

# **Message exchange procedural instructions**

**Prodat and Aperak**

**version 1.4**

**17 November 2009**

**EDI user group**

**[www.energia.fi/sahkomarkkinat/sanomaliikenne](http://www.energia.fi/sahkomarkkinat/sanomaliikenne)**

**FINNISH ENERGY INDUSTRIES**

**These instructions are a translation of the corresponding instructions in Finnish. In any cases of ambiguity in interpretation, the Finnish-language instructions shall be complied with.**

## Contents

<b>1.</b>	<b>GENERAL</b>	<b>3</b>
1.1	Introduction	3
1.2	Terminology	3
1.3	Purpose of the procedural instructions	7
<b>2.</b>	<b>DESCRIPTION OF ELECTRONIC INFORMATION INTERCHANGE AND MESSAGE EXCHANGE</b>	<b>9</b>
2.1	Message exchange	9
2.2	Messages related to supplier switching	11
2.2.1	New supplier's notification of a new contract of a certain metering point Z03	11
2.2.2	System operator's notification to the current supplier Z05	12
2.2.3	Current supplier's notification on the termination/continuation of supply Z08	12
2.2.4	System operator's confirmation of the new contract to the new supplier Z04 – Start or rejection of supply	13
2.2.5	Metering information on the metering point Z11 – DSO's notice to the new supplier on the figures at the start of supply and the annual consumption estimates, and a notice to the previous supplier on the metering information at the termination of supply	14
2.2.6	Changing the meter / metering method and initial reading	15
2.3	Messages during supply	16
2.3.1	Changes in metering point information Z06	16
2.3.2	Current supplier's notice to the distribution system operator of the change in invoicing method during supply Z09	16
2.3.3	Metering information Z11 – DSO's report of energy metering information, balance energies and annual consumption estimates	17
2.3.4	Change of meter Z10	18
2.3.5	Disconnecting the supply of electricity	18
2.4	Messages related to the end of supply	20
2.4.1	Report by the current supplier on the termination of contract Z08	20
2.4.2	Metering information of the metering point Z11 – DSO's notice of the readings at the time of termination of the sale contract	20
2.5	Messages related to the moving process	21
2.5.1	Supplier's notice to the system operator of the current metering point on the customer moving out Z08[14]	21
2.5.2	Supplier's notice to the system operator of the new metering point on the customer's move in Z03[14]	21
2.5.3	DSO's notice to the current supplier on the termination of a sale contract as a result of moving out Z05[14]	22
2.5.4	Metering information on the moving event Z11	22
<b>3.</b>	<b>CONTENTS OF THE MESSAGES</b>	<b>23</b>
3.1	Metering point ID	23
3.2	Contract number	23
3.3	Annual consumption estimate	23
3.4	Meter readings at the start and end of supply and annual consumption estimates	24
3.5	Party ID	24
3.6	Routing of messages	24
3.7	PRODAT contact details	24
3.8	Hourly-metered sites	24
3.9	Reason codes and IDs	25
<b>4.</b>	<b>APERAK MESSAGES</b>	<b>28</b>
Appendix 1	Description of the use of messages	
Appendix 2	Moving process descriptions	
Appendix 3	Use of reading dates in PRODAT messages	

## 1. General

### 1.1 Introduction

These procedural instructions provide guidelines for transmitting information on customers, contracts or metering points in accordance with the Electricity Market Act. PRODAT messages are used in the exchange of information, and they are transmitted in compliance with the EDIEL procedures. The procedural instructions do not contain instructions related to balance settlement (see EDIEL sanomavälityksen yleiset sovellusohjeet, <http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset>).

The instructions are based on the Electricity Market Act and the decrees and decisions of the Government and the Ministry of Employment and the Economy (previously MTI), where applicable.

More detailed specifications are as follows:

Electricity Market Act 386/1995 with amendments

Valtioneuvoston asetus sähkötoimitusten selvityksestä ja mittauksesta (government decree on the settlement and metering of electricity supplies), 5.2.2009

Accounting Act 1336/1997

Decree of the Ministry of Employment and the Economy on information exchange related to the settlement of electricity supplies, 9.12.1008

The instructions have also taken into account the Terms of Electricity Supply (STE10), the Terms of Network Service (VPE10) and the Terms of Electricity Sales (SME10). The terms are available on the Finnish Energy Industries website: [www.energia.fi/sahkomarkkinat/sahkoverkko/sopimusehdot-ja-liittymismaksut](http://www.energia.fi/sahkomarkkinat/sahkoverkko/sopimusehdot-ja-liittymismaksut)

The Finnish Energy Industries has also drawn up instructions 'PRODAT inhouse määrittelyt ja syykoodit' and the 'Electricity market procedural instructions', which also deal with PRODAT messages. This and the above-mentioned instructions are supplemented by the instruction 'Menettelyohjeet myyjille ja verkonhaltijoille myyjänvaihtolanteisiin'. Up-to-date publications are available on: [www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset)

The instructions will be inspected regularly by the EDI user group of the Finnish Energy Industries to ensure that the instructions are updated as a result of any changes in the operating environment.

### 1.2 Terminology

In the instructions, efforts have been made to use terminology that is generally used in the industry. However, some special terms are specified in the following.

APERAK	An EDIFACT application acknowledgement message, which is intended for acknowledging the application level and for possible error reports. If the recipient's
--------	--------------------------------------------------------------------------------------------------------------------------------------------------------------

application has rejected the received message as erroneous, the APERAK message sends the reason for the error to the sender. In a positive case, it is known that the sent message has been accepted by the receiving application without comment.

