CPML FOR ESM

VERSION 3 (V3.2~~1~~)

Created by EFET

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Content

1 Introduction to eSM

eSM stands for "electronic Settlement Matching". The eSM business process concerns the exchange and comparison (matching) of electronic documents that describe counterparty settlement data.

The EFET eSM process has been clearly defined and agreed. A workflow was established that defines how two trading parties interact to compare their settlement data. In total, the EFET eSM standards consist of the following:

- Definitions of the exact message flow, message content and message structure
- Matching criteria and rules for the information exchanged in the eSM process

The eSM Project Workgroup has structured the eSM process on a bilateral or peer-to-peer style of interaction building on the approach developed for electronic Confirmation Matching (eCM). The style of interaction involves a buyer and a seller as participants in the settlement process, regardless of whether the process runs in a peer-to-peer environment, a centralised environment or a distributed ledger environment. The eSM process description is agnostic of the technical implementation layer so that future implementations can be built on various technologies that respect the eSM standard. This way, interoperability between implementations is guaranteed.

The structure of the eSM messages, and — to some extent — the content of the messages, reuse elements that were developed by EFET for other standards, such as electronic Confirmation Matching or electronic Regulatory Reporting (eRR). The corresponding data definitions and technical specifications are defined as an extension to the EFET XML standard called Commodity Product Markup Language, or CpML® for short. Wherever possible, existing elements and data types are reused.

1.1 Standardization in the EFET Organization

EFET has decided on a prioritised approach to develop standards covering the various business processes in the commodity trading industry to facilitate the rapid deployment of the systems and infrastructure required to implement working services. The eSM Project Workgroup has been tasked with focusing on one part of the overall information exchange, building on the standardisation work for centralised and peer-to-peer communication developed first by the electronic Confirmation Matching (eCM) project workgroup. Developing standards for a specific business processes rather than attempting to cover all processes simultaneously will enable the production of measurable benefits throughout the overall standardisation process. The settlement process has grown substantially over time whilst still relying on a non-standardised process. Therefore, it was logical decision to for the standardisation bodies within EFET to focus on eSM.

The EFET standards eCM and eRR, as well as the CpML® reference documentation act as an important foundation for the eSM standards, which continue to demonstrate EFET's strategic aim of developing global standards covering the complete business requirements of traders.

2 About this Document

2.1 Revision History

Version	Date	Changes
1.0	22 March 2019	First version published

2.0	11 October 2019	Update for Phase 2:
		• Addition of netting statements:
		   o New sections added.
		   o Business rules changed for existing fields.
		   o Aggregation key fields made repeatable.
		• New process fields added:
		   o 'DocumentID', 'DocumentVersion', 'SenderID', 'ReceiverID', DocumentUsage
		• New invoice data fields and sections added:
		   o 'PurchaseOrderNumber', 'ServiceProvider', 'OtherAddressDetails'
		• New invoice line item fields and sections added:
		   o 'TransactionType', 'IndexName', 'LineItemDetails' (modified to allow entering of leg 1 and 2), 'NetAmount' (aggregated value of legs 1 and 2),
		• More commodities supported.
		• Some fields moved.
		• Information about matching fields added.
		• Introductory sections added.
		• Typos fixed and other corrections.

2.0.1	09 January 2020	Description of 'OtherAddressDetails' added.
2.0.2	07 February 2020	• Repeatable fields in aggregation keys have unique values. • Ordering of legs for float/float swaps determined.

2.0.3	12 February 2020	• Business rules changed for the following fields to clarify who supplies invoice ID or purchase order number, as well as supplier and customer trade ID:
		   o 'InvoiceData': 'InvoiceID', 'InvoiceDate' and 'PurchaseOrderNumber'
		   o 'LineItems/LineItem': 'SupplierTradeID' and 'CustomerTradeID'

2.0.4	16 April 2020	• Patterns for 'VATIDType' and 'SSDSIDType' adjusted in schema to allow for Swiss VAT IDs.
		• Pattern for IBANType adjusted in schema
		• Selfbilling:
		   o Business rules for 'InvoiceId', 'SupplierTradeId' and 'CustomerTradeId' changed.
		   o 'PurchaseOrderNumber' renamed to 'PurchaseOrSalesOrderNumber' and rules changed.

2.0.5	30 June 2020	• 'StreetNumber' is optional. • 'RegulatoryWording' is optional. • Description of 'MasterAgreementVersion' updated.

Version	Date	Changes
2.0.6	15 December 2020	• Description of 'MasterAgreementVersion' refined. • 'VATJurisdictionCurrency', 'CompanyRegistryNumber', 'CompanyRegistry-Name', 'CompanyRegistryCity', 'CompanyRegistryCountry': Fields are optional for shadow document issuers. • 'DeliveryPointOrZone': Emissions Commodities excluded. • 'SupplierInvoiceID' and 'CustomerInvoiceID' only to be filled by payor or payee, respectively. • Add new value "FixedAndFloating" to 'FixedOrFloating' field. • Allow only unsigned prices, use type "UnsignedPriceType" for the following fields: 'TotalAmount', 'VATamount', 'VATAmountDomestic', 'Price' • Change type of 'VATRate' and 'FXRate' from "QuantityType" to "Unsigned-PriceType". • Allow only unsigned quantities, use type "UnsignedQuantityType" for the following fields: 'TotalVolume' and 'SettlementVolume' • Business rules for 'IndexName' updated.
2.0.7	22 January 2021	• Added explanation to determine payor and payee for the fields 'SupplierInvoiceID' and 'CustomerInvoiceID' for netting statement line items.
2.0.8	19 May 2021	• Added explanation for usage of value "FixedAndFloating". • Extend definition of 'Agreement' field to allow for 110 characters instead of 35.
3.0.0	24 Aug 2021	• Added treatment of fees and premiums (fee invoices) for physical and financial trades: o Generalization of data structures in 'LineItems' to cover all types of transactions as well as fees. o Introduction of generic explanatory and documentation fields at line-item level. • 'PaymentDate' moved to 'AggregationKeys' and removed from 'InvoiceData' and 'NettingStatement'. • Changes to 'LineItemsMatching', now uses strict and non-strict matching. • Business rules of 'SenderID' and 'ReceiverID' corrected (supplier > customer).
3.1.0	21 October 2022	• 'NatureOfPrice': Price must be positive or zero for financial invoices because a differential has no negative unit price. • 'TransactionType' is optional. • Extended usage description of 'FixedOrFloating'. Define order of legs for fixed swaps. • 'IndexName': No index name for fees or premiums. • Update business rules for 'IndexName' based on order of legs in 'LineItemDetails'. • Remove 'VATRate' from line item details for invoices. • Change type of 'VATRate' to 'DecimalPercentageType' to enforce an unsigned decimal value. • Schema-only update: Missing value 'PHYS_FEE' added to 'ESMTransactionType'.

Version	Date	Changes
3.2.0	04 April 2023	• Undo non-backwards-compatible change from 3.1: o Re-add 'VATRate' to line item details for invoices. o All 'VATRate' fields use the type "UnsignedPriceType" again instead of "DecimalPercentageType". Add business rule for inputting VAT rates in All 'VATRate' fields. • Add field 'BranchInformation' in 'InvoiceData/Customer' and 'NettingStatement/Customer'.

2.2 Purpose and Scope

This document is an extension of the specification of the CpML standard.

The CpML standard defines the vocabulary for exchanging standardized messages for commodity trading and reporting processes and is growing according to increased coverage of post-trade services like eCM (electronic Confirmations Matching) and eRR (electronic Regulatory Reporting). The extension as covered by this document adds document structures to exchange and validate invoices and netting statements in the energy sector (electronic Settlement Matching).

