



Annex 2 to the FDF EETS and Fuel Card Providers Ordinance

Technical and Operational Requirements for Fuel Card Provider

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Technical and Operational Requirements for Fuel Card Provider

1 Overview

1.1 Purpose of the document

This annex contains the following information:

- the technical and operational requirements for the fuel card provider for approval and permanent fulfilment, as well as
- the specifications for the approval procedure to be carried out.

1.2 List of changes

Version	Date	Section	Change
1.0	01.03.2020		First published version

1.3 Terms and abbreviations

Term/Abbreviation	Meaning
Declaration procedure	The term "declaration procedure" refers to the procedure at HVC processing terminals (AT) installed at customs offices that must be adhered to when a fuel card is accepted or rejected for the payment of the performance-related HVC.
ID card	The term "ID card" refers to the identification card. The ID card is a chip card for obtaining confirmation documents at the AT. When foreign vehicles first enter Switzerland, their master data is entered in the IS-LSVA and the ID card is issued.
HVC processing terminal	The term "HVC processing terminal (AT)" refers to the machines installed at customs offices for making performance-related HVC declarations for foreign vehicles without an on-board unit. An ID card and the fuel card are required to use the AT. The vehicle driver receives a confirmation document at the AT.
Confirmation document	The "confirmation document" (form 56.50) is the official document for the performance-related HVC declaration for foreign vehicles. The AT issues the confirmation document in duplicate. When leaving the country, the vehicle driver adds the kilometre reading to the original document (Section A), signs it and gives it to the customs office staff; the copy (Section B) is retained by the driver.
IS-LSVA	The "IS-LSVA" is the HVC IT system. It is the FCA's electronic data processing system that manages all data centrally, checks and processes declarations and performs assessments.
Performance-related HVC master data	The term "performance-related HVC master data" refers to the relevant data concerning each vehicle and/or each vehicle holder, e.g. registration number, country, weights, charge category, vehicle holder's address, etc. In the case of foreign vehicles, this data is captured when the vehicle enters Switzerland for the first time.
Collective invoice	The "collective invoice" is the invoice to be issued by the FCA for the card transactions executed with fuel cards.
Cardholder	The term "cardholder" refers to the user of a fuel card.

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Term/Abbreviation	Meaning
Blacklist	The "blacklist" is the list of fuel card numbers that may not be accepted for card transactions.
Fuel card customer	The term "fuel card customer" refers to the authorised recipient of invoices from the fuel card provider.
Whitelist	The "whitelist" is the list of all fuel card prefixes authorised by the fuel card provider that have been or will be issued to the provider's fuel card customers. These fuel cards are accepted by ATs as a cashless means of payment for paying the performance-related HVC.
Card transaction	A "card transaction" refers to the process carried out by a cardholder at a customs office to pay the performance-related HVC for a trip in Switzerland using the fuel card.
Card expiry date	The term "card expiry date" refers to the date (month/year) indicated on a fuel card. Fuel cards remain valid up to the last day of the month indicated as the "card expiry date".
Interface test	The "interface test" is the integration test of the fuel card provider's back office into the FCA's IS-LSVA.
Product procurement category	The term "product procurement category" refers to the group of goods and/or services printed or embossed on fuel and service cards that can be obtained by cardholders by presenting their cards.
Rejection log	The term "rejection log" refers to the list of rejected card transactions to be generated by the fuel card provider.

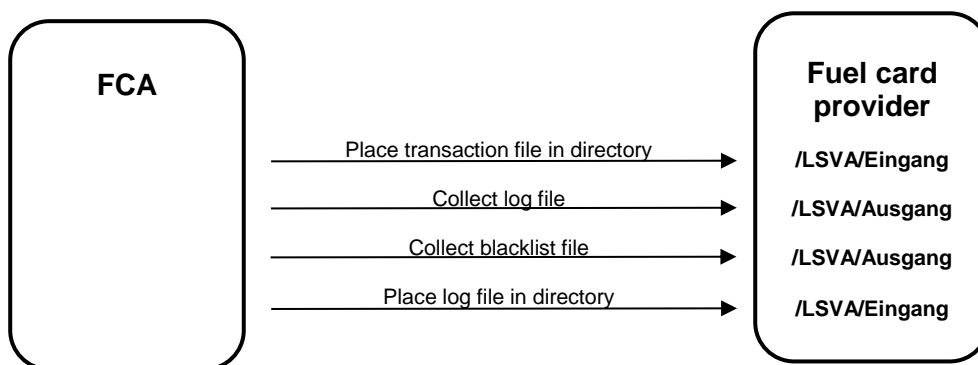
2 Technical specifications

2.1 Data transmission prerequisites

Data is transmitted online by means of secure File Transfer Protocol/sFTP (port 22, public key DSA without password). The data is encrypted by the protocol in order to prevent it from being read or changed by third parties.