EDI	Electronic Data Interchange, OVT in Finnish. Data transfer between two applications using the agreed method. Usually, this is automatic data interchange between two or more organisations according to the name.
EDIEL	The electricity industry's message and information interchange specification, developed by the Nordic Ediel Forum ( <a href="http://www.ediel.org">http://www.ediel.org</a> ). Its operation is continued by ebIX ( <a href="http://www.ebix.org">http://www.ebix.org</a> ).
EDIFACT	EDI for Administration, Commerce and Transport message language for electronic data interchange, including grammar and vocabulary, maintained by the CEFACT organisation under the United Nations. Also published as an ISO standard.
DELFOR	An EDIFACT delivery schedule message. Ediel has revised it to adjust to the needs of time series forecasts.
Distribution system operator, DSO	A body or establishment in possession of a distribution network and engaged in licensed operation thereof.
MSCONS	An EDIFACT message for submitting metering values. Ediel has revised it to better meet the needs of the electricity industry.
Supplier	A person, corporation or establishment selling electricity
PRODAT inhouse	Specification of the interface of PRODAT messages
PRODAT messages	EDIFACT messages, developed for submitting electricity companies' metering point information. PRODAT message (e.g. Z03[1]) consists of a certain message type (Z03) and a reason code ([1]) that expresses more detailed purpose of use.
Contract number	In message exchange, the supplier's contract number is used for identifying the contract.

- Electricity user** The electricity user (user) buys electricity from the supplier and network service from distribution system operator of principally for his own use. The user may also be a connecting party purchasing electricity to be used by others via the connection point specified in his connection contract. Several users may undertake to become jointly responsible for a sale contract.
- Electricity sale contract** An electricity sale contract is a contract between the supplier and the electricity user, concerning the electric energy needed by the user.
- A contract for electricity supply**  
A contract for electricity supply is concluded between the supplier and the electricity user, and by signing it, the supplier assumes responsibility also for the network service. The supplier shall, where needed, agree on provision of network service with the distribution system operator. When a contract for electricity supply is in force, no separate network contract or sale contract shall be concluded for the metering point. Service conforming to the contract for electricity supply is called electricity supply (see the Terms of Electricity Supply — STE05).
- Power network service** Power network service (network service) refers to all those activities of a distribution system operator, which make it possible to transmit electricity on the distribution system operator's network against payment.
- Power network contract** A power network contract (network contract) is concluded between the distribution system operator and the electricity user. The power network contract concerns the network service needed by the electricity user.
- Balance energy forecast**  
A balance energy forecast is calculated with respect to type user group 2. With other type user groups (1 and 3), the balance energy forecast = annual consumption estimate. The balance energy forecast is a computationally adjusted annual consumption estimate, which balances out the systematic error due to the location (temperature difference) used in type curve calculation in curve 2 locations.
- The balance energy forecast is obtained with respect to type user group 2 when the customer's annual consumption estimate is adjusted before the

calculation of hourly energy to correspond with the basic temperature specified in Appendix 4 of government decree on the settlement and metering of electricity supply so that the annual consumption estimate is multiplied by the ratio of energies in the reference curve of the metering period and the temperature-adjusted reference curve.

Balance settlement	Balance settlement refers to the clearing of electricity transactions realised during each hour, which results in an <i>electricity balance</i> and a balance deviation for each party to the electricity market.
Reconciliation	A calculation to establish the difference between the energy entered in the electricity balance with the load curve method and with the metered energy. The calculation is the responsibility of the DSO. The DSO invoices or reimburses the supplier.
Supplier with a supply obligation	If a supplier is in a dominant market position within the area of responsibility of the distribution system operator to which the metering point belongs, and the metering point is equipped with main fuses of 3x63 amperes at maximum or whose metering point receives annually no more than 100,000 kWh of electricity, the supplier has a supply obligation to the user in accordance with section 21 of the Electricity Market Act.
Type load curve, load curve	The annual electricity use of an average consumer in a certain group of customers with similar electricity use, presented hourly. Therefore, the type load curve is the annual time series for hourly energy of an average customer in the customer group in question.
Local type load curve	If the electricity use of a customer group within a certain distribution system operator's area considerably deviates from the time variation in the type load curve, the distribution system operator may introduce a local type load curve for the use of this customer group. The distribution system operator must report to the Energy Market Authority the principles for determining the load curve and the reasons for its necessity one month before the introduction of a local type load curve at the latest.
Type load curve procedure, load curve procedure	

The type load curve procedure means a nationwide calculation model, which utilises the typical consumption of each user type. It is used for calculating the hourly energies of a small-scale user for the balance settlement using the annual consumption estimate based on the previous year's electricity use drawn up by the system operator.

#### Annual consumption estimate

An estimate of the customer's future electricity use, normalised to the local average temperature or based on other more detailed information, founded on the customer's electricity use in the previous year. Other more detailed information may be, for example, customer's notification on changed habits in the use of electricity or new appliances.

The texts of the terminology are mainly quoted either directly or partially from the following documents: the Terms of Network Service (VPE05), the Terms of Electricity Sales (SME99) and the Terms of Electricity Supply (STE05).

### 1.3 Purpose of the procedural instructions

The procedural instructions are meant for those electricity market parties who practise tasks related to the message exchange in electricity trading in Finland.

The common instructions promote the functioning of the electricity market and harmonise the measures, which are implemented by the users and made to the systems, and which are important with respect to the operations of the electricity market, also promoting message exchange.

Taking the constant development of the procedures and systems into account, it is of primary importance that the contents of each message meet the properties of the metering point subject to the notification, in compliance with the PRODAT inhouse specifications.

In order to promote the reputation of the industry and the ease and favourable price of operations, it is important that all actors are aware of the significance of the notification of the start and end of sales made with PRODAT messages and the entry of tasks into various systems based on these messages. With these messages, the distribution system operators maintain the energy balances of each supplier.

When sending the messages, the time limits specified in these instructions must be complied with so that the time limits specified in the instructions form the minimum level for the operations. The general principle must be that everyone acts without delay in message exchange.