The CpML specification corresponds to the underlying XML schemas, which implement this specification. The XML schemas corresponding to this extension of the CpML standard define the data structures and rules for the following document types:

• ESMDocument: Market participants generate messages with invoice information.

The CpML specification defines a generic vocabulary that can be applied to different business processes. Process-relevant information is described in the corresponding process specifications, in this case, the eSM standard.

2.3 Target Audience

This document is for business analysts and IT professionals in the commodity trading business who want to provide standardized trade information in the CpML format for post-trade data processing in the electronic Settlement Matching process.

For example, this can be:

• Software engineers and data architects who implement CPML interfaces
• Business analysts who develop process interfaces

The following knowledge is assumed:

• Familiarity with the terms and processes used in the commodity trading industry
• Know-how regarding the structure and functionality of XML schemas

2.4 Additional Information

This section lists web sites or documents with additional information related to the CpML standard.

Ref ID	Description	Source
[1]	eSM on EFET.org	https://efet.org/standardisation/it--electronic-data-exchange---standards-/esm---electronic-settlement-matching-/
[2]	Core CpML Standard	https://cpml.org/
[3]		
[4]		

2.5 Conventions

2.5.1 Use of Modal Verbs

For compliance with the CPML standard, implementers need to be able to distinguish between mandatory requirements, recommendations and permissions, as well as possibilities and capabilities. This is supported by the following rules for using modal verbs.

The key words "must", "must not", "required", "should", "should not", "recommended", "may" and "optional" in this document are to be interpreted as follows:

Key word	Description
Must	Indicates an absolute requirement. Requirements must be followed strictly in order to conform to the standard. Deviations are not allowed. Alternative expression: required, is mandatory
Must not	Indicates an absolute prohibition. This phrase means that the provision must not be used in any implementation of the CPML standard. Alternative expression: must be omitted
Should	Indicates a recommendation. Among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others. There may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course. Alternative expression: recommended
May	Indicates a permission. This word means that an item is truly optional within the limits of CPML. One data supplier may choose to include the item because a particular transaction requires it or because the data supplier feels that it enhances the document while another data supplier may omit the same item. Alternative expression: optional
Should not	This phrase means that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood, and the case carefully weighed before implementing any behavior described with this label. Alternative expression: "not recommended"

2.5.2 Typographical Conventions

This documentation uses the following typographical conventions:

- 'AgentID': Single quotation marks are used to indicate field names.
- "trader": Double quotation marks are used to indicate field values.
- Reporting/Europe: Slashes are used to indicate paths or nested nodes within the schema, for example, ….
- TotalVolumeUnit: Field names and values as well as attributes are consistently written with camel case spelling, as in the schema. There are no spaces between words and each new word starts with an uppercase letter.

2.5.3 Notation of Schema

The CpML schema reference is a flat representation of the tree structure in the corresponding XSD schema.

For each main node in the schema, there is a separate section with a table that contains the sections and fields in that node. The fields are listed in the same order as in the schema.

Subsections are indicated with a gray background. The start and end of each section is clearly indicated. Subsections are nested within each other.

For each field, you find information about the usage type and the business rules. These rules determine the dependencies on other fields or values, where applicable.

Fields and value types are reused in different locations of the schema. Fields and types that are already present in standard CpML are described in the CpML standard. New fields and types that were introduced for eSM are described in this document in separate sections, see "Description of New CpML Field Names" and "Description of New CpML Field Types".

2.5.4 Information on Field Usage

Information on mandatory or optional use of a field is specified in column "Usage":

- **O = Optional**. These fields are logically optional and not required by business rules. The information may be present in the ESMDocument.
- **O = Optional with condition**. These fields are logically optional but must be omitted if specified conditions are met.
- **C = Conditional**. These fields are logically conditional, meaning the field must be provided if and only if the specified conditions are met.
- **M = Mandatory**. Mandatory fields are logically required and must always be present, unless the parent field may be omitted.
- **M+C = Mandatory with condition**. Fields with this condition are logically required. According to the business rules, specific values must be set if the specified conditions are met.
- **M+CH = Mandatory, but part of a choice**. One of the fields in an XSD choice section must be provided. Thus, all fields within the choice are marked as mandatory in the schema.

2.5.5 Information on Field Occurrence

If nothing else is stated for a field, the following rules apply with regard to the minimum or maximum occurrence of the field:

- Conditional or optional fields: (0-1)
  These fields can be absent or occur exactly once within the given context.
- Mandatory fields: (1-1)
  These fields must occur exactly once within the given context.

In all other cases, the allowed number of repetitions is clearly indicated. Examples: (0-n) or (1-4).

2.6 ESMDocument IDs

To provide a common syntax for ESMDocuments that is comprehensible and maintains uniqueness, the ID in the 'DocumentID' field must be unique. It is recommended to use the following syntax:

1. Document type abbreviation, for example, "ESM"

2. Date code (8 characters, in yyyymmdd format)

3. Locally and daily unique transaction identifier of the sender

4. @

5. Sender identification, i.e. domain name or party code of the sender

Example: ESM_20190610_1234567890@rwe.com

Important: The document ID must not exceed a total length of 50 characters.

Important: Once created, the document ID must not be changed any more. To retransmit information about the same transaction, the document version must be changed instead.

3 CpML for eSM Schema Reference

The ESMDocument extends the basic trade description structure of CpML to include support for settlement of energy transactions according to the EFET eSM Standard Phase 1. The introductory sections 'Processing' and 'AggregationKeys' are used to control the eSM process. These sections are followed by an 'InvoiceData' section, which may be followed by a 'LineItems' section, or by a 'NettingStatement section, which may be followed by a 'NettingStatementLineItems' section.

Note: For more information about the notation of the schema, see "Notation of Schema".

3.1 ESMDocument Root

At root level, an ESMDocument has the following sections:

- 'ProcessInformation'
- 'AggregationKeys'
- Choice of:
  - o 'InvoiceData' and, optionally, 'LineItems'
  - o 'NettingStatement' and 'NettingStatementLineItems'

3.2 ProcessInformation

Name	Usage	Type	Business Rule
ESMDocument/ProcessInformation: mandatory section			
LineItemsIncluded	M	TrueFalseType	Indicates whether the invoice contains line items.
LineItemsMatching	C	LineItemsMatching-Type	Indicates whether line items are used for matching the invoice. In case of strict matching, all line items have to match before the information at invoice level is evaluated. In this case, a match at invoice (header) level explicitly means that all line items match individually as well. In case of non-strict matching, any discrepancies at line-item level are ignored as long as there is a match result at invoice level, that is, the invoice headers match. **Occurrence:** • If 'LineItemsIncluded' is set to "True", then this field is mandatory. • If 'LineItemsIncluded' is set to "False", then this field must be omitted. **Values:** • If the ESMDocuments are to be matched at line-item level, then this field is set to "Strict". • If the ESMDocuments are to be matched at invoice level only, then this field is set to "NonStrict".