The fuel card provider makes an sFTP account and two directories ("/LSVA/Eingang" and "/LSVA/Ausgang") available. Two additional directories ("/LSVATest/Eingang" and "/LSVATest/Ausgang") are needed for any test activities. The fuel card provider gives the FCA its IP address in decimal format. Planned infrastructure changes (e.g. server change, IP address change) are to be notified to the FCA beforehand.

All file transfers are initiated by the FCA:



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2.2 Assessment and invoicing

2.2.1 Assessment

The duplicate of the confirmation document (with all data needed for collecting the charge) received by the vehicle driver, together with the fuel card provider's invoice to its fuel card customers, constitutes the performance-related HVC assessment.

2.2.2 Daily claim

The FCA sends the fuel card provider a file containing details of the individual card transactions on a daily basis. To confirm receipt of a transaction file, the fuel card provider makes a log file available for collection by the FCA no later than the following day.

The process for the technical provision and confirmation of the daily claim is as described below. For this purpose, the FCA assigns the fuel card provider an individual three-letter designation (XYZ is to be understood as an example).

2.2.2.1 Format of the file XYZ_REYYMMDD-NN.TXT (transaction file)

The FCA places one or more files named XYZ_REYYMMDD-NN.TXT in the /LSVA/Eingang directory on a daily basis.

The letters YYMMDD stand for the transaction date, NN is a sequential number (starting with 01) which is increased by one each time if more than one transfer needs to be carried out for a particular day.

It is important to note that this date is not the current date, but the transaction date (corresponding to the date of entry) and that only datasets with the same date may be included in this file.

This file has a fixed record length and is described below. After processing, the fuel card provider deletes this file from the server.

A row with the following details is included in the file per transaction:

No.	Name	Format	Comment
1	TRE_Record_Typ	X(001)	N = Normal transaction
2	TRE_STE_Nr_Ein	X(004)	Code for customs office of entry
3	TRE_STE_Bez_Ein	X(020)	Name of customs office of entry
4	TRE_STE_Nr_Aus	X(004)	Code for customs office of departure
5	TRE_STE_Bez_Aus	X(020)	Name of customs office of departure
6	TRE_DatumEin	9(08)	Date of entry in YYYYMMDD format
7	TRE_ZeitEin	9(06)	Time of entry in HHMMSS format (24-hour format)
8	TRE_DatumAus	9(08)	Date of departure in YYYYMMDD format
9	TRE_ZeitAus	9(06)	Time of departure in HHMMSS format (24-hour format)
10	TRE_TkartNr	X(025)	Card number (entire track 2 of ISSU no. up to and including regional validity if available, or otherwise date of expiry)
11	TRE_Waehrung	X(003)	Currency = CHF
12	TRE_Netto	S9(07)v99	Total net amount
13	TRE_MwStBetrag	S9(07)v99	VAT amount
14	TRE_MwStFaktor	S9(02)x99	VAT factor
15	TRE_Brutto	S9(07)v99	Total amount
16	TRE_BelegNr	X(18)	Confirmation document number (5-digit AT number, 6-digit sequential number within AT, 7 spaces)
17	TRE_SeqNr	9(006)	Sequential number within this transfer (always begins with 1)

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The last record in the file (trailer record) is used to verify the transfer. Its structure is the same and contains the following:

No.	Name	Format	Comment
1	TRE_Record_Typ	X(001)	T = Trailer record
2	TRE_STE_Nr_Ein	X(004)	Empty
3	TRE_STE_Bez_Ein	X(020)	Name of this file
4	TRE_STE_Nr_Aus	X(004)	Empty
5	TRE_STE_Bez_Aus	X(020)	Empty
6	TRE_DatumEin	9(08)	Consecutive sequence number across all transfers
7	TRE_ZeitEin	9(06)	Number of transactions in this transfer
8	TRE_DatumAus	9(08)	Empty
9	TRE_ZeitAus	9(06)	Empty
10	TRE_TkartNr	X(025)	Empty
11	TRE_Waehrung	X(003)	Currency = CHF
12	TRE_Netto	S9(07)v99	Total net amount
13	TRE_MwStBetrag	S9(07)v99	VAT amount
14	TRE_MwStFaktor	S9(02)x99	Empty
15	TRE_Brutto	S9(07)v99	Total amount
16	TRE_BelegNr	X(18)	Empty
17	TRE_SeqNr	9(006)	Sequential number within this transfer

