



Audit Conclusion

17/10

Acquisition and operation of the collection system for toll for the use of the road infrastructure of the Czech Republic

The audit was included in the audit plan of the Supreme Audit Office (SAO) for 2017 under number 17/10. The audit was headed and the Audit Conclusion compiled by SAO member Ing. Jiří Adámek.

The objective of the audit was to verify whether:

- the prerequisites on which the implemented variant of the toll collection system was based have been achieved;
- effective and economical toll collection in accordance with the policies of the Ministry of Transport and the tasks prescribed by the government will be ensured after 2016;
- the actions taken on the basis of the previous audits have been efficient.

The audited period was from 2012 to August 2017; for factual contexts, the preceding and subsequent periods were also included. The audit was conducted with the auditees between February and September 2017.

The auditees:

Ministry of Transport (Ministerstvo dopravy; MD);

Road and Motorway Directorate of the Czech Republic (Ředitelství silnic a dálnic ČR; ŘSD).

The objections to the audit protocol submitted by the MD and the ŘSD were dealt with by the heads of the group of auditors by a decision on objections.

At its meeting no. XVI, held on 13 November 2017, **the SAO Board**

approved by Resolution No. 9/XVI/2017,

the following **audit conclusion**:

I. Introduction

The Electronic Toll Collection (ETC) system is a specialised telematic system for collecting toll on toll roads according to Act No. 13/1997 Coll.¹ The system was put into operation on 1 January 2007. The microwave technology was used. The system consisted of:

- central data processing systems including data warehouses and external interfaces (used, for example, for interconnection with financial and accounting systems, for logistic services, for payment service providers and for telematic applications),
- the infrastructure part (toll and check gates, portable control stations, and toll patrol vehicles),
- the electronic on-board units (Section 22 (2) of Act No. 13/1997 Coll.);
- electronic on-board unit personalisation and programming equipment.

The **Ministry of Transport** is responsible for the development policy of the ETC system and, in accordance with Section 22a of Act 13/1997 Coll., it ensures the operation of the ETC system and toll collection. The **Road and Motorway Directorate** is a governmental public-benefit corporation tasked by the MD with acting as the operator of the ETC system.

By means of the audit No. 17/10, the SAO verified the following, in particular:

- the fulfilment of the ETC system acquisition and operation objectives and parameters for the period 2007–2016;
- the implementation of the European Electronic Toll Service;
- the economy, efficiency and effectiveness of the ETC system costs and the management of the state-owned assets consisting the ETC system;
- the operation of the ETC system and toll collection after 2016;
- the efficiency of the actions taken on the basis of previous audits by the SAO.

The acquisition and operation of the ETC system was audited by the SAO in 2011 under Audit No. 11/13 – *Funds for the acquisition and operation of the collection system for toll for the use of the road infrastructure of the Czech Republic*² and the SAO audited the collection of the toll in 2012 under Audit 12/12 – *Income from performance-based charges (toll) and income from time-based charges (time vignettes), including the related costs*³. In accordance with the tasks specified by the government after the discussion of the audit conclusions from the above-mentioned audits, the Ministry of Transport was to:

- propose the further toll practice for vehicles until 2016 and after 2016;
- immediately commence the preparation of actions leading to the opening of the tendering procedure of for the ETC system operator after 2016;
- propose systemic actions to significantly reduce the ETC system operating costs, with the deadline set at September 2013.

Note: The laws and regulations cited in this Audit Conclusion apply as amended for the audited period .

¹ Act No. 13/1997 Coll. on roads.

² The Audit Conclusion from audit no. 11/13 was published in the 2/2012 issue of the *SAO Bulletin* (Věstník NKÚ). It was discussed by the government in July 2012.

³ The Audit Conclusion from audit no. 12/12 was published in the 2/2013 issue of the *SAO Bulletin* (Věstník NKÚ). It was discussed by the government in August 2013.

II. Evaluation and summary of the findings

As of 31 December 2016, there were 1,450 km of toll roads, 1,220 km of which were motorways and 230 km were Class I roads. As of 1 January 2020, tolls are to apply on 2,488 km of roads, 1,347 km of which being motorways and 1,141 km being Class I roads. The acquisition and operation of the ETC system was ensured by the supplier, with whom the Ministry of Transport concluded delivery and service contracts effective for 2007–2016 on 29 March 2006. In August 2016 the two contracts were extended until 2019.

For the period 2007–2016, the total ETC system costs were CZK 24.1 bn excluding VAT, of which the ŘSD reported CZK 5.4 bn as capital costs and CZK 18.7 bn as operating (current) costs, and the income from toll was CZK 78.5 bn. For the years 2017–2019 the total contract price amounted to CZK 5.3 bn excluding VAT, of which deliveries accounted for CZK 0.6 bn and services for CZK 4.7 bn. The expected value of the public contract for the ETC system in 2020–2029 was CZK 28.8.

The SAO has compared the parameters achieved with those expected and has concluded that in the period 2007–2016 the Ministry of Transport (MD) implemented the ETC system with parameters that were substantially different from those specified by the MD in the variant approved by the government in May 2004, in particular, in that it reduced the extent of Class I roads subject to toll. While the cost ratio of the ETC system⁴ was lower than that originally expected, its comparison with the level in certain neighbouring states and with the level specified in the MD documents from 2015 and 2016 clearly shows that the original value was set unreasonably high. The SAO considers both the final total cost ratio of 31% and the operating cost ratio of 24% high.

The economy and effectiveness of toll collection after 2016 may be adversely affected by certain activities included in the ETC system operation contracts from 2017–2019, which the SAO considers groundless, and by risks the SAO identified in the preparation for the public contract for the operation of the ETC system in 2020–2029. A significant risk consisted in the fact that the MD continuously failed to rely on a comprehensive road tolling policy. The MD thus failed to remedy one of the causes that led to the changes in the ETC system parameters in the previous parameters and was a source of problems with adverse impacts on the costs of the ETC system.

The efficiency of the actions adopted on the basis of the previous audits no. 11/13 and no. 12/12 was low. The Ministry of Transport performed the actions adopted by the government with regard to the previous audits only formally and with delays. It often changed its approach to toll collection after 2016.