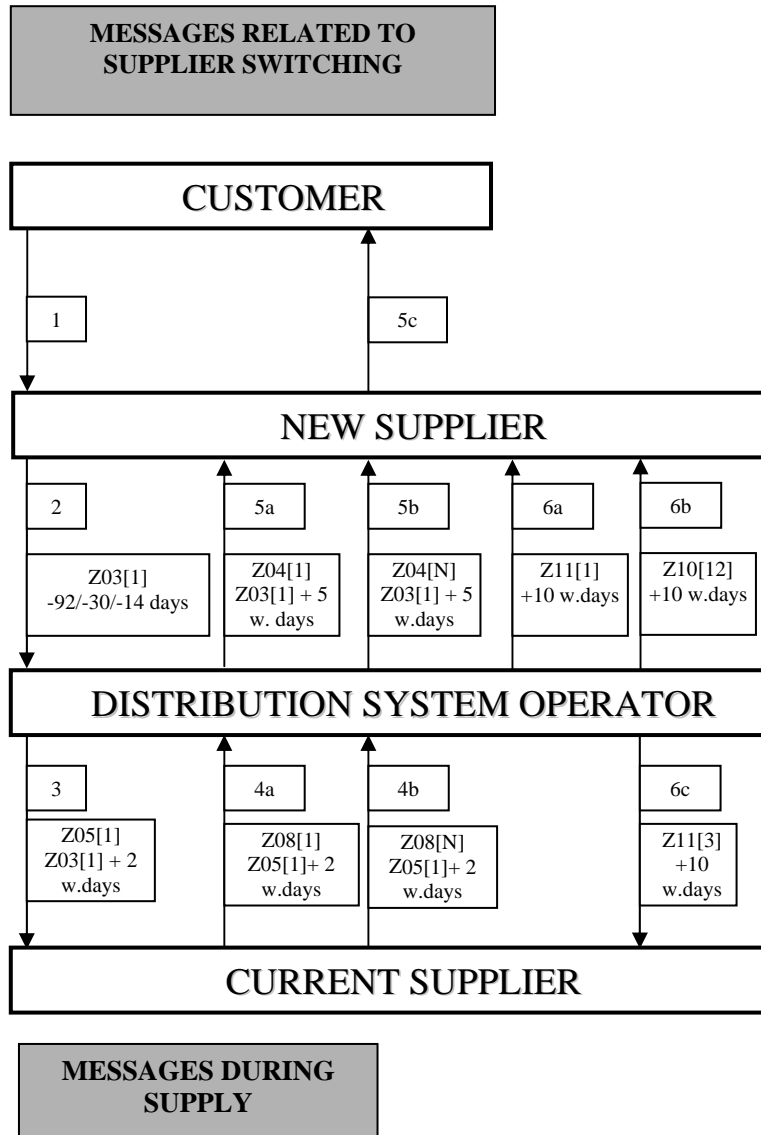
It is important for smooth message exchange that particular attention is also paid to the validity of messages.

In general, PRODAT messages are used for reporting data on the metering point, user and contract regarding hourly-metered metering points in addition to data on the metering point within the sphere of the load curve procedure.

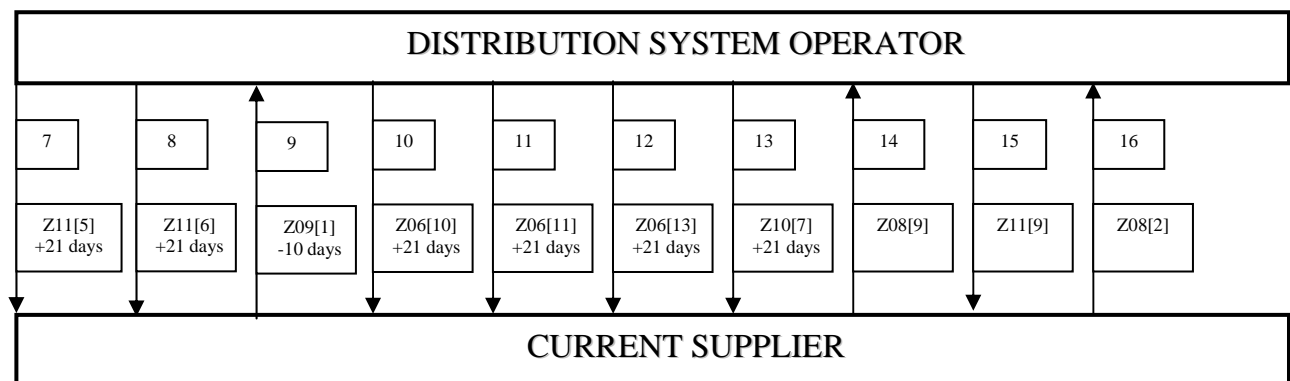
The information interchange described in the procedural instructions must be managed so that the parties may not charge a separate fee for delivering this information.

## 2. Description of electronic information interchange and message exchange

### 2.1 Message exchange



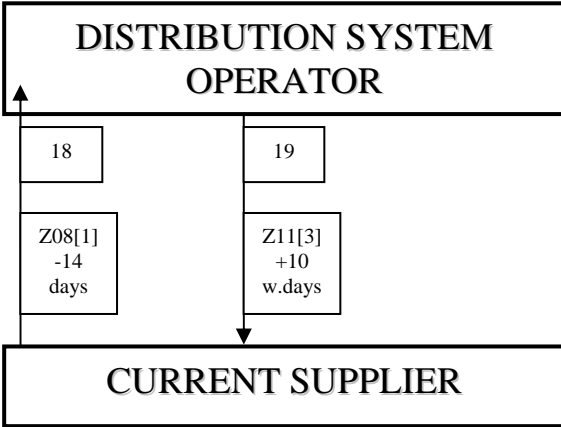
1. New sale contract, requirement to sending Z03
2. New supplier's notice of new sale contract
3. Notice of new sale contract to the current supplier
4. a) Positive reply by the current supplier  
b) Negative reply by the current supplier
5. a) Confirmation of the start of supply to the new supplier  
b) Notice to new supplier that supply cannot be started  
c) Confirmation to the customer
6. a) Report of initial readings to new supplier  
b) New meter information and initial readings due to a change of meter or metering method at the beginning of supply  
c) Report of final readings to previous supplier
7. Metering information during supply as a basis for invoicing
8. Monthly or other intermediate readings during supply
9. Current supplier's notice of change in the invoicing method
10. Distribution system operator's notice of change in the timing zone
11. Distribution system operator's acknowledgement of the change in invoicing method
12. Distribution system operator's notice of change in the fuse size
13. Distribution system operator's notice of change in the meter or metering method during supply
14. Current supplier's confirmation of disconnection to the distribution system operator
15. Distribution system operator's notice of completed disconnection
16. Current supplier's confirmation of reconnection to the distribution system operator
17. Distribution system operator's notice of completed reconnection



\* Time limits; (-) before the start/end of supply and (+) after the start/end, presented in further detail in instruction section 2.2.  
 \*\* Reason codes; Message-specific reason codes are presented in section 3.9 in this instruction.

