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Over normative transport in Poland⁵

Introduction

Over normative carriage is each transport, in situation when the load has exceeded one of the criteria for acceptable means of transport in the form of:

- dimensions (length, width, height),
- the permissible weight in relation to the existing norms.

As defined in Chapter I, Art. 2, of the Law about Road Traffic [11], non normative vehicle is a vehicle or combination of vehicles, with the axle loads with or without a load is larger than the limit set for the road in the act on public roads, or, the dimensions and weight with or without a load is larger than the limit laid down in the traffic regulations. Exempted from this rule are military vehicles, police, border guards, firefighters involved in rescue operations.

According to [9], the non normative vehicle is that, for which are exceeded:

- dimensions:
 - width: 2,6 [m],
 - height: 4 [m],
- permissible gross weight:
 - three axle vehicle: 24 [t],
 - combination of vehicles, with no more axles than four: 32 [t],

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⁵ Artykuł recenzowany

- combination of vehicles, with more axles than four: 42 [t],
- thrust:
 - of one axle: 80 [kN],
 - component axle, at a distance from the axis of the adjacent proximal component axle:
 - to 1,20 [m]: 57,5 kN,
 - from 1,20 [m] to 1,30 [m]: 65,0 [kN],
 - over 1,30 [m]: 72,5 [kN].

Over normative loads are those whose displacement requires the use of special means of transport and handling equipment. Such kinds of loads can be divided into [1, 5, 6, 9]:

- ordinary over normative,
- special over normative,
- heavy,
- heavy with centred weight,
- heavy spatial,
- long.

Ordinary over normative loads are different kinds of steel construction, small size of machinery and equipment, small tanks, etc. Their weight does not exceed 25 [t], and the dimensions slightly exceed acceptable standards of parameters for road transport parameters, i.e., length 15-16 [m], width 3,5-4,0 [m] and height 3,0-3,5 [m]. These types of loads can be transported by the usual road sets, with appropriate labelling and security.

Special over normative loads are light weight but have large overall dimensions. These include i.e. steel construction, industrial tanks. Here do not exist a negative impact on road infrastructure, but there are limitations associated with its parameters.

Heavy loads can be machinery and equipment for construction and road buildings, boilers, tanks, housing equipment, wagons. Weight of these charges is approximately 70-100 [t].

An example of heavy loads with centred weight can be power equipment (turbines, generators), industrial labour, crankshafts of marine engines. They are characterized by high weight per volume. This kind of loads can weight even 300 [t]. For its carriage must be used special multi-axis semitrailers.

To the group of heavy spatial loads can be included different types of constructions, bridges spans, oil derricks, cranes, harbour gantries. In contrast, long cargo may include various types of spans, pillars, elements of cranes, reactors. Length of this type of cargo reaches 60 [m], the other overall dimensions often without departing from the norm.

Means of transport

In the organization process of over normative transport extremely important issue is the appropriate choice of means of transport. Vehicles for over normative transport are the most technically advanced among means of transport. In this group, there is a huge range of available capacity, variety of construction, configuration options, and the vehicles are formed usually in very small quantities or even as a individual products.

Tractors to transport over normative loads can be divided into [1, 5, 6, 9]:

- ballast tractors,
- tractors,
- fifth wheel-ballast tractors.

Ballast tractor is a truck designed for specialized transport of heavy cargo, equipped mostly in multi-axis chassis. Its body is adapted to be load by additional ballast to increase the adhesion of wheels to the road surface. It is designed for carriage multi-axis heavy duty semitrailers.

Tractor is equipped to tow a semitrailer. The element that connects the semitrailer to tractor unit is a fifth wheel. It does not constitute a rigid connection, but allows to twist the semitrailer in relative to the tractor. A fifth wheel is located above the rear, driven axle of the tractor, so that part of the burden of semitrailer can be transferred to it. Thanks the tensional combination of tractor with semitrailer these assemblies despite considerable length allows to keep a relatively small turning radius. Tractor units are widely used in transportation because of their numerous advantages in comparison to conventional trucks. They can carry higher loads by distributing the weight on more axes. They cause less problems with manoeuvring with semitrailer with the same length. Tractors can be join with various kinds of semitrailers , for carriage entirely different loads and coupling tractors with semitrailers do not take much time.