Summary of the findings:

1. After the approval by the government of the variant approved for implementation in May 2004 and during the implementation stage the Ministry of Transport significantly changed

⁴ ETC system cost ratio: cost to income ratio, expressed as a percentage.

the expected parameters of the ETC system. For example, in 2007 it reduced the expected pricing of Class I toll roads in length from 1,562 km to 185 km (as of 31 December 2016 a total of 230 km of these roads were subject to toll), reduced the period of the project from 12 to 10 years, imposed the toll upon all vehicles over 3.5 tonnes from 2010 instead of from 2007, etc. The volume of traffic that was subject to the toll also increased in comparison with the expectations. The results of the comparison of the parameters achieved, in particular, the economic ones, with those expected would not therefore be objective. The expected cost ratio of the ETC system was 39%. The achieved total cost ratio was 31% and the operating cost ratio was 24%.

2.1 In 2013–2016 the Ministry of Transport prepared a number of documents in which it repeatedly changed approaches to toll collection after 2016. None of those documents was based on a comprehensive road tolling policy and the objective analysis of the options. The resolution of the road toll scheme after 2016 was thus deferred to as late as 2016. The Ministry of Transport did not have a comprehensive policy for the future road toll scheme even at the time of the SAO audit. This resulted in a number of outstanding issues, which may affect the economy of the ETC system operation after 2016. The failure by the Ministry of Transport to define solution in the area of the ETC system was one of the causes of:

- extending the contracts with the present ETC provider by three years in 2016;
- expending CZK 521 million excluding VAT in 2008 for the ineffective acquisition and trial operation of the satellite interface to extend the ETC system to include the module for the application of toll on Class I, II and III roads, which was never used;
- the introduction of the European Electronic Toll Service in August 2017 with a delay of nearly five years, provided that the terms and conditions of the tendering procedure for ETC after 2019 do not guarantee that the module of this service, procured for CZK 372 million, will be used after 2019.

2.2 In order to extend the contract with the current ETC system provider by three years in 2016, the Ministry of Transport used negotiated procedure without prior publication in accordance with Section 23 (4) of Act No. 137/2006 Coll.⁵ in contradiction with that act. The economy and effectiveness of the ETC system operation in the period 2017–2019 will be adversely affected by the fact that the Ministry of Transport kept in the contract certain activities the SAO considers groundless, e.g. the activities concerning the renewal of assets, in the amount of at least CZK 252 million excluding VAT (the total amount could not be calculated), or public relations, in the amount of CZK 58 million excluding VAT.

2.3 The SAO audit has found risks and uncertainties that may adversely affect the economy and effectiveness of ETC operation in 2020–2029. Ministry of Transport:

- failed to have a clear idea about a number of issues because it still failed to have a comprehensive road tolling policy. This fact adversely affected the costs and the management of the ETC system assets in 2007–2016;
- failed to duly justify the expected extension of the roads subject to toll to include another 900 km of Class I roads. This may result in the recurrence of the situation from 2007, when the roads subject to toll were reduced by 1,377 km;

⁵ Act No. 137/2006 Coll. on public procurement.

- set a deadline of 14 months to prepare and put into operation the ETC system, which may prove short, in particular, if the new supplier proposes a solution utilising the existing ETC system;
 - failed to consider in its requirements for the renewal of the ETC system components the time remaining until the expected end of the operation of the system. It is the same situation as that which occurred for the existing ETC system assets in 2006 and 2016;
 - failed to efficiently address the maximisation of the potential arising from the existing infrastructure of the ETC system, which the current supplier should hand over to the state in excellent condition in 2019;
 - expected to maintain the existing complicated procedure for the acquisition, renewal and operation of patrol vehicles, which, in particular, made it difficult to audit the efficiency of the economy and effectiveness of the costs involved in their operation.
3. The Ministry of Transport performed the actions adopted by the government in 2012 and 2013 with regard to the previous audits nos. 11/13 and 12/12 only formally and with delays. In particular:
- it failed to propose the further toll practice for vehicles until 2016 and after 2016 by November 2012. In 2013–2015, the Ministry changed its approach to the procurement procedure for the ETC system operator after 2016 even though it should have adopted the relevant actions without delay. It submitted the method of ensuring toll collection, which it was implementing at the time of the audit, to the government in March 2016;
 - it failed to prepare the systemic measures to significantly reduce the operating costs of toll collection by September 2013. In order to perform its task, the Ministry only prepared a material that was to become an underlying document for the selection of the ETC scheme variant after 2016 and for the selection of the contractor.
4. The main findings in the area of ETC asset management include that the Road and Motorway Directorate:
- failed to value the renewed assets in accordance with Act No. 563/1991 Coll.⁶ The reported net book value of the assets, in the amount of CZK 2,261 million, significantly differed from its actual value;
 - failed to reflect in its asset accounting that it has no guarantee of the recovery of 429,758 on-board units in the acquisition value of CZK 561 million, for which it closed the ETC system user account due to the forfeiture of the deposit as well as of the credit;
 - In the period 2007–2016 it retired 133 patrol vehicles from service due to high maintenance costs or high mileage. It transferred the vehicles to other units in-house or to other governmental organisations.

⁶ Act No. 563/1991 Coll. on accounting.

III. Established facts

1. Policy-based ETC solution

1.1 The findings of the previous audit no. 11/13 included the following, among others:

- For the ETC scheme the Ministry of Transport chose the microwave technology, which was less economically advantageous than the satellite technology. The selected solution resulted in the risk that the cost of extending the ETC system, in particular, so as to include additional Class I and lower-class roads, would be higher than for the satellite technology.
- The implementation of the ETC system in the form of the microwave technology was one of the reasons why toll was not applied on Class I roads to the expected extent.
- The Ministry of Transport failed to create the required conditions for the fulfilment of the policy objectives because, by the end of 2011, it had failed to adopt a decision on the method of operating the existing ETC system after 2016 and to adopt a specific approach to the further process of extending the existing ETC system to additional Class I roads.