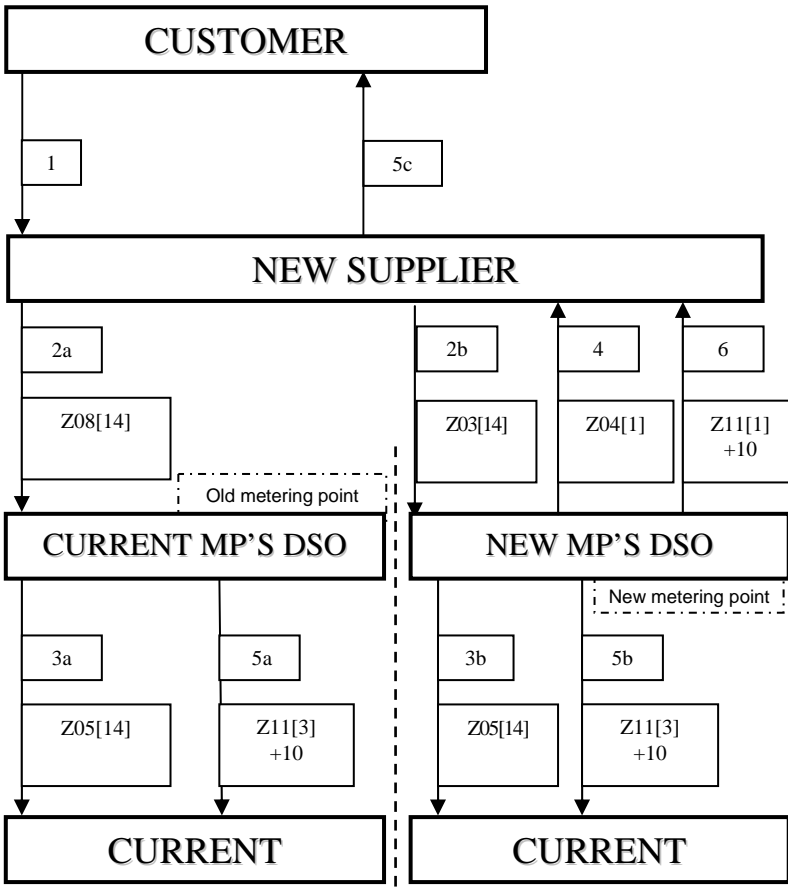
**MESSAGES RELATED TO THE END OF SUPPLY**

- 18. Current supplier's notice of the termination of contract
- 19. Distribution system operator's notice of the readings at the time of termination



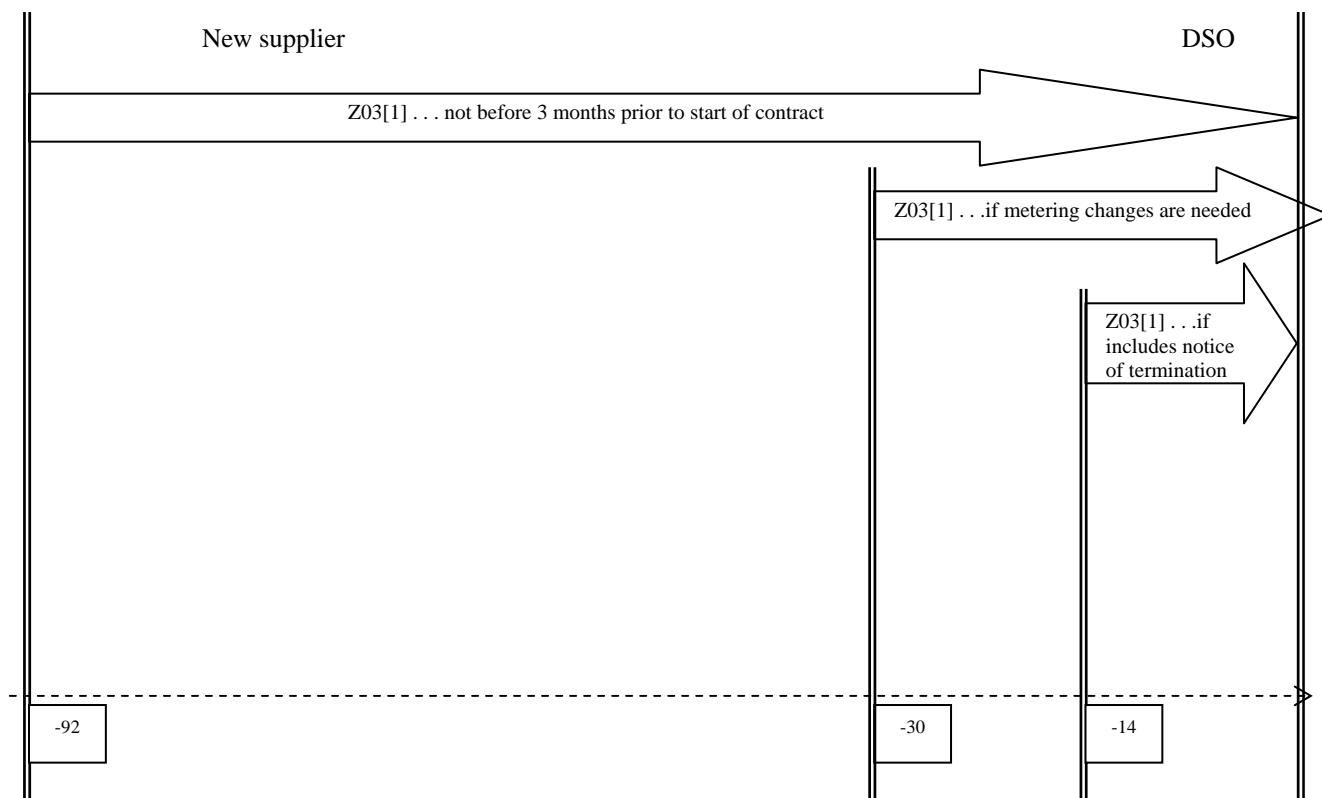
\* Time limits; (-) before the start/end of supply and (+) after the start/end, presented in further detail in instruction section 2.2.  
 \*\* Reason codes: Message-specific reason codes are presented in section 3.9 in this instruction.