A fifth wheel-ballast tractor is a road tractor burden by suitable ballast, designed to carry heavy-duty multi-axis semitrailers. It has a suitable ballast, which increases the traction of the vehicle to the road surface. Just like on tractors, the element connecting semitrailer with tractor is a fifth wheel.

In road transport, to carriage over normative loads are structurally diverse trailers and semi-trailers, i.e. [1, 5, 6, 9]:

- three-axis transportation semitrailers, with platform length of 13 [m] and a height of 1,35-1,40 [m] (from the roadway level), without sides and covers. They are used to transport small overall dimensions of elements weighing up to 25 [t], length 15 m, width 2,8 [m]. They are in sliding variant of up to 21 [m],
- girder semitrailer with higher number of axles and the possibility of sliding event to 45 [m] (Fig. 1). They are strengthened and have an additional, independent control of the axis. They have a load capacity even to 50 [t]. For their carriage are used 3 and 4 axis tractors,

- three-axis semitrailers with lower platform (0,75-1,05 [m]), providing the carriage different elements with height up to 3,5 [m]. They are also in sliding version,
- heavy low floor semitrailers which have 4-8 axis and hydraulic or pneumatic suspension (Fig. 2). They can be used for carrying loads with weight up to 100 [t]. For carrying this trailers are used 3, 4 or 5 axis tractors. A variation of it are semitrailers for carrying vehicles. They have lowering steel elements for wheel vehicles entering by the support based on the ground. (Fig. 3). This type of semitrailers can be lengthen by using suitable elements (Fig. 4),
- recess multi-axis semitrailers have the middle part of the platform hanged between axis at the height of 0,3 -0,6 [m] (Fig. 5). Main advantage of it is a possibility for carrying high loads and loads with centred weight,
- semitrailers for carrying tanks are similar to recess semitrailers, but instead of the floor they have two external beams, between which tank can be placed (Fig. 6). They can be used for carrying loads with weight of up to 80 [t] and length of up to 30 [m],
- modular semitrailers consist of modules with 2 to 4 axles. Depending of the needs it can be freely combined and eventually achieve trailers with up to 16 axles. They can carry loads of up to about 200 [t] weight. They are used when the emphasis exerted by the loaded semitrailer at the tractors fifth wheel is too large to be moved by the construction of the tractor (Fig. 7). An emphasis of the semitrailer is transmitted at the modules' fifth wheel, and the fifth wheel transfers a negligible vertical bearing loads. To evenly load all wheels of semitrailer module, wheels are mounted in such way, that the emphasis is transmitted to the centre of the axle at the both sides of which are single wheels (Fig. 8). As a result, wheels are burdened evenly and there is no phenomena of burden on the wheel which is closer to the centre of the semitrailer.



Fig. 1. The mechanism of sliding girder semitrailer [10]



Fig. 2. Low floor semitrailer [10]



Fig. 3. Element for entering at the low floor semitrailer [10]



Fig. 4. Elements for lengthening the semitrailer [10]



Fig. 5. Recess semitrailer [10]



Fig. 6. Semitrailer for carrying tanks [10]



Fig. 7. Module for relieving the axle of the tractor [10]



Fig. 8. Anchorage of wheels in the module of modular semitrailer [10]

Also, do not forget about the appropriate security of freight. Detailed information on this issue can be found in [2-4, 6-8].

Law regulations

According to the Act of 21 March 1985 on public roads [12], on public roads can move vehicles with an emphasis of a single axle to 11,5 [t]. Simultaneously the Act provides that the Minister responsible for transport by regulation, establish a list of roads:

- national and provincial, after which can move vehicles with an emphasis for single-axis of up to 10 [t],
- national, after which can move vehicles with an emphasis for single-axis of up to 8 [t].

For all other provincial roads, county and municipal roads is allowed traffic with an emphasis for single-axis of up to 8 [t]. This is done to protect roads from damage and bearing in mind the need to ensure the transit traffic.

Regulation currently in force about the list of roads with a specific allowable emphasis of single-axis is [19]. In subsequent appendix to the Regulation is given a list of roads:

- appendix 1 (comprising 73 positions) – national roads including sections of national roads, after which can move vehicles with an emphasis of single-axis of up to 10 [t],
- appendix 2 (comprising 78 positions) – provincial roads including sections of provincial roads, after which can move vehicles with an emphasis of single-axis of up to 10 [t],
- appendix 3 (comprising 42 positions) – national roads including sections of national roads, after which can move vehicles with an emphasis of single-axis of up to 8 [t].