As regards the audit conclusion of the previous audit no. 11/13, the government instructed the Minister of Transport, by virtue of its resolution no. 492 of July 2012, to⁷:

- submit by 30 November 2012 the proposal for the further course of action as regards toll applicable to vehicles with a weight of over 3.5 tonnes until and after the expiry of the contract with the current ETC system provider;
- immediately initiate the preparation of the organisational, legislative and other measures towards the procurement procedure for the ETC system operator after 2016.

The Ministry of Transport performed the above and the follow-up tasks only formally and with delays (see sections 1.2 and 1.3 below). **The result was that the solution for toll collection for the period 2017–2019, which was the Ministry implementing at the time of the audit, was proposed to the government as late as March 2016.**

1.2 The Ministry of Transport set a number of goals and objectives in the document entitled *Transport Sector Strategies, Phase 2*, approved by the government in November 2013⁸. It included, for example, the immediate launch of efforts to ensure the operability of the ETC system from 1 January 2017 onwards, addressing the application of toll to Class I or lower-class roads, and the related choice of the ETC technology and the determination of the toll rates. The measures specified in the document were addressed in separate materials that were submitted to the government (see section 1.3 below). The evaluation and update of the document was to be submitted to the government by the end of 2016. The Ministry of Transport failed to meet the deadline. At the time of the audit, the Ministry of Transport requested one-year deferment until 30 September 2018 from the Office of the Government.

⁷ Resolution No. 492 of the Government of the Czech Republic of 4 July 2012 *regarding the Audit conclusion by the Supreme Audit Office entitled “Funds for the acquisition and operation of the collection system for toll for the use of the road infrastructure of the Czech Republic”*.

⁸ Resolution No. 850 of the Government of the Czech Republic of 13 November 2013, *on Transport Sector Strategies, Phase 2*.

1.3.1.1 In December 2013, the Ministry of Transport submitted to the government the document entitled *Development of the Electronic Toll System in the Czech Republic – Czech Road Tolling Policy*. The main purpose of the document was to become the underlying document for the selection of the future solution of the ETC system and for the initiation of the tendering process for the contractor and provider of the ETC services after 2016. As regards the document, the government adopted Resolution No. 919⁹ in December 2013, according to which the Minister of Transport was to submit to the government, among others, the proposal for the basic parameters for the procurement procedure for the supplier and provider of the ETC services after 2016, with the submission deadline being 30 June 2014.

1.3.1.2 The Ministry of Transport failed to meet the task; instead, it prepared a new document entitled *“Concept for the Preparation of the Electronic Toll Collection System after 2016”*, which it submitted to the government in April 2015. It stated in the document that the current ETC service contract does not provide for the relevant cooperation in terms of ensuring toll collection after 2016 and that, until the expiry of the contract, the ministry was not authorised to make the software and other copyrighted works available to any third parties. It proposed to address these problems by a public contract awarded to the current ETC system provider in August to September 2015 and to conduct a procurement procedure for the ETC system operation after 2016 in March to August 2016.

In the new document from April 2015, the Ministry of Transport changed the ETC system policy and decided to subject no more than 1,000 km of Class I roads to toll instead of tolling the entire network of this Class I roads. It justified the change by maintaining the technological neutrality of the tendering procedure for the ETC system operation after 2016 and by economic reasons (decreasing cost efficiency in case of toll application on more than 1,000 km of Class I roads).

In its Resolution No. 282 of April 2015,¹⁰ the government cancelled the task specified in subparagraph (a) above, acknowledged the new document and instructed the Minister of Transport, among others, to immediately initiate the preparation of the ETC system for the period after 2016 in accordance with the submitted document in the form of a technologically neutral tendering procedure and to submit the basic parameters of the tendering documents by 31 July 2015.

1.3.1.3 However, the Ministry of Transport changed the approach to toll collection after 2016, approved by the government in April 2015, as soon as August 2015 and proposed to the government¹¹ a brand new solution according to which the existing toll collection system would be transformed into a new ETC system in three progressive steps. The existing system was to be operated by the contractor selected in a tendering procedure for another 5 years

⁹ Resolution No. 919 of the Government of the Czech Republic of 4 December 2013, *on the Development of the Electronic Toll System in the Czech Republic – Czech Road Tolling Policy*.

¹⁰ Resolution No. 282 of the Government of the Czech Republic of 15 April 2015 *on the Concept for the Preparation of the Electronic Toll Collection System after 2016*.

¹¹ Resolution No. 693 of the Government of the Czech Republic of 26 August 2015 *on the basic parameters of the tender documents concerning the operation of the Electronic Toll Collection System after 2016*.

and after its lifetime expired, a technologically neutral tendering procedure for the ETC system operator would be carried out.

1.3.1.4 The Ministry of Transport went on to change the approach from August 2015, too, and in November 2015 it proposed to the government to select the ETC system provider for 2017–2019 in a closed tendering procedure, provided that by September 2017 it would submit the ETC policy for the period after 2019. The ETC provider for the period after 2019 was expected to be selected in an open tender between January and December 2018. The government approved the proposal by its resolution no. 935 in November 2015¹².

1.3.1.5 The Ministry of Transport did not implement the solution from November 2015, either. In March 2016 it submitted to the government the document entitled “*The Schedule of the Preparation of the Electronic Toll Collection System after 2016.*”¹³ In the document it proposed to extend the contract with the current ETC system provider by 3 years so as to use the period to resolve the issues complicating the smooth transition from the current ETC system provider to a new one. The Ministry justified the change by the fact that no agreement had been achieved with the current supplier and that the current toll collection system could not be handed over under a closed or open tender. This is the approach the Ministry of Transport applied at the time of the audit.