**MESSAGES RELATED TO CUSTOMER MOVE**



## 2.2 Messages related to supplier switching

### 2.2.1 New supplier's notification of a new contract of a certain metering point Z03



After concluding a new sale contract with a customer, the new supplier shall report this without delay to the DSO with a Z03[1] message. The notification shall be at the DSO's disposal not before three months and not later than 14 days before the start of the contract. The contracts are always valid for periods of full 24 hours.

For example, when the contract's period of notice is 14 days and a notice of termination is given on 1 April 2008, the contract will terminate in 14 days from this, i.e. on 15 April 2008. Therefore, the first day when the contract will no longer be valid is 16 April 2008, and this is the day when the new contract may start. In the example, the new supplier's notification should be received by the DSO by 1 April 2008 at the latest.

The DSO must pass on the information to the current supplier without delay, however, not later than within two working days of receiving the notification. The current supplier shall accept as the time of notice of termination the time when the DSO has received the notice of termination. The customer or his representative and the current supplier may agree on a shorter period of notice when the notice of termination is made by the customer. The sending of

a Z03[1] message must always be preceded by an electricity sale contract with the customer, drawn up by the new supplier.

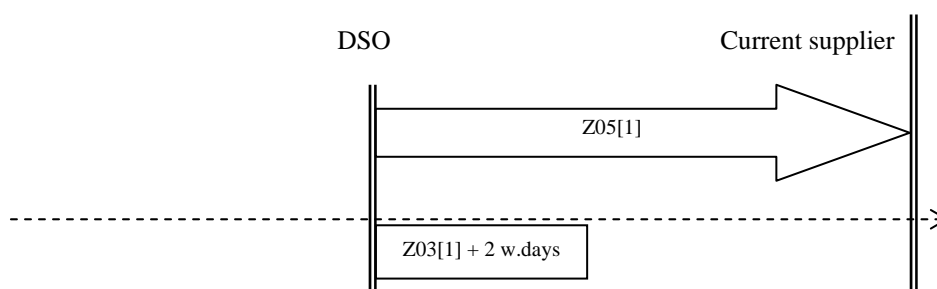
If the user's site requires metering changes, the notice must be received at least 30 days before the start of the contract.

The supplier must give the contract number in the Z03[1] message. The number must be used in messages concerning the metering point in question until the end of the supply period.

The codes in square brackets are reason codes. Message-specific reason codes are presented under 3.9 in these instructions as well as in the publication 'PRODAT Inhouse määrätykset ja syykoodit:

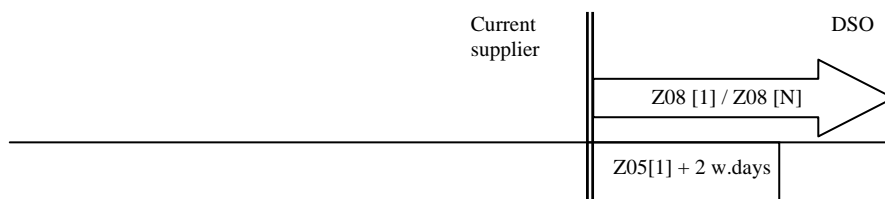
<http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset>

### 2.2.2 System operator's notification to the current supplier Z05



The system operator transmits the notification on the new sale contract to the current supplier. The notification must be transmitted within two working days from receiving the notification of the new supplier.

### 2.2.3 Current supplier's notification on the termination/continuation of supply Z08



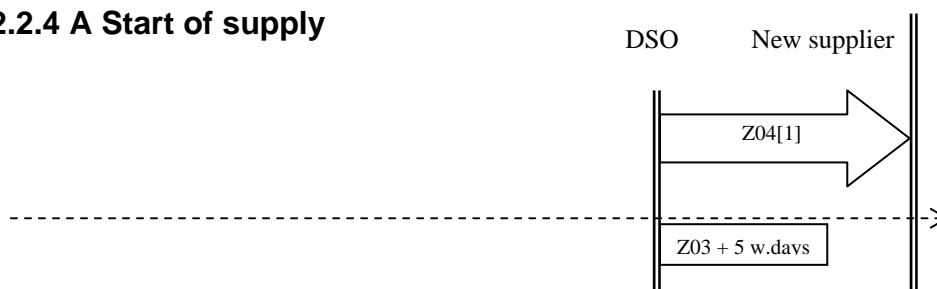
If the current sale contract can be terminated, the supplier shall send a notice of termination of the sale Z08[1] not later than within 2 working days after receiving the notification of the system operator. If the current supplier has a valid fixed-term sale contract, the current supplier shall send a notification of this with a Z08[N] message. The current supplier shall report the first possible day of termination of the valid contract in a Z08[N] message if there is maximum 30 days' difference between the starting day of the proposed new contract and the day of termination of the current contract. If the starting day of the proposed new contract is more than 30 days from the day of termination

of the current contract and the current supplier does not want to notify of the day of termination, the day field is left empty.

The time of termination of the contract stated in the Z08[1] message determines the day of termination of the contract and the starting day of the new contract. The contracts are always valid for periods of full 24 hours, i.e. the contract terminates at 24.00 hours on the day of termination, and the new contract starts at 0.00 hours the next day. These are, in practice, the same points in time. The time of termination given in the message gives the first point in time when the old contract is no longer valid. If, for example, it has been agreed with the customer that the day of termination of the contract is 31 December 2007, the new contract may start at 0.00 hours on 1 January 2008, which is stated in the message as the exact time of the termination of the contract.