Name	Usage	Type	Business Rule
SenderRole	M	SenderRoleType	Indicates which party is sending the document: the official document issuer or the shadow document issuer. In case of selfbilling, the official document issuer is the customer, in other cases it is the supplier. **Values:** • If the 'InvoiceData' section is present, then the value "OfficialDocumentIssuer" or "Shadow-DocumentIssuer" must be used. • If the 'NettingStatement' section is present, then the value "DocumentIssuer" or "ReverseDocumentIssuer" must be used.
DocumentID	M	IdentificationType	The sender assigns a unique identification to each ESMDocument, see "ESMDocument IDs".
DocumentVersion	M	VersionType	Version of the ESMDocument. The version number is always associated with the 'DocumentID'. It is used to distinguish and order the initial ESMDocument and all its amendments over time. **Important:** ESMDocuments may only be amended for processing reasons, for examples, in case of transmission failures. If the details of an invoice or netting statement change, a new ESMDocument with a different document ID must be sent. The default value is 1.
SenderID	M	SSDSIDType	The counterparty that is sending the ESMDocument. **Values:** • If the ESMDocument is sent by the supplier, then this must be the party code that is used in 'SupplierSSDSID'. • If the ESMDocument is sent by the customer, then this must be the party code that is used in 'CustomerSSDSID'.
ReceiverID	M	SSDSIDType	The other counterparty of the invoice or netting statement. **Values:** • If the ESMDocument is sent by the supplier, then this must be the party code that is used in 'CustomerSSDSID'. • If the ESMDocument is sent by the customer, then this must be the party code that is used in 'SupplierSSDSID'.
DocumentUsage	M	UsageType	Indicates whether the ESMDocument is a test message or a live message.
End of **ProcessInformation**			

3.3 AggregationKeys

The AggregationKeys section contains crucial information about an invoice or netting statement. The data from this section allows to identify the type of the invoice or netting statement.

Name	Usage	Type	Business Rule
ESMDocument/AggregationKeys: mandatory section			
Repetition of aggregation keys for netting statements:			
For invoices, each aggregation key may only have one value. For netting statements, multiple values may be required for some of the fields. For each aggregation key field, it is clearly indicated whether the field may be present multiple times in a netting statement.			
Repeated fields may not contain duplicated values, that is, no value may appear twice in one enumeration. For example, there may be a 'Commodity' field set to 'Power' and another 'Commodity' field set to "Gas", but there may not be two 'Commodity' fields set to "Power".			
SupplierSSDSID	M	SSDSIDType	Unique identifier of supplier from System Static Data Standard. Matching field.
CustomerSSDSID	M	SSDSIDType	Unique identifier of customer from System Static Data Standard. Matching field.
Commodity	M	EnergyProductType	Repeatable field with unique values (netting statements only): (1-n) Subject of the trading relationship, for example, referring to power (electricity), gas (natural gas), freight, time charter or renewables (CO2 certificates). Matching field.
DeliveryPointOrZone	C	AreaType	Repeatable field with unique values (netting statements only): (0-n) Location where the commodity is physically delivered. Delivery locations are mostly defined by Energy Identification Codes (EIC), indicating the physical location on national or regional gas or electricity grids. Matching field. **Occurrence:** • If 'AggregationKeys/PhysicalOrFinancial' is set to "Physical" and the underlying transaction is not an Emissions Commodity, then this field is mandatory. Current values for Emissions Commodites are: "EUAPhase_3", "EUAPhase_4", "CER", "ERU" or "AAU". • Else, this field must be omitted.

Name	Usage	Type	Business Rule
MarketInformation	C	MarketInformation-Type	Repeatable field with unique values (netting statements only): (0-n) Country or pair of countries (border) where the financial transaction is executed. Gas only: The first country of the pair indicates the side of the border where the last measuring point before the border is located. Matching field. **Occurrence:** Section 'InvoiceData' is present: • If 'AggregationKeys/PhysicalOrFinancial' is set to "Financial" or "FinancialFeeOrPremium", then this field is mandatory. • Else, this field must be omitted. Section 'NettingStatement' is present: • For each 'AggregationKeys/PhysicalOrFinancial' that is set to "Financial" or "FinancialFeeOrPremium", one 'MarketInformation' field must be present.
TotalVolumeUnit	M	ESMUnitOfMeasure-Type	Repeatable field with unique values (netting statements only): (1-n) Unit of measure in which the total volume is expressed. Matching field.
Currency	M	ESMCurrencyCode-Type	Repeatable field with unique values (netting statements only): (1-n) Currency applied to the settlement of the transactions of the invoice or netting statement. Often related to the commodity and the delivery location. Matching field.
InvoicePeriodStart	M	DateType	Start of the period during which deliveries are to be settled. For monthly invoices, this is the first day of the month by default. Matching field.
InvoicePeriodEnd	M	DateType	End of the period during which deliveries are to be settled. For monthly invoices, this is the last day of the month by default. Matching field.

Name	Usage	Type	Business Rule
FixedOrFloating	M	FixedOrFloatingType	Repeatable field with unique values (netting statements only): (1-n) Indicates the price relation of the transactions that make up the invoice or netting statement. Invoices for fixed swaps are set to "Fixed", whereas invoices for float swaps are set to "Floating". **Important:** The value "FixedAndFloating" is only used if one of the counterparties is not able to differentiate between "Fixed" or "Floating". In all other cases, the values "Fixed" or "Floating" should be used, respecting the lowest level of granularity. Matching field.
PhysicalOrFinancial	M	PhysicalOrFinancial-Type	Repeatable field with unique values (netting statements only): (1-n) Indication of the nature of transactions that make up the invoice or netting statement. Matching field.
NatureOfPrice	M+C	NatureOfPriceType	Repeatable field with unique values (netting statements only): (1-n) Indicates whether the transaction has a positive or zero price or has a negative price. Negative prices often require a specific treatment, both on the accounting and on the financial settlement side. Matching field. **Values:** • If 'PhysicalOrFinancial' is set to "Financial", then "PositiveOrZero" must be used.
AggregationKeys/AgreementDetails: mandatory, repeatable section (1-n) Per master agreement, one 'AgreementDetails' section must be provided.			
Agreement	M	ESMAgreementType	Indicates the legal framework that determines general terms and conditions applicable to the traded instruments. The master agreement specifically determines the settlement rules and conditions that apply to the transactions that make up the invoice. Matching field.
MasterAgreement-Version	M	MasterAgreement-VersionType	Year of publication of the master agreement version. Matching field.
End of **AgreementDetails**			
PaymentDate	M	DateType	Date when the invoice or netting statement is due. Matching field.
End of **AggregationKeys**			

3.4 InvoiceData

Name	Usage	Type	Business Rule
ESMDocument/InvoiceData: mandatory section **Occurrence:** • If the ESMDocument describes an invoice for a physical delivery, a financial delivery or a fee or premium, then the 'InvoiceData' section is mandatory. • If the ESMDocument describes a netting statement, then this section must be omitted and the 'NettingStatement' section must be used instead.			
InvoiceID	C	IdentificationType	Unique identifier of the invoice document, often issued and/or adopted by the sender's ERP system. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer", then this field is mandatory. • Else, this field must be omitted.
InvoiceDate	C	DateType	Date of issue of the invoice. **Occurrence:** • If 'InvoiceID' is present, then this field is mandatory. • Else, this field must be omitted.
PurchaseOrSales-OrderNumber	C	IdentificationType	Unique identifier of the purchase or sales order related to this invoice in the sender's ERP system. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "ShadowDocumentIssuer", then this field is mandatory. • Else, this field must be omitted. **Values:** • If 'InvoiceData/Selfbilling' is set to "False", then this field represents the purchase order number. • If 'InvoiceData/Selfbilling' is set to "True", then this field represents the sales order number.
InvoiceData/Supplier: mandatory section			
VATID	M	VATIDType	VAT number as identifier used by the supplier's national tax authority.
VATRepresentative	O	AlphanumericType	Person/organisation acting as the supplier's tax representative.
VATJurisdiction-Currency	C	ESMCurrencyCode-Type	Currency applicable within the jurisdiction of the supplier. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer", then this field is mandatory. • Else, this field is optional.
TaxPoint	O	DateType	The tax point refers to the last day of delivery of the commodity, in this case the last day of the month. This field is only required where the date of supply for VAT purposes is different to the invoice date.