1.3.2 As described above, in the period 2013–2016 the Ministry of Transport changed the approach to toll collection after 2016 multiple times. The main reason for the changes was the fact that the approaches were not based on clearly defined possibilities. **At the time of the audit, the Ministry of Transport had no document available that could be considered a comprehensive road tolling policy document.** Although the document *Road Tolling Concept for the Czech Republic* was submitted to the government in November 2016¹⁴, it only dealt with the extent of toll application to Class I and lower-class roads, thus failing to represent a comprehensive ETC policy. At the time of the audit, there were thus multiple issues outstanding for the Ministry of Transport:

- the relationship between time-based and performance-based toll charges;
- the extent of road tolling and the related economic aspects;
- the technological solution of the toll collection system in connection with the utilisation of the existing assets of the state;

- the degree of the state’s participation in toll collection;
- the legislative dimension of the potential solutions.

¹² Resolution No. 935 of the Government of the Czech Republic of 20 November 2015 *on the Implementation Schedule of the Concept for the Preparation of the Electronic Toll Collection System after 2016.*

¹³ Resolution No. 188 of the Government of the Czech Republic of 9 March 2016 *on the Implementation Schedule of the Preparation of Electronic Toll Collection System after 2016.*

¹⁴ Resolution No. 1000 of the Government of the Czech Republic of 7 November 2016 *on the Road Tolling Concept for the Czech Republic.*

2. Imposition of toll on Class I roads

2.1 The previous audit no. 11/13 stated that the Ministry of Transport had reduced its plan to impose toll on 1,562 km of Class I roads to 185 km in 2007. The figure changed only little afterwards as toll was charged on 230 km of Class I roads as of 31 December 2016.¹⁵

The Ministry of Transport failed to explain the reasons why, less than a year after putting the ETC system into operation, it reduced the length of Class I roads subject to toll by 88 %. It only declared that it had no documents or supporting information that caused the then-leadership of the Ministry to decide so. In the documents produced in the period 2013–2016 concerning the ETC system after 2016 (listed in Sections 1.2 and 1.3 above), the Ministry stated varying lengths of Class I toll roads (for example, under 1,000 km, between 850 and 3,000 km, or the entire network of Class I roads).

2.2 The Ministry of Transport had no clear idea about toll application to Class I roads even at the time of the audit. In its document *Road Tolling Policy for the Czech Republic* from November 2016 (see Section 1.3.2 above), it expected to increase the length of Class I roads subject to toll by 850 to 3,000 km. However, that was not in line with the results of two studies (commissioned by the ministry in 2015) listed in the document:

- In the first study, the maximum length of extending the application of toll to Class I roads, given that the reference cost ratio of the project of 20% was not to be exceeded, was set at 224 km for the microwave technology and at 662 km hybrid technology (combining microwave and satellite technologies).
- In the other study, the microwave technology was seen as the financially more advantageous option provided that toll was charged on an additional roughly 700 km of Class I roads. In terms of greater coverage, the satellite or hybrid technologies were more advantageous.

On the basis of the request of the Ministry of Transport, the project manager of the ETC system implementation project after 2019 prepared the *Analysis of the Performance-based Tolling Scheme on Newly Selected Class I Road Sections* in December 2016. The analysis compared three lengths of Class I toll roads with the zero variant (maintaining the current length of toll roads) in terms of the cost ratio, stating that the method selected was independent of the technology of the toll collection system. According to the results of the analysis, the most economically advantageous option was to extend toll to 76 km of Class I roads and the least advantageous option was extension by 900 km. **With regard to the parameters achieved in the multi-criteria evaluation, the optimum option was extension of the toll to another 474 km of Class I roads.**

At the time of the audit, the Ministry of Transport expected the imposition of toll to another 900 km of Class I roads but failed to provide reasonable grounds for this expectation. The Ministry stated that the extension of the toll was selected from the 850 - 3,000 km range on the basis of Resolution No. 1 000 of the Government of the Czech

¹⁵ Figure according to Decree No. 470/2012 Coll. on the use of roads subject to toll.

Republic 7 November 2016¹⁶ (see Section 1.3.2 above), provided that the range resulted from the negotiation between the transport experts of the coalition parties. It also stated that it had relied on an analysis of the project manager from December 2016. However, the project manager had considered the 900 km option to be the worst in his analysis from December 2016 (see the preceding paragraph).

3. European Electronic Toll Service

According to European Commission Decision No 2009/750/EC,¹⁷ the Member States were to ensure the interoperability of their toll collection systems by October 2012. **The Ministry of Transport failed to submit any documents that would enable the evaluation of its actions in ensuring the interoperability of the toll collection system in the Czech Republic in the period 2009–2012.** It submitted its proposal for the implementation of the European Electronic Toll Service to the government as late as December 2013, provided that the service was expected to be implemented from as late as 2016.¹⁸

However, the Ministry of Transport postponed the implementation of the European Electronic Toll Service at the end of 2014. It justified this step by stating the economic inefficiency of the implementation in the existing system. In April 2015 it proposed to the government to implement the service only after 2016¹⁹. However, it kept changing the solutions and dates for the implementation of the European Service in connection with the changes in its approach to toll collection by March 2016 as stated in point 1.3.1 above.

In March 2016 the Ministry of Transport again proposed to the government the immediate implementation of the European Electronic Toll Service in the existing toll collection system ²⁰, even though it had previously abandoned this solution as economically inefficient in 2014. The proposal was presented on the grounds of minimising sanctions from the European Commission for the breach of Treaty on the Functioning of the European Union arising from the failure to meet the requirements of European Commission Decision No. 2009/750/EC.

The Ministry of Transport included the implementation of the European Electronic Toll Service in Amendments 1 and 2 from August 2016, by virtue of which the contracts with the existing provider operating the ETC system were extended for 2017–2019 (see Section 6

¹⁶ With this resolution, the government acknowledged that the extension of the roads subject to toll, in the expected range of 850 to 3,000 km, would be submitted to the government by the minister of transport by 31 December 2016 on the basis of an analysis performed by the project manager.

¹⁷ European Commission Decision No. 2009/750/EC of 6 October 2009 *on the definition of the European Electronic Toll Service and its technical elements*.

¹⁸ Resolution No. 919 of the Government of the Czech Republic of 4 December 2013, *on the Development of the Electronic Toll System in the Czech Republic –Czech Road Tolling Policy* (see also point 1.3.1.1 of the Audit Conclusion).

