expected to reduce CO2 emissions, other air pollutants and noise. The measure is therefore expected to contribute to the environmental, health and climate policy objectives of the Union.

(4) Allowing France to apply a reduced rate of taxation to shore-side electricity does not go beyond what is necessary to increase the use of such electricity, since on-board generation of electricity will remain the more competitive alternative in most cases. For the same reason, and because of the current relatively low degree of market penetration of the technology, the measure is unlikely to lead to significant distortions in competition during its lifetime and will thus not negatively affect the proper functioning of the internal market.

(5) In accordance with Article 19(2) of Directive 2003/96/EC, each authorisation granted under that provision is to be strictly limited in time. In order to ensure that the authorisation period is sufficiently long so as not to discourage relevant economic operators from making the necessary investments, it is appropriate to grant the authorisation from 1 January 2020 until 31 December 2025. However, the authorisation should cease to apply from the date of application of any general provisions on tax advantages for shore-side electricity adopted by the Council under Article 113 or any other relevant provision of the Treaty on the Functioning of the European Union, should such provisions become applicable prior to 31 December 2025.

(6) In order to enable port and ship operators, as well as distributors and redistributors of electricity to pursue the promotion of shore-side electricity, it should be ensured that France may apply the tax reduction, as requested, with effect from 1 January 2020.

(7) This Decision is without prejudice to the application of Union rules regarding State aid,

HAS ADOPTED THIS DECISION:

Article 1

France is authorised to apply a reduced taxation rate to electricity directly supplied to vessels, other than private pleasure craft, berthed in ports (‘shore-side electricity’), provided that the minimum levels of taxation referred to in Article 10 of Directive 2003/96/EC are respected.

Article 2

This Decision shall apply from 1 January 2020 until 31 December 2025.

However, should the Council, acting on the basis of Article 113 or any other relevant provision of the Treaty on the Functioning of the European Union, provide for general rules on tax advantages for shore-side electricity, this Decision shall cease to apply on the day on which those general rules become applicable.

Article 3

This Decision is addressed to the French Republic.

Done at Brussels,

For the Council

The President

1. OJ L 283, 31.10.2003, p. 51–70. [↑](#footnote-ref-1)
2. The term ‘private pleasure craft’ is defined in Article 14(1)(c), second subparagraph of Directive 2003/96/EC. [↑](#footnote-ref-2)
3. Moreover, as specified by the French authorities, the reduced rate of taxation on electricity consumption should also apply to electricity supplied by power production groups (mobile shelters) using LNG (liquefied natural gas). [↑](#footnote-ref-3)
4. In addition, the French authorities underlined that a reduced rate of domestic tax on final consumption of electricity already applies to transport of passengers and goods by train, metro, tramway, cable, hybrid rechargeable or electric bus and trolleybus. [↑](#footnote-ref-4)
5. The French authorities provided a list of ports interested by the use or future installation of shore-side electricity terminals: they are several and include both seaports and inland ports. [↑](#footnote-ref-5)
6. Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (OJ L 187, 26.6.2014, p. 1–78). [↑](#footnote-ref-6)
7. Commission Recommendation 2006/339/EC of 8 May 2006 on the promotion of shore-side electricity for use by ships at berth in Community ports (OJ L 125, 12.5.2006). [↑](#footnote-ref-7)
8. SWD(2019) 329 final. [↑](#footnote-ref-8)
9. Council conclusions of 28 November 2019, 14608/19, FISC 458. [↑](#footnote-ref-9)
10. Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (OJ L 152, 11.6.2008, p 1). [↑](#footnote-ref-10)
11. Directive (EU) 2016/802 of the European Parliament and of the Council of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels (OJ L 132, 21.5.2016, p. 58–78). [↑](#footnote-ref-11)
12. Moreover, regarding the above-mentioned use of LNG to produce and supply shore-side electricity, the reduction of CO2 emissions is estimated at 22 % (compared to the use of navigation fuel). [↑](#footnote-ref-12)
13. Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure (OJ L 307, 28.10.2014, pp. 1–20) [↑](#footnote-ref-13)
14. C(2014) 2231 final of 9 April 2014. [↑](#footnote-ref-14)
15. Commission Recommendation 2006/339/EC of 8 May 2006 on the promotion of shore-side electricity for use by ships at berth in Community ports (OJ L 125, 12.5.2006) [↑](#footnote-ref-15)
16. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Strategic goals and recommendations for the EU's maritime transport policy until 2018, COM(2009) 8 final of 21 January 2009. [↑](#footnote-ref-16)
17. Cf. European Commission Directorate General Environment, Service Contract Ship Emissions: Assignment, Abatement and Market-based Instruments, Task 2a – Shore-Side Electricity, August 2005, <http://ec.europa.eu/environment/air/pdf/task2_shoreside.pdf> . The cost analysis is carried out for the three ports of Gothenburg (Sweden), Juneau and Long Beach (USA) [↑](#footnote-ref-17)
18. In terms of cost comparison, according to the French Authorities, the purchase price of electricity supplied via shore-side electricity terminals is around EUR 0.10/kWh; for inland waterway transport, the national tariff applied by VNF (*Voies navigables de France*) and some other ports for the use of the terminals is EUR 0.20/kWh (including the purchase price for electricity). On the other hand, the minimum cost of a kWh for diesel is around EUR 0.2192 (inland waterway) and for heavy fuel oil is around EUR 0.0953 (maritime). [↑](#footnote-ref-18)
19. OJ L 283, 31.10.2003, p. 51. [↑](#footnote-ref-19)