Name	Usage	Type	Business Rule
LegalName	M	AlphanumericType	Legal name identifying the supplier in a national or regional company register.
IdentifierCode	M+C	ESMIdentifierCode-Type	Supplier identifier code as currently applied in different official registries. **Values:** • If 'TypeOfIdentifierCode' is set to "EIC", then this field must contain a valid EIC. • If 'TypeOfIdentifierCode' is set to "LEI", then this field must contain a valid LEI. • If 'TypeOfIdentifierCode' is set to "ACERCode", then this field must contain a valid ACER code.
TypeOfIdentifierCode	M	TypeOfESMIdentifier-CodeType	Type of code detailing the nature of the supplier identifier code.
CompanyRegistry-Number	C	AlphanumericType	Number of the register where the supplier is registered. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer", then this field is mandatory. • Else, this field is optional.
CompanyRegistry-Name	C	AlphanumericType	Name of the register where the supplier is registered. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer", then this field is mandatory. • Else, this field is optional.
CompanyRegistryCity	C	AlphanumericType	City of the register where the supplier is registered. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer", then this field is optional. • Else, this field is optional.
CompanyRegistry-Country	C	CountryCodeType	Country of the register where the supplier is registered. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer", then this field is mandatory. • Else, this field is optional.
BranchInformation	O	AlphanumericType	Information about the specific supplier branch acting as the party in this invoice.
ServiceProvider	M	AlphanumericType	Name of the eSM service provider that is used by the supplier. Valid values are provided as eSM static data.
Supplier/LegalAddressDetails: mandatory section			
Street	M	AlphanumericType	Street name of the supplier's legal address.
StreetNumber	O	AlphanumericType	Street number of the supplier's legal address.
City	M	AlphanumericType	City of the supplier's legal address.

Name	Usage	Type	Business Rule
PostalCode	M	PostalCodeType	Postal code of the supplier's legal address.
Country	M	CountryCodeType	Country of the supplier's legal address, expressed as ISO code.
End of **LegalAddressDetails**			
Supplier/OtherAddressDetails: optional section The other address can be used for invoicing and settlements service centers that are physically hosted at another address.			
Street	M	AlphanumericType	Street name of the supplier's other address.
StreetNumber	O	AlphanumericType	Street number of the supplier's other address.
City	M	AlphanumericType	City of the supplier's other address.
PostalCode	M	PostalCodeType	Postal code of the supplier's other address.
Country	M	CountryCodeType	Country of the supplier's other address, expressed as ISO code.
End of **OtherAddressDetails**			
Supplier/ContactDetails: mandatory section			
FirstName	O	AlphanumericType	First name of supplier contact.
FamilyName	O	AlphanumericType	Family name of supplier contact.
PhoneNumber	O	PhoneNumberType	Phone number of supplier contact.
Email	M	EmailType	E-mail address of supplier contact.
End of **ContactDetails**			
Supplier/BankingDetails: mandatory section			
IBAN	M	IBANType	IBAN code of supplier banking details.
BIC	M	BICType	BIC of supplier banking details.
AccountHolder	O	AlphanumericType	Account holder of supplier banking details.
End of **BankingDetails**			
End of **Supplier**			
InvoiceData/Customer: mandatory section			
VATID	O	VATIDType	VAT number as identifier used by the customer's national tax authority.
LegalName	M	AlphanumericType	Legal name identifying the customer in a national or regional company register.

Name	Usage	Type	Business Rule
IdentifierCode	M+C	ESMIdentifierCode-Type	Customer identifier code as currently applied in different official registries. **Values:** • If 'TypeOfIdentifierCode' is set to "EIC", then this field must contain a valid EIC. • If 'TypeOfIdentifierCode' is set to "LEI", then this field must contain a valid LEI. • If 'TypeOfIdentifierCode' is set to "ACERCode", then this field must contain a valid ACER code.
TypeOfIdentifierCode	M	TypeOfESMIdentifier-CodeType	Type of code detailing the nature of the supplier identifier code.
BranchInformation	O	AlphanumericType	Information about the specific customer branch acting as the party in this invoice.
ServiceProvider	M	AlphanumericType	Name of the eSM service provider that is used by the supplier. Valid values are provided as eSM static data.
Customer/LegalAddressDetails: mandatory section			
Street	M	AlphanumericType	Street name of the customer's legal address.
StreetNumber	O	AlphanumericType	Street number of the customer's legal address.
City	M	AlphanumericType	City of the customer's legal address.
PostalCode	M	PostalCodeType	Postal code of the customer's legal address.
Country	M	CountryCodeType	Country of the customer's legal address, expressed as ISO code.
End of **LegalAddressDetails**			
Customer/OtherAddressDetails: optional section The other address can be used for invoicing and settlements service centers that are physically hosted at another address.			
Street	M	AlphanumericType	Street name of the customer's other address.
StreetNumber	O	AlphanumericType	Street number of the customer's other address.
City	M	AlphanumericType	City of the customer's other address.
PostalCode	M	PostalCodeType	Postal code of the customer's other address.
Country	M	CountryCodeType	Country of the customer's other address, expressed as ISO code.
End of **OtherAddressDetails**			
Customer/ContactDetails: mandatory section			
FirstName	O	AlphanumericType	First name of customer contact.
FamilyName	O	AlphanumericType	Family name of customer contact.
PhoneNumber	O	PhoneNumberType	Phone number of customer contact.
Email	M	EmailType	E-mail address of customer contact.

Name	Usage	Type	Business Rule
End of **ContactDetails**			
End of **Customer**			
InvoiceData/NetAmount: mandatory section			
TotalAmount	M	UnsignedPriceType	Total settlement amount that is due according to the transactions in the scope of the invoice document. Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed. Matching field.
End of **NetAmount**			
TotalVolume	M	UnsignedQuantityType	Total settlement volume which is due according to the transactions in the scope of the invoice document. Matching field.
InvoiceData/VATDetails: mandatory section			
VATRate	M	~~DecimalPercentageType~~UnsignedPrice-Type	VAT rate applicable to the invoice document. Numerical representation of percentage as a decimal value~~, for example, "0.19" for a VAT rate of 19%~~. Each invoice represents transactions that apply the same VAT rate. ~~Therefore, no separate VAT rate is indicated at line item level.~~ Matching field. **Values:** • VAT rates are reported using a leading 0 before the decimal point and with a maximum of three digits after the decimal point. Examples: "0.19" for 19% or "0.175" for 17.5%.
VATAmount	M	UnsignedPriceType	VAT amount, total net amount multiplied by VAT rate. Matching field.
VATAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the VAT amount is expressed. Matching field.
VATAmountDomestic	C	UnsignedPriceType	VAT amount expressed in the currency of the domestic country. **Occurrence:** • If 'VATAmountDomesticCurrency' differs from 'VATAmountCurrency', then this field is mandatory. • If 'VATAmountDomesticCurrency' is identical to 'VATAmountCurrency', then this field must be omitted.
VATAmountDomestic-Currency	M	ESMCurrencyCode-Type	Currency in which the VAT amount is expressed in the corresponding country.
TaxStatement	M	AlphanumericType	General text description of the applicable tax regime.
FXRate	O	UnsignedPriceType	FX rate applied to convert the VAT amount into the domestic VAT amount.