¹⁹ Resolution No. 282 of the Government of the Czech Republic of 15 April 2015 *on the Concept for the Preparation of the Electronic Toll Collection System after 2016* (see also point 1.3.1.2 of the Audit Conclusion).

²⁰ The objective was approved by Resolution No. 188 of the Government of the Czech Republic of 9 March 2016 *on the Implementation Schedule of the Preparation of Electronic Toll Collection System after 2016* (see also point 1.3.1.5 of the Audit Conclusion).

below). The contractual price for the implementation of the service was CZK 372 million. The service was implemented as of 31 August 2017, i.e. nearly five years after the binding deadline set by the European Commission. **However, the terms and conditions of the tendering procedure for the ETC system after 2019 do not guarantee that the European Electronic Toll Service module acquired for CZK 372 million will also be used after 2019.** The actual extent of its utilisation will depend on the technical solution supplied by the contractor selected in the tendering procedure for the ETC system after 2019.

4. ETC system costs and revenues in 2007–2016

4.1 Costs

According to Government Resolution No. 652 from August 2013²¹ regarding audit no. 12/12, the Ministry of Transport was to propose by 30 September 2013, among others, the system measures to significantly reduce the operating costs of the ETC system. Regarding this issue, the Ministry of Transport prepared the document entitled *Development of the Electronic Toll System in the Czech Republic – Czech Road Tolling Policy* (see point 1.3.1.1 above). However, the document **failed to focus on the system measures to reduce the costs of the ETC system**, instead, it was to become the supporting document for the selection of the ETC system option after 2016 and for the selection of the provider.

The total costs of the acquisition and operation of the ETC system in 2007–2016 reached CZK 24,066 million excluding VAT²², of which the costs of the ETC system operation unit of the Road and Motorway Directorate accounted for CZK 1,114 million. In terms of total costs, the ŘSD reported capital costs of CZK 5,436 million and operating costs of CZK 18,630 million.²³

4.1.1 Interface for telematic applications and line management of the D1

According to the instructions from the Ministry of Transport, the ŘSD concluded the 27 December 2007 the amendments to the supply and service contracts concluded with the ETC system operator for 2007–2016 on 29 March 2006, adding new performance including, among others, the supply and implementation of the telematic application interface and line management of the D1 motorway, including the provision of services related to their operation for the period of 102 months. The total payments for this new performance reached CZK 2,843 million excluding VAT.

The purpose of the telematic application interface was to acquire data for the National Transport Information Centre. Similarly, the line management of the D1 was unrelated to the

²¹ Resolution No. 652 of the Government of the Czech Republic of 21 August 2013 *on the Supreme Audit Office Audit Conclusion from Audit No. 12/12 – Revenues from performance-based charges (toll) and income from time-based charges (time vignettes), including the related costs.*

²² The amount does not include costs in the amount of CZK 2,843 million excluding VAT for the telematic application interface and line management of the D1 motorway, which were not related to ETC. These costs were paid by the ŘSD on the basis of amendments to the ETC system supply and service contracts dated 29 March 2006 (see point 4.1.1 of the Audit Conclusion).

²³ The operating costs reported by the ŘSD also included the costs of the renewal of the assets, which should be included in capital costs (see Section 5.1 of the Audit Conclusion).

ETC system and the ETC system infrastructure was not used for its implementation on other motorways. **The Ministry of Transport and the Road and Motorways Directorate failed to submit any reasons indicating why the supply and implementation had been included in the contracts with supplier of the ETC system.**

The supply and implementation of the above-mentioned interface and line management were included in the contracts with the ETC system provider dated 29 March 2006 on the same date on which the Ministry concluded the amendments by which it reduced the length of Class I toll roads from 1,377 km to 185 km and, consequently, the amount to be paid by CZK 4,718 million.

4.1.2 Satellite interface

Another new performance which was added by ŘSD to the contracts specified in the preceding point by the amendments dated 27 December 2007 included the supply and implementation of the satellite interface through which the ETC system was to be extended to include Class I, II and III roads. The total price was CZK 773 million excluding VAT, of which the supply accounted for CZK 441 million and test operation for CZK 332 million.

However, the satellite interface was never used. The reason was mainly the change in the approach of the Ministry of Transport in 2010–2011 regarding the application of toll to Class I and lower-class roads (see points 1 and 2 above). According to information from the ŘSD, the satellite interface became non-compliant with the requirements of the applicable standards, which changed in the course of test operation. The Directorate also advised that in 2015 it had transferred a part of the satellite interface technology, with the acquisition value of CZK 252 million excluding VAT, to the telematic application interface (see point 4.1.1 above). The remaining assets, with the acquisition value of CZK 189 million excluding VAT, were disposed of. **The Road and Motorway Directorate spent CZK 521 million excluding VAT on the ineffective acquisition of the satellite interface and the related costs.**

4.1.3 Public relations

The service contracts with the ETC system provider also included public relations services. They were supposed to be focused on services related to the new tolling system implemented since 2007, in particular, to clarify the importance of resolving the current situation, to explain the basic principles of the new system, to inform continuously about the progress of the work, to create a positive image of the ETC system as an improvement in freight transport, etc. The target groups included the carriers, the professional public, and the media.

In 2007–2016 the Directorate spent CZK 254 million excluding VAT on these services. **The scope and specific content of the performance provided could not be established from the documents presented by the ŘSD.** The contribution of the above-mentioned activities for the entire period from the implementation of the ETC system in 2007 is questionable, too, because several years after the implementation the system was generally well known.

4.2 Revenues

The amount paid by the ŘSD to the State Transport Infrastructure Fund for 2007–2016 was CZK 78,506 million,²⁴ of which the toll paid was accounted for CZK 76,545 million, the late toll charge for CZK 66 million, the forfeited deposits and credit for CZK 1,372 million, and the current account balance for CZK 523 million.

According to Government Resolution No. 652 from August 2013²⁵ regarding audit no. 12/12, the Ministry of Transport was to propose to the government by 30 September 2013, among others, the system measures to significantly reduce the cost of recovering the outstanding toll. In this context, the ŘSD changed the payment method of the toll owed from 2014 and the debtors sent the payments directly to the account of the ŘSD instead of to the accounts of the law firms through which the Directorate was collecting the debts.