In accordance with Art. 13 of the Act [12], people using public roads are required to pay tolls on national roads automotive vehicles. Automotive vehicle is understood as a motor vehicle whose construction allows to travel at speeds in excess of 25 [km/h], but it is not a farm tractor. However, a motor vehicle is a mean of transport (machine or device) for moving at the road, with an engine, except a moped and a rail vehicle [11]. As a automotive vehicles are understood also combination of vehicles consisting of automotive vehicle and the trailer or semitrailer with total weight more than 3,5 [t]. From these fees are exempted vehicles:

- emergency services,
- the Border Guard,
- the Government Protection Bureau,
- the Prison Service,
- the Road Transport Inspection,
- customs service,
- the Police,
- the Polish Armed Forces,
- the armed forces of foreign countries – if an international agreement provides so,

- the national road administration used to maintain these roads.

Exempted from fees may also be vehicle performing carriage for the purpose of humanitarian aid or medical attention. Such decision shall be taken by the minister responsible for transport by an administrative decision in response to the request of the operator [12].

The fee is determined by multiplying the number of kilometres after given section of the road, and the rate per kilometre for each vehicle category. The Act [12] distinguishes here the following vehicle categories:

- 1 - automotive vehicles with a permissible total weight exceeding 3,5 [t] but less than 12 [t],
- 2 - automotive vehicles with a permissible total weight exceeding 12 [t],
- 3 - buses.

The rate of the fee can not be higher than 2 [PLN] and can not exceed the values calculated in accordance with [21]. The Council of Ministers has established sections of national roads, for which the fee is collected, and its height in the regulation [20, 22]. The amount of the fee depends on:

- road class:
 - national roads class A and S,
 - national roads class GP and G,
- category of the vehicle:
 - automotive vehicle with a permissible total weight exceeding 3,5 [t] and less than 12 [t],
 - automotive vehicles with a permissible total weight exceeding 12 [t],
 - buses regardless of the permissible total weight,
- vehicle class in the Euro, depending on the exhaust emission limits:
 - max EURO 2,
 - EURO 3,
 - EURO 4,
 - min. EURO 5.

In the case of non-payment, the vehicle's driver imposes a penalty of 3000 [PLN]. If the fee has not been paid in the full amount the penalty is 1500 [PLN]. The regularity of payment and impose appropriate penalties shall be entitled by:

- Police officers,
- inspectors of Road Transport,
- heads of customs offices and directors of customs chambers,
- Border Guard officers.

The method and scope of controlling the correctness of payment was regulated in the Regulation [14]. An additional fee may be charged for passage through bridges and tunnels with a total length of object (specified in the registration documents) of more than 400 [m], located in stretches of public roads and the ferry crossings on public roads [12].

The Act currently in force [12], repealed section. 13c and Appendix 1 and 2, which accounted about the necessity of incurring an additional toll fee the public roads by over normative vehicles.

Because of the road safety The Act [12] prohibits the movement of over normative vehicles on the roads without the required permit or in a manner inconsistent with traffic regulations.

The central organ of government administration competent in matters of national roads is the General Director for National Roads and Motorways, which must issue permits for the passage of over normative vehicles (Article 18 para. 2 pt. 3 [12]).

Movement of over normative vehicles is allowed if (Article 64 [11]) it has permission at the appropriate category and observes the traffic conditions of the permit, behaves special care by the driver.

The Act [11] states that permission for the transit of over normative vehicles are issued in seven categories. Categories of permits for over normative vehicles crossing the particular type of road are summarized in Annex 1 to the Act. [11].

In order to allow the travel by the roadway specified in the permit, to and from the place specified in the permit shall be authorized in category I. The permit is issued by the administrator of the road at the request of the entity for the period:

- month,
- 6 months,
- 12 months.

In addition to the category I permit shall be issued to the extracts, equal to the number of vehicles in the application for authorization. In the permit are not given specific data of vehicles, which shall conduct the carriage.

The fee for a permit is calculated by multiplying the number of excerpts and fee rate for the permit in this category, which can not be higher than 240 [PLN]. Currently, there is a fee, depending on the period of validity of the permit, in the amount of [18]:

- 50 [PLN] - 1 month,
- 100 [PLN] - 6 months,
- 200 [PLN] - 12 months.