Name	Usage	Type	Business Rule
FXCurrencyPair	O	FXCurrencyPairType	Pair of VAT amount currency and domestic VAT amount currency. **Occurrence:** • If 'VATAmountDomesticCurrency' differs from 'VATAmountCurrency', then this field is mandatory. • If 'VATAmountDomesticCurrency' is identical to 'VATAmountCurrency', then this field must be omitted. **Values:** • The currencies in this field must correspond to the currencies in 'VATAmountCurrency' and 'VATAmountDomesticCurrency'. **Note:** In the future, this data may be derived automatically by the process.
FXReference	O	FXReferenceType	Link to officially published fixing value for the FX rate.
ExciseTaxInformation	O	AlphanumericType	Indirect tax applied by the local government of the supplier to the specific commodity embedded in the invoice.
End of **VATDetails**			
InvoiceData/GrossAmount: mandatory section			
TotalAmount	M	UnsignedPriceType	Sum of the total net amount and the VAT amount. Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed. Matching field.
End of **GrossAmount**			
SelfBilling	M	TrueFalseType	Indicates whether this document is part of a selfbilling process. In case of selfbilling, both the invoice and the shadow document must be produced by the trader who undertakes the selfbilling. The trader produces the invoice or shadow document from their perspective as normal with 'SelfBilling' set to "False". In addition, the trader produces their counterparty's invoice or shadow document as if it were raised by the counterparty with 'SelfBilling' set to "True". The matching engines will operate matching as usual.
RegulatoryWording	O	AlphanumericType	Information on the regulatory context of the invoice.
End of **InvoiceData**			

3.5 LineItems

Name	Usage	Type	Business Rule
ESMDocument/LineItems: optional section **Occurrence:** • If the 'InvoiceData' section is present and 'LineItemsMatching' is set to "Strict", then the 'LineItems' section is mandatory. • If the 'InvoiceData' section is present and 'LineItemsMatching' is set to "NonStrict", then the 'LineItems' section is optional. • If the 'NettingStatement' section is present, then the 'LineItems' section must be omitted.			
LineItems/LineItem: mandatory, repeatable section (1-n) A line item can describe a physical transaction, a financial transaction or the fees or premiums associated with a physical or financial transaction. **Repetition:** • For each line item, one 'LineItem' section is provided. • Each ESMDocument may only contain 'LineItem' sections of the same type that describe the underlying transactions, for example, only line items for physical transactions or only line items for fees or premiums.			
SupplierTradeID	C	TradeIDType	Unique reference number of the transaction according to the supplier's ETRM system. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer" and 'InvoiceData/-Selfbilling' is set to "False", then this field is mandatory. • If 'ProcessInformation/SenderRole' is set to "ShadowDocumentIssuer" and 'InvoiceData/-Selfbilling' is set to "True", then this field is mandatory. • Else, this field must be omitted.
CustomerTradeID	C	TradeIDType	Unique reference number of the transaction according to the customer's ETRM system. **Occurrence:** • If 'ProcessInformation/SenderRole' is set to "ShadowDocumentIssuer" and 'InvoiceData/-Selfbilling' is set to "False", then this field is mandatory. • If 'ProcessInformation/SenderRole' is set to "OfficialDocumentIssuer" and 'InvoiceData/-Selfbilling' is set to "True", then this field is mandatory. • Else, this field must be omitted.
UTI	O	UTIType	Unique Trade Identifier (UTI) acting as unique reference for the transaction, shared between supplier and customer.
SettlementVolume	M	UnsignedQuantityType	Total settlement volume of the transaction which is due according the scope of the line item. Matching field.
SettlementVolume-Unit	M	ESMUnitOfMeasure-Type	Unit of measure in which the volume of the line item is expressed. Matching field.

Name	Usage	Type	Business Rule
Description	O	AlphanumericType	Descriptive text on additional specifications of the transaction described by this line item, for example, to reflect the name of the strategy it belongs to or the type of a fee or premium.
TransactionType	O+C	ESMTransactionType	**Values:** • If the transaction is a fixed swap, then set this field to "FXD_SWP". • If the transaction is a float swap, then set this field to "FLT_SWP". • If the transaction is a fee or premium for a physical transaction, then set this field to "DAH_FEE", "IND_FEE", "FOR_FEE", "PHYS_FEE", "GASCAPPRI_FEE" or "GASCAPSEC_FEE".
LineItem/LineItemDetails: mandatory, repeatable section (1-2)			
Occurrence and Values: • If 'AggregationKeys/PhysicalOrFinancial' is set to "Physical", "PhysicalFeeOrPremium" or "FinancialFeeOrPremium", then one 'LineItemDetails' section must be provided, which contains the details about the line item. • If 'AggregationKeys/PhysicalOrFinancial' is set to "Financial", then two 'LineItemDetails' sections must be provided as follows: ○ For fixed swaps, the first 'LineItemDetails' section contains the details of the fixed leg of the transaction, and the second 'LineItemDetails' section contains the details of the floating leg of the transaction. ○ For float/float swaps the ordering of the legs is determined as follows: The first leg must correspond to the SSDSID that comes first when the supplier and the customer SSDSIDs are ordered.			
Price	M	UnsignedPriceType	Price of the physical transaction or the price of a fee or premium or the price of leg 1 or leg 2 of the transaction expressed per unit of measure. Matching field.
PriceCurrency	M	ESMCurrencyCode-Type	Currency in which the price of the line item or the price of leg 1 or leg 2 of the transaction is expressed. Matching field.
IndexName	C	IndexNameType	Index name that is used if ISIN or standardized name exists, including its term. For examples, please refer to https://efet.org/standardisation/static-data/. **Occurrence and Values:** 'AggregationKeys/PhysicalOrFinancial' is set to "Physical": • If 'FixedOrFloating' is set to "Fixed", then this field must be omitted. • If 'FixedOrFloating' is set to "Floating", then this field is mandatory. • If 'FixedOrFloating' is set to "FixedAndFloating", then this field is optional. 'AggregationKeys/PhysicalOrFinancial' is set to "Financial": • If 'FixedOrFloating' is set to "Fixed", then the following applies: ○ If this is the first 'LineItemDetails' section, then this field must be omitted. ○ If this is the second 'LineItemDetails' section, then this field is mandatory. • If 'FixedOrFloating' is set to "Floating", then this field is mandatory.

Name	Usage	Type	Business Rule
			• If 'FixedOrFloating' is set to "FixedAndFloating", then this field is optional. 'AggregationKeys/PhysicalOrFinancial' is set to "PhysicalFeeOrPremium" or "FinancialFeeOr-Premium": • This field must be omitted.
LineItemDetails/NetAmount: mandatory section			
TotalAmount	M	UnsignedPriceType	For a physical transaction, the total settlement amount that is due according to the transactions comprised in the scope of the line item. For a financial transaction, the total settlement amount that is due according to the transactions that leg 1 or leg 2 comprises. For a fee or premium, the total settlement amount that is due. Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed. Matching field.
End of **NetAmount**			
DeliveryStartDate	M	DateType	Start of the period during which deliveries are to be settled within the scope of this line item. The delivery start date must be on or after the 'DeliveryStartDate' in the 'InvoiceData' section. Matching field.
DeliveryEndDate	M	DateType	End of the period during which deliveries are to be settled within the scope of this line item. The delivery end date must be before or on the 'DeliveryEndDate' in the 'InvoiceData' section. Matching field. **Note:** For the Gas Day, the delivery end date is the day on which the last Gas Day within the delivery period starts, not the day on which the delivery actually ends. Example: For a monthly delivery in January, the delivery end date is January 31.
End of **LineItemDetails**			
LineItem/NetAmount: conditional section **Occurrence:** • If two 'LineItemDetails' sections are present, then this section is mandatory. • Else, this section must be omitted.			
TotalAmount	M	UnsignedPriceType	Total settlement amount that is due according to the transactions comprised in leg 1 and leg 2 of this line item. Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed. Matching field.