2.2.2.2 Format of the file XYZ_REYYMMDD-NN.LOG (log file)

To confirm receipt of a transaction file, the fuel card provider places a log file XYZ_REYYMMDD-NN.LOG with the following structure in the /LSVA/Ausgang directory the following day at the latest:

No.	Name	Format	Comment
1	TRF_Record_Anzahl	9(06)	Total number of transactions
2	TRF_Fehler_Anzahl	9(06)	Number of errors (no longer used; value is 000000)
3	TRF_Total_Betrag	S9(07)v99	Total amount of all successfully imported invoices

2.2.3 Invoicing to fuel card providers

Twice a month, i.e. mid-month and at the end of the month, the FCA prepares an invoice for the fuel card provider. As a collective invoice, it includes all performance-related HVC amounts levied via this fuel card provider during the billing period, based on the daily claims confirmed by the corresponding fuel card provider (see 2.2.2.2.)

The collective invoice contains a reference to the transaction file transmitted and the amount in Swiss francs for each day. A detailed list of data is not provided.

2.2.4 Invoicing to fuel card customers

The fuel card provider issues invoices to its fuel card customers based on the collective invoice, less credits/cancellations, and the transaction details transmitted daily.

The fuel card provider ensures that the invoice to its fuel card customers contains at least the following information for each card transaction:

- I. Customs office of entry
- II. Six-digit confirmation document number
- III. Charge amount

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Together with the copy of the confirmation document, these details constitute proof of payment of the performance-related HVC by the person liable to the charge under Article 5 of the HVCA (Heavy Vehicle Charge Act).

2.3 Complaints by fuel card customers and refund requests

Complaints by fuel card customers are reviewed in accordance with the approval contract.

The fuel card provider is entitled to claim the refund of a card transaction ("relevant card transaction") from the FCA in the following cases:

- I. If the relevant card transaction was not carried out in accordance with the declaration procedure (see [Performance-related heavy vehicle charge - Vehicles licensed abroad](#)).
- II. If transactions were submitted late (see 2.6.3).

No later than 30 days after receiving the collective invoice, the fuel card provider must submit to the FCA a written "rejection log" concerning the card transactions for which a refund is to be claimed, together with the respective rationale and evidence. If the outcome of the FCA's review is positive, the amount of this "rejection log" is credited to a subsequent collective invoice. If this amount exceeds the total amount charged to the fuel card provider, the FCA has to pay the difference between the two amounts to the fuel card provider within 30 days. The FCA and the fuel card provider are not entitled to any compensation whatsoever in respect of processing work or the costs incurred with a refund request.

2.4 Transmission of blocked card details

The fuel card provider places the blacklist file named XYZ_SPYYMMDD.TXT in the /LSVA/Ausgang directory. The FCA checks every day whether a blacklist file is ready for collection. A blacklist file remains valid until an updated version takes effect.

The FCA confirms receipt of the blacklist file by placing the log file in the fuel card provider's /LSVA/Eingang directory. The list of blocked cards is effective for all ATs, without limitation, no later than twenty-four (24) hours after that time. The blacklist remains valid until an updated version takes effect.

2.4.1 Format of the blacklist file XYZ_SPYYMMDD.TXT

A row with the following details is included in the file per card or card group:

No.	Name	Format	Comment
1	TSP_Record_Type	X(001)	K = Card
2	TSP_SeqNr	9(006)	Sequential number within this transfer (always begins with 1)
3	TSP_TkartNr	X(019)	Card number In the event of card groups being blocked, only the prefix is transmitted and the remaining character places are filled with percentage signs (%). This means that all cards commencing with that prefix have been blocked.

The last record in the file (trailer record) includes the following details in the file:

No.	Name	Format	Comment
1	TSP_Record_Type	X(001)	T = Trailer
2	TSP_SeqNr	9(006)	Sequential number within this transfer (always begins with 1)
3	TSP_TkartNr	9(006)	Total number of datasets

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2.4.2 Format of the log file XYZ_SPYYMMDD.LOG

Immediately after the FCA has processed the new blacklist file, a file named XYZ_SPYYMMDD.LOG is placed in the fuel card provider's /LSVA/Eingang directory.