The costs paid to the service providers for keeping the records of, and recovering the outstanding toll payments were higher than the amounts actually recovered. In 2009–2016 the ŘSD paid CZK 77 million for recovering the outstanding amounts while the amount recovered only reached CZK 63 million. The cost effectiveness was thus CZK 0.82 (the income was CZK 0.82 for each CZK 1.00 expended).

4.3 Comparison of the achieved and expected economic parameters

The objective comparison of the economic parameters of the ETC system in 2007–2016 with the expected one could not be performed because **after the approval of the implementation variant by the government in May 2004²⁶ and during the initial years of the implementation the Ministry of Transport changed the parameters fundamentally**, in particular:

- it reduced the period of the project from 12 to 10 years;
- it changed the toll rates (the plan foresaw a charge of CZK 4.20 per km for vehicles weighing over 12 tonnes and CZK 1.60 per km for vehicles weighing between 3.5 and 12 tonnes; in reality, the toll applied only vehicles weighing over 12 tonnes in the period 2007–2009 and to all vehicles weighing over 3.5 tonnes from 2010, with the toll rates ranging from CZK 1.70 to CZK 5.40 per kilometre);
- toll was supposed to apply to 2,995 km of roads; in fact, only 1,450 km were subject to toll as of 31 December 2016.

²⁴ Of the total of CZK 78,506 million, the Directorate paid CZK 77,170 million in the period 2007–2016 and CZK 1,336 million in 2017.

²⁵ Resolution No. 652 of the Government of the Czech Republic of 21 August 2013 *on the Supreme Audit Office Audit Conclusion from Audit No. 12/12 – Revenues from performance-based charges (toll) and income from time-based charges (time vignettes), including the related costs.*

²⁶ Resolution No. 481 of the Government of the Czech Republic of 19 May 2004 *on the plan to implement a performance-based charge applicable to certain categories of road vehicles on selected roads in the Czech Republic.*

The approved variant showed a foreseen cost ratio of the ETC system of 38.9% and the average monthly efficiency of 95%.²⁷ However, the toll scheme implemented as at 31 December 2016 was closest in scope to variant no. 1 (CZK 1,499 km), according to which the cost ratio was 33.5% and the efficiency was 95%.

During the operation of the ETC system in 2007–2016, the Ministry of Transport and the Road and Motorway Directorate concluded a total of 58 amendments to the two contracts dated 29 March 2006 (see point 4.1.1 among others). The amendments mainly decreased the supply in connection with the reduced length of Class I toll roads, while increasing the performance by including additional deliveries and services. The amendments increased the contract price excluding VAT by CZK 5,241 million to the total of CZK 23,807 million, i.e. by 28%, of which the price of the deliveries was increased by CZK 2,410 million to CZK 7,687 million, i.e. by 45%, and the price of the services was increased by CZK 2,831 million to the total of CZK 16,120 million, i.e. by 21%.

As at 31 December 2016, toll applied to a total of 1,450 km of roads, 1,220 km of which were motorways and 230 km were Class I roads. The average total cost ratio of the ETC system was 31% and the operating cost ratio was 24% in the period 2007–2016. The average monthly efficiency of the ETC system was 99%.

The materials and studies that mentioned the cost ratio did not specify clearly what costs (total, operating, etc.) the reported values concerned. For example, the implementation variant specified a cost ratio of 39%, ; in the document *Concept for the Preparation of the Electronic Toll Collection System after 2016*, which was discussed by the government on 15 April 2015 (see point 1.3.1.2), the Ministry of Transport specified the cost ratio of toll collection after 2016 between 10% and 20%; the study from 2015 (see section 2.2 above) specified a reference cost ratio of 20%, etc. The Audit Conclusion regarding audit no. 11/13 mentioned the operating cost ratio of 12% in Austria and 21% in Germany in 2007. **The SAO considers the average total cost ratio of 31% and the operating cost ratio of 24% in the period 2007–2016 high.**

5. ETC system assets

As at 31 December 2016, the ŘSD reported ETC system assets in the acquisition value of CZK 7,732 million and net book value of CZK 2,261 million. However, that did not correspond to their actual value (see point 5.1 below).

5.1 Renewal of ETC system asset

The assets were renewed by the ETC system provider under the service contract dated 29 March 2006. No detailed rules were set for the renewal in the contract. The specific price was only set for the system technology and for the distribution and contact point technology; for the period 2007–2016 it was CZK 972 million excluding VAT and for the

²⁷ ETC efficiency: the success rate of the specified toll transactions (captured vehicles passing through the toll gates).

period 2017–2019 it was CZK 252 million excluding VAT. For all other items it was set together with the maintenance. **It was therefore impossible to establish the full price of the renewal.**

The most significant asset renewal projects included the renewal of the patrol vehicles, the infrastructure on the toll gates, programming stations, and computing equipment including the software. According to the accounting documents of the ŘSD, the ETC system supplier renewed assets in the total acquisition value of CZK 902 million including VAT, of which patrol vehicle renewal accounted for CZK 378 million, for example. The ŘSD paid the supplier CZK 1,168 million including VAT for the renewal of the two above-mentioned technologies as a part of the service contract, i.e. CZK 266 million more than the acquisition value of all the renewed assets. **The reasons for the above-mentioned difference in the acquisition value and the price paid for the renewed assets could not be evaluated on the basis of the presented documents.**

In accounting for the renewed assets, the ŘSD failed to proceed in compliance with Act No. 563/1991 Coll. because:

- it incorrectly recognised services which were of the nature of the acquisition of fixed assets as service costs (failing to comply with Section 8 (2) and (3) of the act cited above);
- it recognised the renewed assets as assets acquired free of charge and failed to value them at the reproduction cost of acquisition²⁸ (failing to comply with Section 25 (1) (I) of the act cited above).