## 2.2.4 System operator's confirmation of the new contract to the new supplier Z04 – Start or rejection of supply

### 2.2.4 A Start of supply



The system operator shall transmit the current supplier's response to the new supplier immediately after receiving it.

The system operator must confirm to the new supplier the information on the start of the electricity supply within five working days at the latest after receiving the new supplier's notification on the start of supply regardless of the fact whether the current supplier has sent his reply message specified under 2.2.3.

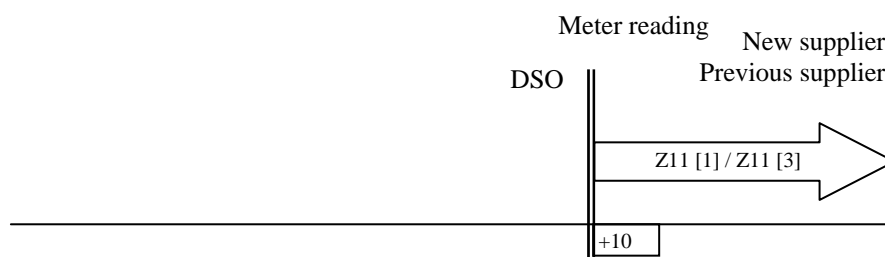
The DSO notifies the supplier of the valid annual consumption estimates with a Z04 message that acknowledges the start of the supply, using reason code 1.

### 2.2.4 B Rejecting the supply



If the current fixed-term sale contract is still valid, the DSO shall transmit a notification on the rejection of the new sale contract with a Z04[N] message. The notification must be transmitted within five working days at the latest after receiving the new supplier's notification of the start of supply.

### 2.2.5 Metering information on the metering point Z11 – DSO's notice to the new supplier on the meter readings at the start of supply and the annual consumption estimates, and a notice to the previous supplier on the metering information at the termination of supply



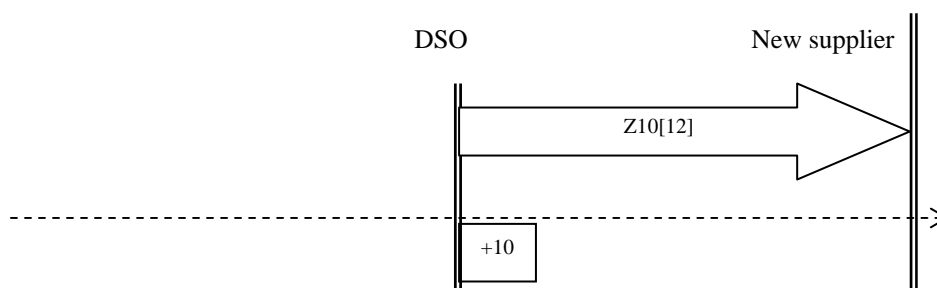
The message shall be at the recipient's disposal within 10 working days at the latest from the time of supplier switch.

The procedure applies to notices made on metering points covered by the load curve procedure and on hourly-metered metering points with a maximum of 3x63 amperes the hourly energies of which are used for creating their own summed profile meant only for hourly metering.

According to a government decree, the metering information of all hourly-metered sites, also those with a maximum of 3x63 amperes, must be primarily reported with a daily MSCONS message. There are more detailed instructions on the MSCONS procedure in the general EDIEL instruction at: [www.energi.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energi.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset)

The Z11 message is not used for reporting the metering information of an hourly-metered metering point of over 3x63 amperes. See also item 3.8 in these instructions.

## 2.2.6 Changing the meter / metering method and initial reading



The distribution system operator confirms to the new supplier the start of new supply in accordance with the new metering point information related to the change of the meter or metering method at the time of the start of supply with message Z10, reason code 12.

The message shall be at the new supplier's disposal within 10 working days of the time of change at the latest.

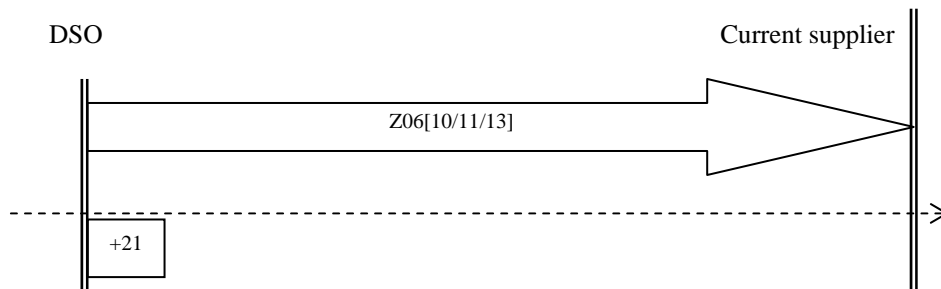
This message is used for reporting the change of consumer profile ID as a result of the change in the metering method when the site covered by the type-load curve procedure changes to an hourly-metered site. If the metering information of the metering point is reported after the change with a daily MSCONS message, the consumer profile ID is 0 (zero). If a supplier-specific summed profile is created from the hourly energies of hourly-metered metering points with a maximum of 3x63 amperes, code 6, 7 or 8 is used, depending on the site's previous type-load curve classification. The codes to be used are described in paragraph 3.9 and in the instruction PRODAT inhouse määrittymiset ja syykoodit, which is found at:

[www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset)

Also in a situation where the changing of meter or metering method takes place after sending the Z04[1] message and before the start of supply, the distribution system operator will report the readings and annual consumption estimates at the starting time with a Z10[12] message. This kind of a situation arises if the DSO has to change the metering equipment or metering method after sending the Z04 message. For this reason, the DSO's system must always check before sending the initial reading (Z11[1]) whether the meter's data or the consumer profile ID corresponds with the information of the previously sent Z04[1] message, and if it does not, it must create a Z10[12] message for the time of the start of supply.

## 2.3 Messages during supply

### 2.3.1 Changes in metering point information Z06



The message must be at the supplier's disposal within 21 days of the time of change at the latest.