No.	Name	Format	Comment
1	TSL_Record_Anzahl	9(06)	Total number of datasets imported

2.4.3 Description of format codes

Format code	Description	Examples
X(005)	The field content is alpha-numerical. The field is 5 characters long.	Test1
9(04)	The field content is numerical. The field is 4 positions long. No decimal places are permitted. Output is right-aligned. Any missing characters are filled using zeros (0).	1234 0123
S9(07)v99	The field content is numerical. The field length is: - 7 positions - 2 decimal places - the first character is a plus sign (+) - a full stop as the decimal separator Output is right-aligned. Any missing characters are filled using zeros (0).	+0001234.56 +0012345.70 +0000012.35

2.5 Transmission of valid card prefixes

In addition to the blacklist of blocked cards, there is a whitelist (see appendix to the approval contract) of all card prefixes authorised by the fuel card provider. As the whitelist changes very rarely, the fuel card provider sends it in writing to the FCA by post or email as an amendment to the approval contract when necessary.

The decision as to which of the products and services available at service support points may be obtained using fuel and service cards lies with the fuel card customer/provider. The FCA accepts all cards for payment of the performance-related HVC, irrespective of the product procurement category.

2.6 Payment obligation

2.6.1 Cards that are not blocked

The fuel card provider guarantees the payment of charges for all whitelist fuel cards that did not show up as being blocked during the check at the AT upon entry. If the fuel card provider places a fuel card on the blacklist between the time of entry into and departure from Switzerland within 10 days, the card transaction is accepted by the fuel card provider.

If the period between entry into and departure from Switzerland is longer than 10 days and the fuel card provider places the fuel card on the blacklist during that time, the card transaction is accepted by the fuel card provider, subject to acceptance and payment by the fuel card customer. Otherwise, the performance-related HVC is borne by the FCA.

2.6.2 Emergency procedure

If the AT and/or the IS-LSVA malfunctions, the declaration is made using a form (form 56.20) to be completed manually. The fuel card provider's blacklist is not checked in these cases. If a blocked fuel card is demonstrably used during such a phase, the card transaction is accepted by the fuel card provider, subject to acceptance and payment by the fuel card customer. Otherwise, the performance-related HVC is borne by the FCA.

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2.6.3 Transmission of card transactions

The fuel card provider confirms receipt of the file containing details of the individual card transactions transmitted daily by the FCA. Transactions that are no older than 30 days, counting from the time of issue of the confirmation document at the AT, are accepted and settled by the fuel card provider.

If, contrary to the above provision, card transactions older than 30 days are submitted to the fuel card provider, they are accepted and settled by the fuel card provider, subject to acceptance and payment by the fuel card customer. Otherwise, the performance-related HVC is borne by the FCA.

3 Operational specifications

3.1 Financial capacity

The role of fuel card provider for the performance-related HVC requires financial capacity. For this reason, the fuel card provider must demonstrate to the FCA both during the approval procedure and during regular operation that it has sufficient liquidity to pay the performance-related HVC debts of its fuel card customers.

The fuel card provider must provide proof of liquidity as follows:

- a) During the approval procedure:
 - The fuel card provider must submit to the FCA an up-to-date business plan for the performance-related HVC business (at least 4 years, including balance sheet and income statement).
 - The fuel card provider must supply the FCA with a current balance sheet and income statement, as well as its audit report. The annual accounts must be drawn up in accordance with recognised international accounting standards.
 - The fuel card provider must retroactively inform the FCA of its monthly debtor turnover rate for at least the last 12 months in a verifiable and traceable manner. The guideline value for the debtor turnover rate is 12. (Debtor turnover rate = turnover divided by average debtor portfolio). Note: in order to obtain the correct value, you must ensure the same periodicity is used, e.g. turnover for 12 months (October 20xx-1 to September 20xx) and average debtor portfolio (portfolio as at end of September 20xx-1 plus portfolio as at end of September 20xx divided by 2).
 - The fuel card provider must disclose its ownership structure (shareholders/partners) to the FCA with official documentation.
- b) During regular operation:
 - The fuel card provider must voluntarily submit a current balance sheet, income statement and the audit report to the FCA once a year after the annual financial statements have been prepared. The annual accounts must be drawn up in accordance with recognised international accounting standards.
 - The fuel card provider must voluntarily provide the FCA with its debtor turnover rate on a monthly basis or, in the case of stable performance, on a quarterly basis in a verifiable and traceable manner. The guideline value for the debtor turnover rate is 12. (Debtor turnover rate = turnover divided by average debtor portfolio). Note: in order to obtain the correct value, you must ensure the same periodicity is used, e.g. turnover for 12 months (October 20xx-1 to September 20xx) and average debtor portfolio (portfolio as at end of September 20xx-1 plus portfolio as at end of September 20xx divided by 2).
 - If significant changes occur with regard to the confirmed ownership structure, the fuel card provider must notify the FCA immediately without being