At the request of entity performing passage, the governor having jurisdiction over the place of the applicant or the start of the journey, gives the permit the transit of category II over normative low-speed

vehicle, farm tractor or combination of vehicles consisting of a low-speed vehicle or a farm tractor and a special trailer. The permit is issued for a period of 12 months indicates the vehicle, which will execute passage and the entity performing the journey. The maximum amount of the fee for the authorization may not exceed 120 [PLN], and currently amounts to 100 [PLN].

District administrator competent for the applicant's registered office or place of departure issues the permit of category III, and the General Director for National Roads and Highways shall issue the permit category IV, V and VI at the request of an interested entity. Permission of category III and IV may also be given by customs office governor in the case of vehicle entries on Polish territory.

Permits category III to VI shall be issued for a period:

- one month,
- 6 months,
- 12 months,
- 24 months.

Permit category IV confers the right to movement of vehicles and the routes specified for permit category III, and permit category VI – set for permit category V. In case of a permit category VI, it shall be accompanied by a list of national roads, after which may take place the crossing.

For permits category V and VI where the vehicle traveling is planned of the actual total weight larger than permitted by a bridge or overpass on the road other than national, person planning such crossing must send in writing an information to the manager of the road about the time and the route of the planned crossing. This must be done within 7 working days before the planned passage, and the road administrator is required no later than three days before the indicated date of passage confirm the acceptance of the notice. He may impose conditions passing through a bridge or overpass, or raise reasoned objections if conditions of the technical efficiency of objects is impossible to enforce the pass.

The maximum amount of fees for the authorization may not exceed:

- 2400 [PLN] - category III,
- 3600 [PLN] - category IV,
- 4300 [PLN] - category V,
- 5800 [PLN] - category VI.

Currently, there is a fee, depending on the period of validity of the permit, in the amount of [17]:

- category III:
 - 200 [PLN] - 1 month,
 - 400 [PLN] - 6 months,
 - 1200 [PLN] - 12 months,

- 2000 [PLN] - 24 months,
- category IV:
 - 500 [PLN] - 1 month,
 - 1000 [PLN] - 6 months,
 - 2000 [PLN] - 12 months,
 - 3000 [PLN] - 24 months,
- category V:
 - 600 [PLN] - 1 month,
 - 1200 [PLN] - 6 months,
 - 2400 [PLN] - 12 months,
 - 3600 [PLN] - 24 months,
- category VI:
 - 800 [PLN] - 1 month,
 - 1600 [PLN] - 6 months,
 - 3200 [PLN] - 12 months,
 - 4800 [PLN] - 24 months.

If the movement of the vehicle due to its dimensions, weight or axle loads is not possible on the basis of permits categories I-VI, for single or multiple crossing on public roads on a particular route within the prescribed time shall be authorized in category VII at the request of an interested entity. Authorization shall be granted by the General Director for National Roads and Motorways after consultation with other road managers. For route running within the administrative boundaries of the city with county rights, and not running at highway or expressway, the permit gives the president of set city.

In addition to the standard conditions, the authorization category VII may be issued when there is the possibility of designating a route that ensures the safety and efficiency of traffic.

Category VII permit is granted for a period of 14 days – for permits for single crossing, or 30 days – for permits for multiple passages. In addition to the period of validity and number of journeys, the authorization specifies the route and conditions of transit (including the adjustment range of road infrastructure), vehicle data, which will execute the passage, and the way of piloting when required.

The fee for a permit category VII, on a single passage, can not be higher than 600 [PLN] for a vehicle with dimensions exceeding established for of category III and IV and axle emphasis and weight is not exceeding the limit values. In any other case the fee may not exceed the 2000 [PLN]. The fee for a permit is determined by the formula:

$$O_n = p_j + (n-1) \cdot 0,7 \cdot p_j \quad (1)$$

Where:

p_j – the rate of the fee for issuing the single passage,

n – number of passes.

For category VII permits for single vehicle journey over normative vehicles, whose dimensions exceed the size specified for of category III and IV and the axle emphasis and the weight are no larger than the limit, there is a fee of 500 [PLN], while for other vehicles – 1600 [PLN].