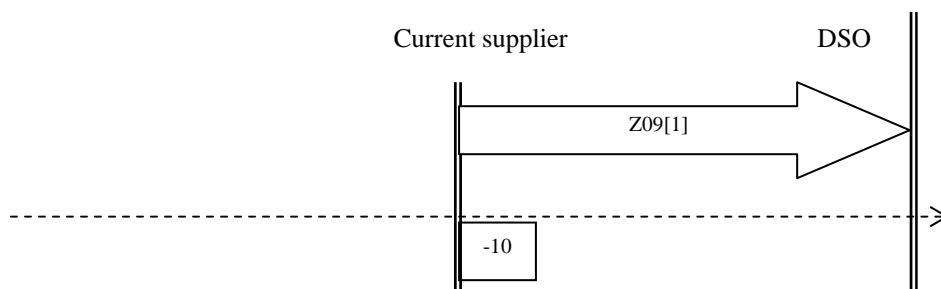
**With reason code 10**, the distribution system operator reports to the current supplier of the change in the new measurement type during supply as a result of the change of product.

**With reason code 11**, the distribution system operator acknowledges to the current supplier the change of invoicing method during supply.

**With reason code 13**, the distribution system operator reports to the current supplier of the change of fuse information during supply.

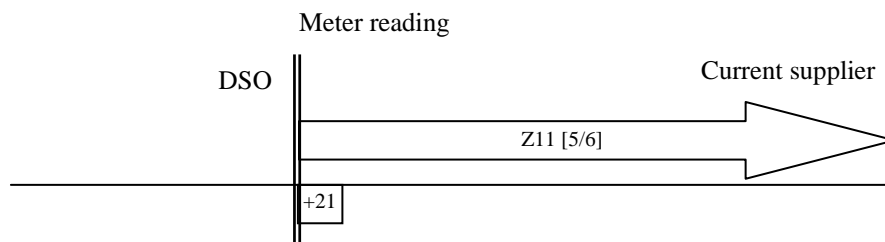
**Other changes in the metering point ID** that are not part of the PRODAT procedure shall be reported to the parties, for example, by e-mail or fax. These include changes in invoicing details, for example, a change of the invoicing address of the metering point.

### 2.3.2 Current supplier's notice to the distribution system operator of the change in invoicing method during supply Z09



The message shall be at the disposal of the distribution system operator within 10 days before the time of change at the latest.

### 2.3.3 Metering information Z11 – DSO’s notice of energy metering information, balance energies and annual consumption estimates



The message shall be at the recipient’s disposal within 21 working days of the time of reading at the latest. With reason code 5, the message shall include the meter readings and the annual consumption estimates and balance energies, in addition to the metered consumption.

**With reason code 5**, the distribution system operator reports the metering information as a basis for the change in invoicing or annual consumption estimate. The distribution system operator’s own customer balancing or actual consumption-based invoicing shall be based on the metering information of this message.

**With reason code 6**, the distribution system operator reports so-called intermediate meter readings implemented monthly (or by other period) to the current supplier. This message is used for transmitting e.g. the intermediate meter readings of customers with remote reading, covered by the load curve procedure, who are invoiced less frequently than monthly, despite more frequent readings, taking place e.g. every 3 months, 6 months or 12 months.

In Z11 messages, the meter reading period always starts from the previous meter reading regardless of whether it is an intermediate or invoice reading.

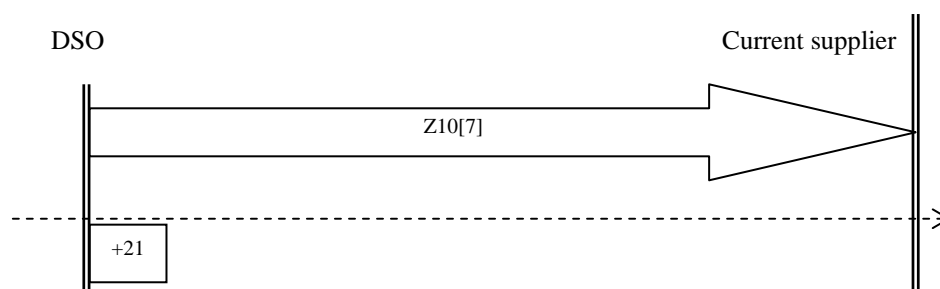
The procedure applies to notices made on metering points covered by the load curve procedure and on hourly-metered metering points with a maximum of 3x63 amperes, the hourly energies of which are used for creating their own summed profile meant only for hourly metering. With respect to the latter group, the metering information is transmitted once a month.

According to a government decree, the metering information of all hourly-metered sites, also those with a maximum of 3x63 amperes, must be primarily reported with a daily MSCONS message. When the annual consumption estimate of these sites changes, it is notified with a Z11[5] message. A change in the annual consumption estimate must be reported at least once a year.

The Z11 message is not used for reporting the metering information of an hourly-metered metering point of over 3x63 amperes. The metering information of an hourly-metered metering point with over 3x63 amperes is reported with a MSCONS message. There are more detailed instructions on the MSCONS procedure in the general EDIEL instruction at:

[www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset). See also item 3.8 in these instructions.

### 2.3.4 Change of meter Z10



The distribution system operator notifies the current supplier of any changes in the meter or metering method that has taken place during supply, including the metering point information, with reason code 7.

This message is used for reporting the change of customer profile ID as a result of the change in the metering method when the site covered by the customer profile procedure changes to an hourly-metered site. If the metering information of the metering point is reported after the change with a daily MSCONS message, the customer profile ID is 0 (zero). If a supplier-specific summed profile is created from the hourly energies of hourly-metered metering points with a maximum of 3x63 amperes, code 6, 7 or 8 is used, depending on the site's previous type load classification. The codes to be used are described in section 3.9 and in the instruction PRODAT inhouse määrittymiset ja syykoodit, which is found at: [www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset)

The message must be at the supplier's disposal within 21 days of the time of change at the latest.