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requested to do so. Significant changes to the confirmed ownership structure are a change in the voting or capital share of 10% or more and attaining a capital or voting majority ($\geq 50\%$).

3.2 Quality assurance system

The fuel card provider is certified in accordance with EN ISO 9001 or an equivalent standard.

Any fuel card provider holding certification other than EN ISO 9001 must be able to demonstrate the equivalence of its quality assurance certification with EN ISO 9001.

3.3 Risk management plan

The fuel card provider must have a permanent risk management plan which covers toll payment in all toll areas in which it operates.

The management plan must consider the main risks facing the provision of performance-related HVC services, such as

- interruption of business operations (interruption of the information processing chain),
- cash flow/liquidity risk,
- economic slowdown,
- increasing competition,
- loss of reputation,
- difficulties in achieving the necessary levels of service,
- liability,
- changes in regulations/legislation.

The management plan must specify in detail the avoidance and mitigation measures to be taken to counter these risks.

The fuel card provider must voluntarily provide the FCA with the current, approved risk management plan at least every two years.

3.4 Approval procedure

The following principles apply to the approval procedure:

- The fuel card provider delivers the documents in PDF/A format.
- The fuel card provider submits the approval application in one of the official Swiss languages. The documents that demonstrate compliance with the approval requirements can also be sent to the FCA in English.

3.4.1 Level 1 – Eligibility test

The aim of the eligibility test is to demonstrate that the operational requirements are met.

The fuel card provider must submit the following documents to the FCA with the application form:

- the business plan for establishing the fuel card business for the performance-related HVC (see 3.1 a),
- the current balance sheet and income statement (see 3.1 a),
- the monthly debtor turnover rate (see 3.1 a),
- the current ownership structure (see 3.1 a),
- the provider's quality assurance system certificate (see 3.2),

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- the current risk management plan (see 3.3),

The fuel card provider receives an email containing information on the documents to be submitted with the application.

3.4.2 Level 2 – Testing in the test environment/interfaces

The aim of the interface test is to verify that the interfaces have been implemented in accordance with the FCA's specifications.

Interface test process:

1. Preparatory work

- The fuel card provider must report to the FCA the IP address or DNS name of its server and the desired port for the connection. Port 22 is the default.
- The fuel card provider must enable the Confederation's IP subnetwork 193.5.216.0/24 for access to its server.

2. IS-LSVA configuration

- The FCA has to enter the information on the fuel card provider and the account in the IS-LSVA (acceptance and production).
- The FCA has to enter the connection information in the TK_PARAMETER table of the LSVA0026 module.

3. Information for the fuel card provider

- To configure the SSH connection between the servers involved, the IS-LSVA server's public key is supplied to the fuel card provider (file name *"id_dsa.pub"*).
- The fuel card provider has to create the folders *"/LSVA/Eingang"* and *"/LSVA/Ausgang"* for the productive data, and *"/LSVATest/Eingang"* and *"/LSVATest/Ausgang"* for the test data. The fuel card provider does not need a dedicated test server.

4. Test run between the FCA and the fuel card provider

- The FCA creates test transactions for the fuel card provider and transmits them as a transaction file.
- The fuel card provider creates a log file to confirm receipt of the transactions.
- The FCA reads this confirmation and checks whether the file structure is correct and whether the associated transactions are confirmed.
- The fuel card provider supplies a test blacklist file.
- The FCA reads the test blacklist file, checks the structure and verifies whether the blocked card numbers are imported correctly.
- Immediately after the test blacklist file has been processed, a confirmation file is sent to the fuel card provider.

5. Live operation

If the tests are successful, the FCA and the fuel card provider are ready for live operation.