5.2 Patrol vehicles

The patrol vehicles were intended for field inspections of vehicles subject to toll payments. Under the supply contract dated 29 March 2006, the ETC system supplied a total of 35 special patrol vehicles in 2006 and 2007, in the total amount of CZK 107 million excluding VAT, averaging CZK 3 million per vehicle. The vehicles were used by the Customs Administration free of charge under an agreement with the ŘSD to provide the inspection patrolling duty under Act No. 13/1997 Coll. The costs of the acquisition and operation of the vehicles were paid by the ŘSD. **The ŘSD failed to present any documents that would enable the verification of whether or not the quantity of vehicles (35) was efficient with regard to the patrols.** As per a request from the Customs Administration, the ŘSD reduced the number to 29 in March 2017.

According to the service contract, the ETC system provider proceeded to supply another 137 vehicles within the framework of the renewal of the patrol vehicles, including certain components of the special equipment, by the end of 2016. **For the reasons specified in the preceding paragraph, the price paid by the ŘSD for the delivery of these additional vehicles could not be determined objectively.** The same number of ETC vehicles was retired by the ŘSD due to high maintenance costs or high mileage. 48 of these vehicles were transferred to other units in-house and 85 vehicles to other governmental organisations. The remaining 4 vehicles, which had been in an accident, were disposed of.

²⁸ The ŘSD recognised assets in its accounting at the cost corresponding to the original assets that were renewed or at CZK 1.19 to 1.21 including VAT.

The operating costs of the patrol inspection vehicles were CZK 197 million including VAT in the period 2007–2016 and CZK 6 million in the period from 1 January 2017 to 30 June 2017. In the period 2007–2016 the average annual operating cost per vehicle was CZK 584 thousand. The audit found certain irregularities concerning, for example, the year-to-year difference in the cost of oil or telephone charges, which the ŘSD failed to clarify completely.

In the agreement concluded with the Customs Administration, the ŘSD failed to specify the terms and procedures for ensuring the economy and effectiveness of the operation of the patrol inspection vehicles. **It also failed to present any documents that would enable the evaluation of how the Directorate monitored the economy and effectiveness of the operation of the vehicles.**

The system for the acquisition, operation and renewal of the patrol inspection vehicles is complicated and difficult to control, in particular, in terms of the cost effectiveness and economy. It requires cooperation from the ETC system provider, the ŘSD and the Customs Administration. **The renewal of vehicles paid for by a fixed sum under the ETC service contract without clearly defined rules is non-transparent and problematic** both in terms of economy and in terms of the acquisition of fixed assets from operating funds rather than from capital funds.

5.3 Electronic on-board units

The use of electronic on-board units is mandatory for all vehicles that are subject to toll. The obligations of the toll collection system operator and of the vehicle operator and driver with regard to the on-board units are governed by Act No. 13/1997. The ETC system provider supplied a total of 973,500 on-board units in the amount of CZK 1,260 million excluding VAT in the period 2007–2016.

The accounting records of the ŘSD included 429,758 on-board units with the acquisition value of CZK 561 million excluding VAT for which the ETC user account was closed due to the forfeiture of both the deposit and the credit as at year-end 2016. **The ŘSD failed to reflect this fact in its accounts even though it has no information about the current status of these on-board units or any guarantee of recovering them.**

6. ETC system operation in 2017–2019

6.1 The previous audit no. 11/13 found that **in connection with the selection of the supplier and provider of the ETC services for 2007–2016, the Ministry of Transport failed to ensure observance of the requirement for building an open ETC system.** The deliveries and services which emerged in the course of that period could thus be made and provided only by the selected ETC system provider. Combined with the vague policies, as stated in point 1 above, this resulted in the extension of the contract with the current ETC provider until 2019. In addition, the Ministry of Transport took until as late as 2015 to begin to address this situation, which prevents the award of the public contract to anyone but the current ETC system provider.

In July 2016 the Ministry of Transport submitted to the government the justification²⁹ of the public contract for the operation of the ETC system after 2016 by the existing ETC provider (with the foreseen value of CZK 6 billion). In the justification, the Ministry stated:

- the operation of the ETC system by the current provider for the maximum of three years was required for the preparation and implementation of the procurement procedure for the supplier of the new ETC system and the provider of the services related to its operation;
- the failure to implement the public contract would imply that toll would not be collected after 31 December 2016, resulting in annual revenue drop by at least CZK 7 billion;
- the performance of the public contract would result in the expedited implementation of the interface for the European Electronic Toll Service and in the fulfilment of the requirements prescribed by the EU legislation.

The government approved the justification in July 2016³⁰. On the same date, the government discussed the information from the Ministry of Transport *Above-threshold public contract awarded in a negotiated procedure without prior publication according to Section 23 of Act No. 137/2006 Coll. on public procurement, as amended, entitled “Operation of the Electronic Toll Collection System after 2016”*.

Within the framework of the negotiated procedure without prior publication according to Section 23 (4) (a) of Act No. 137/2006 Coll., the Ministry of Transport requested a quotation for the operation of the ETC system in 2017–2019 from the existing ETC system provider on 27 August 2016. On the following day it evaluated the bidder’s quotation dated 27 August 2016, decided to accept the quotation, and concluded amendments 1 and 2 to extend the existing ETC supply and service contracts for the maximum period of 3 years, starting on 1 January 2017. **The total contract price was CZK 5.3 bn excluding VAT³¹ (of which the deliveries accounted for CZK 0.6 billion and services for CZK 4.7 billion, including asset renewal in the amount of CZK 0.3 million).**

6.2 The Ministry of Transport applied the above-mentioned negotiated procedure without prior publication in contradiction with Act no. 137/2006 Coll. because the situation where the Ministry had to renew the contracts with the current ETC system provider resulted as a result of conditions created by the Ministry itself in the previous years (see the preceding point 6.1).

By its decision from October 2016,³² the Office for the Protection of Competition imposed a fine of CZK 1 million upon the Ministry of Transport for the improper application of the negotiated procedure without prior publication in extending the contracts with the existing ETC system provider. The Office did not question the technical reasons which had caused the

²⁹ According to Section 156 (3) of Act No. 137/2006 Coll., the approval of the justification by the government is required in order for the procurement procedure to commence.