Name	Usage	Type	Business Rule
End of **NetAmount**			
VATRate	O	UnsignedPriceType	VAT rate applicable to the transaction. Numerical representation of percentage as a decimal value. **Values:** • VAT rates are reported using a leading 0 before the decimal point and with a maximum of three digits after the decimal point. Examples: "0.19" for 19% or "0.175" for 17.5%.
VATAmount	O	UnsignedPriceType	VAT amount, total net amount multiplied by VAT rate.
TradeDate	M	DateType	Date the transaction took place. Matching field.
DateOfFirstDelivery	M	DateType	First delivery date of the transaction. Matching field.
DateOfLastDelivery	M	DateType	Last delivery date of the transaction. Matching field.
End of **LineItem**			
End of **LineItems**			

3.6 NettingStatement

Name	Usage	Type	Business Rule
ESMDocument/NettingStatement: conditional section **Occurrence:** • If the ESMDocument describes a netting statement, then the 'NettingStatement' section is mandatory. • If the ESMDocument describes an invoice, then this section must be omitted and the 'InvoiceData' section is used instead.			
NettingStatement-Date	M	DateType	Issue date of the netting statement.
NettingStatementID	M	IdentificationType	Unique identifier of the netting statement, often issued and/or adopted by the sender's ERP system.
NettingStatement/Supplier: mandatory section			
VATID	M	VATIDType	VAT number as identifier used by the supplier's national tax authority.
VATRepresentative	O	AlphanumericType	Person/organisation acting as the supplier's tax representative.
LegalName	M	AlphanumericType	Legal name identifying the supplier in a national or regional company register.

Name	Usage	Type	Business Rule
IdentifierCode	M+C	ESMIdentifierCode-Type	Supplier identifier code as currently applied in different official registries. **Values:** • If 'TypeOfIdentifierCode' is set to "EIC", then this field must contain a valid EIC. • If 'TypeOfIdentifierCode' is set to "LEI", then this field must contain a valid LEI. • If 'TypeOfIdentifierCode' is set to "ACERCode", then this field must contain a valid ACER code.
TypeOfIdentifierCode	M	TypeOfESMIdentifier-CodeType	Type of code detailing the nature of the supplier identifier code.
CompanyRegistry-Number	M	AlphanumericType	Number of the register where the supplier is registered.
CompanyRegistry-Name	M	AlphanumericType	Name of the register where the supplier is registered.
CompanyRegistryCity	M	AlphanumericType	City of the register where the supplier is registered.
CompanyRegistry-Country	M	CountryCodeType	Country of the register where the supplier is registered.
BranchInformation	O	AlphanumericType	Information about the specific supplier branch acting as the party in this invoice.
ServiceProvider	M	AlphanumericType	Name of the eSM service provider that is used by the supplier. Valid values are provided as eSM static data.
Supplier/LegalAddressDetails: mandatory section			
Street	M	AlphanumericType	Street name of the supplier's legal address.
StreetNumber	O	AlphanumericType	Street number of the supplier's legal address.
City	M	AlphanumericType	City of the supplier's legal address.
PostalCode	M	PostalCodeType	Postal code of the supplier's legal address.
Country	M	CountryCodeType	Country of the supplier's legal address, expressed as ISO code.
End of **LegalAddressDetails**			
Supplier/OtherAddressDetails: optional section The other address can be used for invoicing and settlements service centers that are physically hosted at another address.			
Street	M	AlphanumericType	Street name of the supplier's other address.
StreetNumber	O	AlphanumericType	Street number of the supplier's other address.
City	M	AlphanumericType	City of the supplier's other address.
PostalCode	M	PostalCodeType	Postal code of the supplier's other address.
Country	M	CountryCodeType	Country of the supplier's other address, expressed as ISO code.
End of **OtherAddressDetails**			

Name	Usage	Type	Business Rule
Supplier/ContactDetails: mandatory section			
FirstName	O	AlphanumericType	First name of supplier contact.
FamilyName	O	AlphanumericType	Family name of supplier contact.
PhoneNumber	O	PhoneNumberType	Phone number of supplier contact.
Email	M	EmailType	E-mail address of supplier contact.
End of **ContactDetails**			
Supplier/BankingDetails: mandatory section			
IBAN	M	IBANType	IBAN code of supplier banking details.
BIC	M	BICType	BIC of supplier banking details.
AccountHolder	O	AlphanumericType	Account holder of supplier banking details.
End of **BankingDetails**			
End of **Supplier**			
NettingStatement/Customer: mandatory section			
VATID	O	VATIDType	VAT number as identifier used by the customer's national tax authority.
LegalName	M	AlphanumericType	Legal name identifying the customer in a national or regional company register.
IdentifierCode	M+C	ESMIdentifierCode-Type	Customer identifier code as currently applied in different official registries. **Values:** • If 'TypeOfIdentifierCode' is set to "EIC", then this field must contain a valid EIC. • If 'TypeOfIdentifierCode' is set to "LEI", then this field must contain a valid LEI. • If 'TypeOfIdentifierCode' is set to "ACERCode", then this field must contain a valid ACER code.
TypeOfIdentifierCode	M	TypeOfESMIdentifier-CodeType	Type of code detailing the nature of the supplier identifier code.
BranchInformation	O	AlphanumericType	Information about the specific customer branch acting as the party in this netting statement.
ServiceProvider	M	AlphanumericType	Name of the eSM service provider that is used by the supplier. Valid values are provided as eSM static data.
Customer/LegalAddressDetails: mandatory section			
Street	M	AlphanumericType	Street name of the customer's legal address.
StreetNumber	O	AlphanumericType	Street number of the customer's legal address.
City	M	AlphanumericType	City of the customer's legal address.
PostalCode	M	PostalCodeType	Postal code of the customer's legal address.

Name	Usage	Type	Business Rule
Country	M	CountryCodeType	Country of the customer's legal address, expressed as ISO code.
End of **LegalAddressDetails**			
Customer/OtherAddressDetails: optional section The other address can be used for invoicing and settlements service centers that are physically hosted at another address.			
Street	M	AlphanumericType	Street name of the customer's other address.
StreetNumber	O	AlphanumericType	Street number of the customer's other address.
City	M	AlphanumericType	City of the customer's other address.
PostalCode	M	PostalCodeType	Postal code of the customer's other address.
Country	M	CountryCodeType	Country of the customer's other address, expressed as ISO code.
End of **OtherAddressDetails**			
Customer/ContactDetails: mandatory section			
FirstName	O	AlphanumericType	First name of customer contact.
FamilyName	O	AlphanumericType	Family name of customer contact.
PhoneNumber	O	PhoneNumberType	Phone number of customer contact.
Email	M	EmailType	E-mail address of customer contact.
End of **ContactDetails**			
End of **Customer**			
NettingStatement/NetAmount: mandatory section			
TotalAmount	M	UnsignedPriceType	Total settlement amount that is due according to the transactions in the scope of the invoice document. Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed. Matching field.
End of **NetAmount**			
NettingStatement/VATDetails: mandatory section			
VATAmount	M	UnsignedPriceType	VAT amount, total net amount multiplied by VAT rate. Matching field.
VATAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the VAT amount is expressed. Matching field.
End of **VATDetails**			
NettingStatement/GrossAmount: mandatory section			

Name	Usage	Type	Business Rule
TotalAmount	M	UnsignedPriceType	Sum of the total net amount and the VAT amount. Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed. Matching field.
End of **GrossAmount**			
RegulatoryWording	O	AlphanumericType	Information on the regulatory context of the netting statement.
End of **NettingStatement**			

3.7 NettingStatementLineItems

Name	Usage	Type	Business Rule
ESMDocument/NettingStatementLineItems: mandatory section			
LineItems/LineItem: mandatory, repeating section **Repetition:** • For each line item that is to be matched, one 'LineItem' section is provided.			
SupplierInvoiceID	C	IdentificationType	Unique reference number of the invoice according to the supplier's ETRM/ERP system. **Occurrence:** • If the sender is the payor, then this field is mandatory. • If the sender is the payee, then this field must be omitted. **Important:** Regardless of the sender role on netting statement level, the sender shall determine for each netting statement line item separately whether they are the payor or payee, based on the processing of the fields 'SenderRole' and 'Selfbilling' that would apply if the corresponding invoice were submitted individually to the eSM process.
CustomerInvoiceID	C	IdentificationType	Unique reference number of the invoice according to the customer's ETRM/ERP system. **Occurrence:** • If the sender is the payee, then this field is mandatory. • If the sender is the payor, then this field must be omitted. **Important:** Regardless of the sender role on netting statement level, the sender shall determine for each netting statement line item separately whether they are the payor or payee, based on the processing of the fields 'SenderRole' and 'Selfbilling' that would apply if the corresponding invoice were submitted individually to the eSM process.
InvoiceDate	M	DateType	Date of issue of the invoice.