In the case of over normative transport should be aware that over normative loads transported in vehicles must be indivisible loads. Such loads can not be divided into smaller without incurring undue expense or risk of damage. Exclusions include vehicles moving here under license category I and II.

The condition for the designation of a possible route for the over normative vehicle is technical condition of the road, for which [15]:

- there are no fractures or slides,
- the height of road gauge or road engineering object is at least 0.1 m higher than the height of the vehicle and its cargo,
- the width of road gauge or road engineering object is at least 1.0 m larger than the width of the vehicle and its cargo,
- assessment of the technical condition of the bridge girders or bridge structure made in accordance with the provisions of the numbering and registration of public roads and bridges is equal to or larger than 3 (on a scale of 0 to 5).

Possible adaptation of costs of road infrastructure along the route of the over normative vehicle, supplies, services or works specified in the authorization for crossing, shall be borne by the entity performing the crossing [11].

Specific questions relating to the authorization, examples of permits and documents related to their issue, conditions of the route calculation and the criteria for determining traffic conditions for the passage of over normative vehicles is governed by law [15].

In [18] are described conditions of navigating on the roads over normative vehicles of:

- Police,
- Road Transport Inspection,
- the Government Protection Bureau,
- the Internal Security Agency,
- Foreign Intelligence Agency,
- the Central Anticorruption Bureau,
- the Border Guard, the Prison Service,

- the Customs Service,
- fire protection units.

For these vehicles, and vehicles of the road managers and vehicles involved rescue operations, or the direct elimination of consequences of natural disasters, is not required to obtain permits for the passage of over normative vehicles. Additionally, in the case of performing humanitarian or medical aid, an administrative decision of the competent minister for transport may exempt from the obligation to obtain a permit, subject to the consent to transfer from the road manager. Exemption is issued at the request of the entity performing the passage and the competent state authority, local government or humanitarian organizations.

Over normative vehicles must be piloted by one vehicle if it exceeds [16]:

- 23 [m] in length,
- 3,2 [m] in width,
- 4,5 [m] in height,
- 60 [t] of its actual weight.

Two pilot vehicles, moving in front of and behind the over normative vehicle, are required in case where it exceeds [16]:

- 30 [m] in length,
- 3,6 [m] in width,
- 4,7 [m] in height,
- 80 [t] of its total weight.

This requirement also applies to over normative vehicles moving in column.

Pilot vehicle may be an automotive vehicle with a maximum authorized mass of 3.5 [t] but it cannot be a motorcycle. Such vehicle should be equipped with [16]:

- a label marking the vehicle performing piloting,
- two flashing yellow lights,
- the means to conduct the direct radio contact with piloted vehicles,
- sound equipment.

During the passage the pilot [16]:

- exercises direct supervision over the passing over normative vehicles during the passage and parking,
- directs the traffic to the necessary extent specified by the provisions of road traffic directing,
- decides to suspend the piloting in case of significant traffic disruptions or risk of its security,

- ensure the proper organization of over normative vehicles passage under the terms of the permit or the conditions set by the governor for the passage of an over normative vehicle by the bridge or the viaduct.

Law regulations related to financial penalties for crossing over normative vehicles without authorization or contrary to the conditions set in the permit, are specified in section 4 of the Act of 20 June 1997, the Road Traffic Law. [11]. For this type of infringement, by an administrative decision issued by a competent for the place of the checks carried Police Authority, the Road Transport Inspection, Border Guard, customs service or manager of the road, be fined:

- for the lack of permit category I and II – 1500 [PLN],
- for the lack of permit category III, IV, V and VI – 5000 [PLN],
- for the lack of permit category VII, when the emphasis of one or more axles, total laden weight or vehicle dimensions exceed the limit of values less than 10% – 500 [PLN],
- for the lack of permit category VII, when the emphasis of one or more axles, total laden weight or vehicle dimensions exceed the limit of values more than 10%, but less than 20% – 2000 [PLN],
- for the lack of permit category VII, when the emphasis of one or more axles, total laden weight or vehicle dimensions exceed the limit of values more than 20% – 15000 [PLN],
- for passage the over normative vehicle by the bridge or the viaduct without confirmed notification by the road manager – 3000 [PLN],
- for passage the over normative vehicle by the bridge or the viaduct with objection notified by the road manager – 6000 [PLN],
- for the breach of passage – 2000 [PLN].