³⁰ Resolution No. 640 of the Government of the Czech Republic of 11 July 2016 *on approval of the justification of the public contract entitled “Operation of the Electronic Toll Collection System after 2016”*.

³¹ The prices were set for the foreseen scope of performance. Their amount was to be adjusted in accordance with the actual performance on the basis of the unit prices specified in the contracts.

³² Decision No. ÚOHS-S0600/2016/VZ-43077/2016/522/PKř of the Office for the Protection of Competition of 25 October 2016.

Ministry to apply such a procedure. It stated, however, that the reasons claimed by the Ministry had resulted from inappropriate contractual arrangements with the successful bidder in the tendering procedure conducted in 2005. At the same time, the Office noted the inactivity of the Ministry of Transport at the time after the conclusion of the contracts with the successful bidder.

As regards the actions of the Ministry of Transport in extending the contracts with the current ETC system provider, the Office issued another decision in November 2016.³³ In this decision, it dismissed the motion of the plaintiff to prohibit the performance of the contracts with the current ETC system provider on the grounds of the existence of reasons requiring special considerations in connection with public interest requiring the contracts to be performed even though the reasons for prohibiting the performance of the contracts had been found as the contracting authority had committed an administrative offence in connection with the conclusion of the contracts.

6.3 The service contract extended by Amendment No. 1 of 28 August 2016 still contains certain activities whose needs the SAO does not consider justified:

- In the new period of three years the contractor was to renew the technical and software components so as to continuously maintain their excellent technical condition. In this context, the Ministry of Transport failed to take into consideration the time remaining until the end of the operation of the existing system, whose technology may not be used after 2019. Ensuring the renewal of the equipment to the full extent in such a short time before the expected end of the operation of the ETC system may be both uneconomical and ineffective. The price for the renewal of the technologies of the system and of the distribution and contact points for the period 2017–2019 was CZK 252 million excluding VAT. The price could not be set for other parts of the technology because it was included in the total price of maintenance.
- The Ministry of Transport failed to explain the need for the activities related to public relations. The price for this service was CZK 58 million excluding VAT. The Ministry did not include this activity in the specifications of the public contract for the ETC system after 2020, arguing that road toll was a routine and notorious matter.

7. Public contract for the ETC system in the period 2020–2029

With a view to selecting the supplier and service provider in the period 2020–2029, the Ministry used the negotiated procedure with prior publication according to Act No. 134/2016 Coll.³⁴, which was opened on 15 June 2017. The expected value of the public contract was set at CZK 28.8 billion³⁵ and the deadline for the submission of the participation applications was 24 August 2017. The subject matter of the public contract was the building of the ETC system either by using the existing system or its components or by building an entirely new system, and the provision of the services and deliveries related to the operation

³³ Decision No. ÚOHS-S0629/2016/VZ-46347/2016/522/PKř of the Office for the Protection of Competition of 18 November 2016.

³⁴ Act No. 134/2016 Coll. on public procurement.

³⁵ The expected value including the reservation of commitment changes. Without this reservation the value was CZK 26.7 billion.

of the ETC system. At the time of the audit, the evaluation of the qualifications of the four tenderers who had applied was conducted.

The performance period was 140 months, of which 14 months were for the preparation and commissioning of the ETC system, 120 months for the ETC system operation, and 9 months for the phasing-out of the ETC system (3 months of which coincided with the operation of the system) and for the provision of assistance in the transition to a new system. The operation was expected to be launched from 1 January 2020. As of that date, the Ministry of Transport expected to apply the toll to 1,347 km of motorways and 1,141 km of Class I roads.

The audit of the preparation of the public contract specified above identified certain risks and uncertainties that may affect the economy, efficiency and effectiveness of the toll collection scheme after 2019:

- a) the Ministry of Transport had no comprehensive road tolling policy in place. This resulted in certain conceptually open issues (see point 1.3.2 above). This fact was one of the causes for the changes in the implementation of the ETC scheme in 2007–2016 with a negative cost impact.
- b) The Ministry of Transport failed to demonstrate properly on the basis of what 900 km of Class I roads were included among the toll roads as of 1 January 2020 (see Section 2 above).
- c) The period granted to the new contractor for the preparation and commissioning of the ETC system is 14 months, or rather 12 months, considering that test operation must commence two months before the full operation of the ETC system. According to SAO this period is short, especially if the new contractor proposes a solution drawing on the existing ETC system. From this perspective, the problems include:
 - the solution of the connection between the central part with the payment solution, which, unlike the central system, is not owned by the state, hence the Ministry of Transport cannot guarantee full cooperation from the owner of those assets;
 - the necessity to modify the central part, which does not meet the requirement for the open architecture and modular solution of the new system.
- d) For the entire operation period (from 1 January 2019 to 31 December 2029) the provider shall ensure the renewal of the ETC system components in line with the requirements of the tender documents. In this, the Ministry of Transport failed to consider the time remaining until the expected end of the operation of the system. Ensuring the renewal of the equipment to the full extent shortly before the expected end of the operation of the ETC system may be both uneconomical and ineffective. The fact that the state will own equipment in an excellent condition and of significant value when the ETC system is put out of operation is similar to the situation which, among others, complicated the selection of the ETC system provider after 2016.
- e) The Ministry of Transport failed to efficiently address the maximisation of the potential arising from the existing ETC infrastructure, which the current supplier and operator of the ETC system should hand over in excellent technical condition in accordance with the contracts.
- f) The complicated system of the acquisition, renewal and operation of the patrol vehicles (see Section 5.2 above) should be maintained. The system, which requires cooperation from the ETC system provider, the ŘSD, and the Customs Administration, makes it difficult

to efficiently control the vehicles, in particular, as far as the economy and cost effectiveness of their operation is concerned.

List of Abbreviations

| | |
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| CR | Czech Republic |
| VAT | Value added tax |
| MD | Ministry of Transport (Ministerstvo dopravy) |
| SAO | Supreme Audit Office (Nejvyšší kontrolní úřad) |
| ŘSD | Road and Motorway Directorate (Ředitelství silnic a dálnic) |
| ETC | Electronic Toll Collection |