Name	Usage	Type	Business Rule
LineItem/NetAmount: mandatory section			
TotalAmount	M	UnsignedPriceType	For a physical transaction, the total settlement amount that is due according to the transactions comprised in the scope of the invoice document.
			For a financial transaction, the total settlement amount that is due according to the transactions that leg 1 comprises.
			Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed.
			Matching field.
End of **NetAmount**			
LineItem/VATDetails: mandatory section			
VATRate	M	UnsignedPrice-Type~~Decimal-PercentageType~~	VAT rate applicable to the netting statement line item.
			Numerical representation of percentage as a decimal value.
			Matching field.
			Values:
			VAT rates are reported using a leading 0 before the decimal point and with a maximum of three digits after the decimal point. Examples: "0.19" for 19% or "0.175" for 17.5%.
VATAmount	M	UnsignedPriceType	VAT amount, total net amount multiplied by VAT rate.
			Matching field.
VATAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the VAT amount is expressed.
			Matching field.
End of **VATDetails**			
LineItem/GrossAmount: mandatory section			
TotalAmount	M	UnsignedPriceType	Sum of the total net amount and the VAT amount.
			Matching field.
TotalAmountCurrency	M	ESMCurrencyCode-Type	Currency in which the total net amount is expressed.
			Matching field.
End of **GrossAmount**			
End of **LineItem**			
End of **LineItems**			

4 Description of New CpML Field Names

The following tables list all new CpML field names in alphabetical order. The valid values derived from the types are listed in the field type descriptions.

4.1 A–D

Field name	Definition	Based on type
AccountHolder	Name of banking account holder.	AlphanumericType
Agreement	The master trading agreement under which the transaction is conducted.	ESMAgreementType
BIC	Bank identifier code as defined by ISO 9362.	BICType
BranchInformation	Supplier branch acting as invoice party or customer branch acting as shadow invoice party.	AlphanumericType
City	Name of a city.	AlphanumericType
CompanyRegistryCity	City of the register where a company is listed.	AlphanumericType
CompanyRegistry-Country	Country of the register where a company is listed.	CountryCodeType
CompanyRegistryName	Number of the register where a company is listed.	AlphanumericType
CompanyRegistry-Number	Number of the register where a company is listed.	AlphanumericType
Country	Country name, represented as ISO 3166-1 alpha-2 code.	CountryCodeType
CustomerInvoiceID	Unique identifier of an invoice as supplied by the customer.	IdentificationType
CustomerSSDSID	Unique customer identifier, as defined by the System Static Data Standard.	SSDSIDType
CustomerTradeID	Unique transaction reference number according to the customer's ETRM system.	TradeIDType
Description	Text that describes additional transaction specifications.	AlphanumericType

4.2 E–L

Field name	Definition	Based on type
Email	E-mail address.	EmailType
ExciseTaxInformation	Indirect tax applied by the local government.	AlphanumericType
FamilyName	A person's family name.	AlphanumericType
FirstName	A person's first name.	AlphanumericType
FixedOrFloating	Price relation of the transactions that make up an invoice.	FixedOrFloatingType
FXCurrencyPair	Pair of VAT amount currency and domestic VAT amount currency.	FXCurrencyPairType

Field name	Definition	Based on type
FXRate	FX rate that is applied to convert an amount in one currency to another currency.	UnsignedPriceType
IBAN	International bank account number as defined by ISO 13616:2007.	IBANType
IdentifierCode	Identifier code of a supplier or customer of an invoice as currently applied in different official registries, for example, an EIC.	ESMIdentifierCode-Type
IdentifierCode	Identifier code of a supplier or customer of an invoice as currently applied in different official registries, for example, an EIC.	ESMIdentifierCode-Type
InvoiceDate	Date of issue of an invoice.	DateType
InvoiceID	Unique identifier of an invoice document.	IdentificationType
InvoicePeriodEnd	End date of the settlement period for deliveries.	DateType
InvoicePeriodStart	Start date of the settlement period for deliveries.	DateType
LegalName	Legal identifier of a company in a national or regional company register.	AlphanumericType
LineItemsIncluded	Indicates whether an invoice contains line items.	TrueFalseType
LineItemsMatching	Indicates whether line items are used for matching an invoice.	LineItemsMatching-Type

4.3 M−R

Field name	Definition	Based on type
MarketInformation	Indicates a country or pair of countries (border) where a financial transaction is executed.	MarketInformation-Type
NatureOfPrice	Indicates whether a transaction has a positive or zero price or a negative price.	NatureOfPriceType
NettingStatementDate	Delivery date of the last transaction in a netting statement.	DateType
NettingStatementID	Unique identifier of a netting statement.	IdentificationType
PaymentDate	Due date of an amount.	DateType
PhoneNumber	Phone number with international prefix.	PhoneNumberType
PhysicalOrFinancial	Indicates the nature of the transactions that make up an invoice.	PhysicalOrFinancial-Type
PostalCode	Postal code in country-specific format.	PostalCodeType
PriceCurrency	Currency in which a price is expressed.	CurrencyCodeType
PurchaseOrSalesOrder-Number	Unique identifier of a purchase or sales order.	IdentificationType
RegulatoryWording	Information on the regulatory context of an invoice.	AlphanumericType

4.4 S–Z

Field name	Definition	Based on type
SelfBilling	Indicates whether an invoice is part of a selfbilling process.	TrueFalseType
SenderRole	Indicates the sender of a document: the official document issuer or the shadow document issuer.	SenderRoleType
ServiceProvider	Name of a valid eSM service provider as provided by eSM static data.	AlphanumericType
SettlementVolume	Total settlement volume that is due according to the scope of an invoice document.	UnsignedQuantityType
SettlementVolumeUnit	Unit of measure in which the settlement volume is expressed.	ESMUnitOfMeasure-Type
Street	Street name without street number.	AlphanumericType
StreetNumber	Street number, which may contain letters and digits.	AlphanumericType
SupplierInvoiceID	Unique identifier of an invoice as supplied by the supplier.	IdentificationType
SupplierSSDSID	Unique identifier of a company, as defined by the System Static Data Standard.	SSDSIDType
SupplierTradeID	Unique transaction reference number based on the supplier's ETRM system.	TradeIDType
TaxPoint	The last day of the month in which the last delivery occurs according to the contract.	DateType
TaxStatement	General text description of the applicable tax regime.	AlphanumericType
TotalAmount	Total settlement amount that is due according to the scope of an invoice document.	UnsignedPriceType
TypeOfIdentifierCode	Type of an identifier code.	TypeOfESMIdentifier-CodeType
VATAmount	VAT amount, total net amount multiplied by VAT rate.	UnsignedPriceType
VATAmountCurrency	Currency in which the VAT amount is expressed.	CurrencyCodeType
VATAmountDomestic	VAT amount expressed in the domestic currency.	UnsignedPriceType
VATAmountDomestic-Currency	Currency in which the domestic VAT amount is expressed.	CurrencyCodeType
VATID	VAT number as identifier used by the company's national tax authority.	VATIDType
VATJurisdictionCurrency	Currency that applies in the jurisdiction of the supplier.	CurrencyCodeType
VATRate	VAT rate that applies to an invoice document or a transaction. VAT rates are reported using a leading 0 before the decimal point and with a maximum of three digits after the decimal point. Examples: "0.19" for 19% or "0.175" for 17.5%.	UnsignedPrice-TypeDecimal PercentageType
VATRepresentative	Person/organisation acting as tax representative.	AlphanumericType

5 Description of New CpML Field Types

The following tables list all new CpML field types in alphabetical order. Where applicable, valid values are described. The Length column describes the maximum string length, where applicable. If nothing else is stated, the minimum string length is 1.