Should also not be forgotten that, in accordance with Annex 2 to the Act of 6 September 2001 on road transport [13], a request for carriage of goods by over normative vehicle to the subject who has no required permit shall be imposed a penalty of 8000 [PLN].

Conclusion

In case where the dimensions of the cargo (the road set with load) or weight of the set exceed the acceptable norms to complete the carriage appropriate permit has to be approved. Such permits are issued only in case where load is indivisible and technical conditions of roads and traffic engineering facilities allow to determine the appropriate passing route. Organization of over normative transport is also associated with incurring the relevant administrative fees. Over normative load requires the transportation on vehicles specially adapted for this purpose, with appropriate security and labelling. Performing this type of transport

requires each time an individual approach to the planning and organization of the carriage.

This article presents only an outline of issues relating to the carriage of over normative transport conducted on Polish territory.

Abstract

Transport of over normative loads requires sophisticated equipment and compliance with the relevant provisions governing such passages. Conducting this types of carriage is associated with the provision of maximum security and minimizing inconvenience to the other road traffic users. To make this possible, people responsible for such services must have knowledge of the aspects both technical and legal. This article outlines the issues which have to be known in order to fully properly organize the transport of over normative goods on territory of Poland.

Transport ponadnormatywny w Polsce

Streszczenie

Przewozy ładunków ponadnormatywnych wymagają specjalistycznego sprzętu i przestrzegania odpowiednich przepisów regulujących takie przejazdy. Wykonywanie tego rodzaju przewozów wiąże się z zapewnieniem maksymalnego bezpieczeństwa oraz minimalizacją utrudnień dla innych uczestników ruchu drogowego. Aby to było możliwe, osoby odpowiedzialne za takie przewozy muszą posiadać wiedzę dotyczącą aspektów zarówno technicznych, jak i prawnych. Niniejszy artykuł przedstawia zarys problematyki, którą należy poznać, aby w pełni poprawnie organizować przewóz towarów ponadnormatywnych na terytorium Polski.

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- [17] *Rozporządzenie Ministra Transportu, Budownictwa i Gospodarki Morskiej z dnia 28 marca 2012 r. w sprawie wysokości opłat za wydanie zezwolenia na przejazd pojazdu nienormatywnego* (Dz.U. 2012 nr 0 poz. 366).
- [18] *Rozporządzenie Ministra Spraw Wewnętrznych oraz Ministra Sprawiedliwości z dnia 17 października 2012 r. w sprawie warunków poruszania się po drogach pojazdów nienormatywnych Policji, Inspekcji Transportu Drogowego, Biura Ochrony Rządu, Agencji Bezpieczeństwa Wewnętrznego, Agencji Wywiadu, Centralnego Biura Antykorupcyjnego, Straży Granicznej, Służby Więziennej, Służby Celnej oraz jednostek ochrony przeciwpożarowej* (Dz.U. 2012 nr 0 poz. 1142).
- [19] *Rozporządzenie Ministra Transportu, Budownictwa i Gospodarki Morskiej z dnia 6 września 2012 r. w sprawie wykazu dróg krajowych oraz dróg wojewódzkich, po których mogą poruszać się pojazdy o dopuszczalnym nacisku pojedynczej osi do 10 t, oraz wykazu dróg krajowych, po których mogą poruszać się pojazdy o dopuszczalnym nacisku pojedynczej osi do 8 t* (Dz.U. 2012 nr 0 poz. 1061).
- [20] *Rozporządzenie Rady Ministrów z dnia 22 marca 2011 r. w sprawie dróg krajowych lub ich odcinków, na których pobiera się opłatę elektroniczną, oraz wysokości stawek opłaty elektronicznej* (Dz.U. 2011 nr 80 poz. 433).
- [21] *Rozporządzenie Rady Ministrów z dnia 22 marca 2011 r. w sprawie obliczania maksymalnej stawki opłaty elektronicznej* (Dz.U. 2011 nr 77 poz. 417).
- [22] *Rozporządzenie Rady Ministrów z dnia 25 października 2013 r. zmieniające rozporządzenie w sprawie dróg krajowych lub ich odcinków, na których pobiera się opłatę elektroniczną, oraz wysokości stawek opłaty elektronicznej* (Dz.U. 2013 poz. 1267).