5.1 A-D

Field Type	Definition	Base Type	Length
AlphanumericType	Generic type to describe strings containing letters, digits, blanks, and special characters such as slashes or dots. No trailing or leading whitespace is allowed.	string	
BICType	Text string representing a BIC, using 8 or 11 characters: ▪ 4 letters or digits: business party prefix ▪ 2 letters: country code according to ISO 3166-1 ▪ 2 letters or digits: business party suffix ▪ 3 letters or digits: optional branch identifier Example: DEUTDE2HXXX	string	8 or 11
DecimalPercentage Type	Numerical value representing a percentage as a decimal value. Requires exactly two digits after the decimal point. Pattern: 0\.[0-9]{2} Example: 0.19 represents 19%. Note: Type is currently not in use.	Decimal	4

5.2 E−L

Field Type	Definition	Base Type	Length
EmailType	String representing an e-mail address. Must include a local part (user name) followed by @ and a domain part.	string	
ESMAgreement-Type	Contract ID of a master agreement.	string	110
ESMCurrencyCode-Type	ISO 4217 3 alpha code identifying a currency unit. Only uppercase letters are allowed.	string	3-3
ESMIdentifierCode-Type	Identifier code of the customer or supplier of an invoice, represented as EIC, LEI or ACER code.	string	1-20
ESMTransaction-Type	The following transaction types are collectively termed Physical Transactions: ▪ FOR: Physical Forward that settles against a fixed price. ▪ OPT: Option on a physical forward. ▪ PHYS_INX: Physical forward that settles against an index. ▪ OPT_PHYS_INX: Option on a physical forward that settles against an index. The following transaction types are collectively termed Financial Transactions: ▪ FXD_SWP: Fixed/float swap ▪ FLT_SWP: Float/float swap ▪ OPT_FXD_SWP: Fixed/float swaption ▪ OPT_FLT_SWP: Float/float swaption ▪ OPT_FIN_INX: Option on an index.	NMTOKEN	

	The following transaction types are related to fees and premiums: ▪ DAH_FEE: Fee or premium for a day-ahead trade ▪ IND_FEE: Fee or premium for an index trade. ▪ FOR_FEE: Fee or premium for a forward trade. ▪ PHYS_FEE: Fee or premium for a physical trade. ▪ GASCAPPRI_FEE: Fee or premium for a primary gas capacity trade. ▪ GASCAPSEC_FEE: Fee or premium for a secondary gas capacity trade.		
ESMUnitOf-MeasureType	The unit of measure that is applied to a quantity. The following values are allowed: ▪ 100MJ, 100MJPerDay ▪ AAU ▪ Bag, BBL, BCF, BF, BSH, BTU, BTUPerDay ▪ CBU, Celsius, CER, cwt ▪ Day, DTH ▪ EUA, EUAA ▪ Fahrenheit, Fee ▪ g, GAL, GJ, GJPerDay, GW, GWh, GWhPerDay ▪ hL ▪ in, Ingot ▪ KG, kL, KM3, KW, KWh, KWhPerDay ▪ L, LB, LEC ▪ M3, M3PerDay, MCM, MCMPerDay, MJ, MJPerDay, MMBTU, MMBTUPerDay, MMJ, MMJPerDay, MT, MW, MWh, MWhPerDay ▪ NM3 ▪ OBU, ozt ▪ ROC ▪ SBU, SM3, st ▪ t, Therm, ThermPerDay ▪ UKA ▪ Vega ▪ WBU The following values are present in the current CpML specification, but not implemented in the 6.4.3 schemas. For completeness, they are also listed, but not yet implement for eSM either: ▪ BBLPerMonth, DayPerMonth, ERU, KTherm, KThermPerDay, MTPerMonth **Important:** The valid value for Emissions (EUA and CER) Trade Confirmations is "EUA". **Important:** 1 EUA = 1 tonne of CO_2.	NMTOKEN	
FixedOrFloating-Type	The following values are allowed: • Fixed • Floating • FixedAndFloating	string	
FXCurrencyPair-Type	Two alphabetic currency codes according to ISO 4217, separated by a slash. Example: EUR/GBP	string	7-7
IBANType	String representing an IBAN according to ISO 13616:2007: ▪ 2-letter country code according to ISO 3166-1 ▪ 2-digit checksum ▪ Country-specific bank account number with up to 30 alphanumeric characters Example: DE91100000000123456789	string	5-34

LineItemsMatching-Type	The following values are allowed: ▪ Strict ▪ NonStrict	string	

5.3 M–R

Field Type	Definition	Base Type	Length
MarketInformation-Type	String representing a country or pair of countries using 2-letter country codes according to ISO 3166-1. If two countries are indicated, they are separated by a slash. Example: DE/NL	string	2 or 5
NatureOfPriceType	The following values are allowed: ▪ PositiveOrZero ▪ Negative	string	
PhoneNumberType	String representing an international phone number, starting with + and followed by numbers. Zeros for local prefixes should not be indicated. Special characters such as brackets, hyphens, blanks, or slashes are not allowed. Example: +4930987654321	string	≥6
PhysicalOrFinancial Type	The following values are allowed: • Physical • Financial • PhysicalFeeOrPremium • FinancialFeeOrPremium	string	
PostalCodeType	String representing a postal code in the format of the corresponding country. Only capital letters, digits, and blanks are allowed.	string	1-10

5.4 S–Z

Field Type	Definition	Base Type	Length
SenderRoleType	Indicates the sender of a document. The following values are allowed for invoices: ▪ OfficialDocumentIssuer ▪ ShadowDocumentIssuer The following values are allowed for netting statements: ▪ DocumentIssuer ▪ ReverseDocumentIssuer	string	
SSDSIDType	String that combines a VAT ID with an EIC, separated by an underscore. Example: GB684966762_21X000000001022V	string	
TypeOfESM-IdentifierCodeType	The following values are allowed: • EIC • LEI • ACERCode	string	
UnsignedPriceType	A price or amount in some currency or percentage thereof. Only unsigned values are permitted.	decimal	

Field Type	Definition	Base Type	Length
UnsignedQuantity-Type	A quantity in some quantity unit. Only unsigned values are permitted.	decimal	
VATIDType	String representing a VAT ID, a country code followed by 2 to 13 letters or numerical digits.	string	4-16

Appendix A. Glossary of Terms

Term	Description
BIC	Business Identifier Code
ETRM system	Energy Trading and Risk Management system
EIC	Energy Identification Code
IBAN	International Bank Account Number
ISIN	International Securities Identification Number
LEI	Legal Entity Identifier
SSDS	System Static Data Standard
UTI	Unique Trade Identifier
VAT	Value-added Tax