### 2.3.5 Disconnecting the supply of electricity

Measures taken as a result of breaches of contract, such as unpaid invoices, or a disconnection of supply at the customer's request, are described in Figures 2 and 3 and in Electricity market procedural instructions, available on: [www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset)

If the customer fails to pay the sales invoice, the supplier shall send reminders and warnings to the customer in accordance with section 7.2 in the Terms of Electricity Sales. If the customer does not react to the sent reminders and warnings, i.e. further neglects the payment of the invoice, the supplier shall request the system operator to disconnect the customer's electricity supply.

Before sending the request to disconnect the supply, the supplier must verify that the disconnection situation meets the requirements of the Electricity Market Act and the terms. The system operator no longer carries out these verifications, but it relies on the supplier's notification. The request to disconnect the supply should be sent by e-mail. The system operators must, on the other hand, make sure that there is an electronic mailbox for this purpose and for other urgent communications, the contents of which are read on a regular basis. See section 3.2 of Electricity market procedural instructions: [www.energia.fi/sahkomarkkinat/sanomaliikenne/](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/)

**Disconnection and connection of network service at the supplier's request, Figure 1**

1. The supplier delivers the request by e-mail to the DSO about one week before the proposed disconnection. If the request is made by telephone, the Supplier must deliver a confirmation, which may be an e-mail, fax or Prodat Z08[9].

2. DSO disconnects the supply of electricity on the day proposed in the disconnection request. DSO's representatives will not negotiate on the disconnection with the customer. DSO will invoice the supplier who, in turn, invoices the customer.

3. Meter readings

4. DSO delivers a confirmation on the disconnection, including meter readings, to the supplier, Prodat Z11[9]

5. The supplier requests the DSO by telephone to carry out a reconnection. The supplier must deliver a confirmation, which may be an e-mail, fax or Prodat Z08[2]. If the request arrives at the system operator by 13.00 hours, the connection must take place during the same day at the time agreed with the customer.

6. DSO connects the electricity

7. Meter readings

8. DSO delivers a confirmation on reconnection including meter readings to the supplier, Prodat Z11[2]

**Disconnection and connection of network service due to DSO's invoice, Figure 2**

9. DSO disconnects the electricity

10. Meter readings

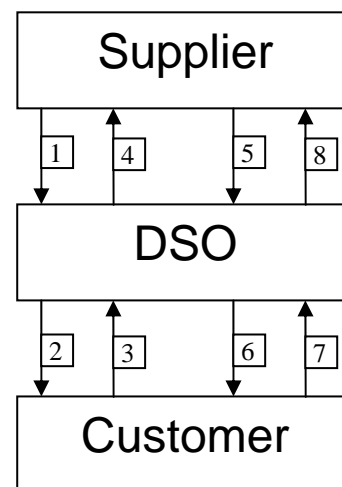
11. DSO delivers a notice of disconnection, including meter readings, to the supplier, Prodat Z11[9].

12. DSO connects the electricity

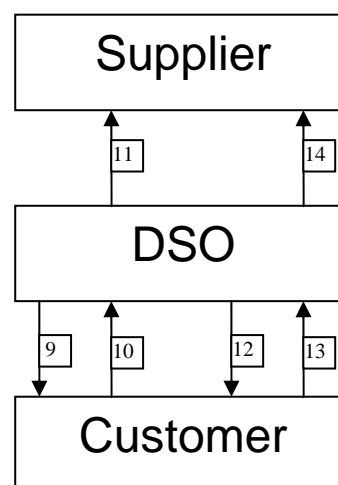
13. Meter readings

14. DSO delivers a notice on reconnection, including meter readings, to the supplier, Prodat Z11[2]

*The distribution system operator notifies the supplier of the disconnection/connection within one week of the disconnection/connection at the latest when the customer's annual estimate is less than 1 GWh and the next working day from the disconnection/connection at the latest when the customer in question consumes 1 GWh or more of electricity a year.*



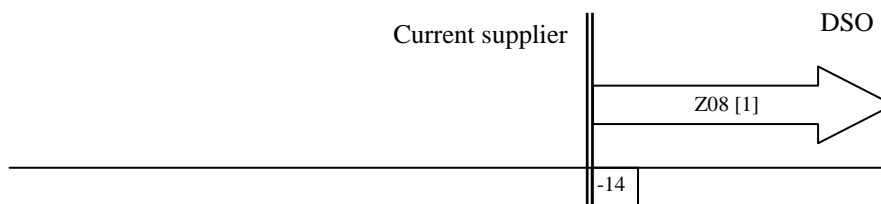
**Figure 1. Measures taking place at the supplier's request**



**Figure 2. Carried out by the DSO**

## 2.4 Messages related to the end of supply

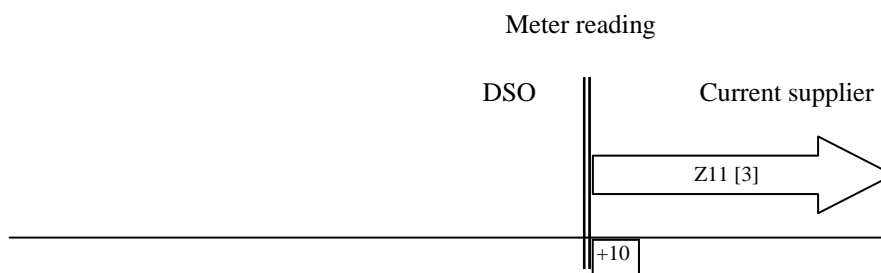
### 2.4.1 Notice by the current supplier on the termination of contract Z08



The current supplier notifies the distribution system operator of the termination of its sale contract with a Z08[1] message. The notification must be at the DSO's disposal not later than 14 days before the termination of the contract.

If the customer is moving out of the metering point, a Z08[14] message is used. See further details in section 2.5.1.

### 2.4.2 Metering information of the metering point Z11 – DSO's notice of the readings at the time of termination of the sale contract



The message shall be at the recipient's disposal within 10 working days from the time of termination of the contract at the latest.

The procedure applies to notices made on metering point covered by the load curve procedure and on hourly-metered metering points with a maximum of 3x63 amperes, the hourly energies of which are used for creating their own summed profile meant only for hourly metering.

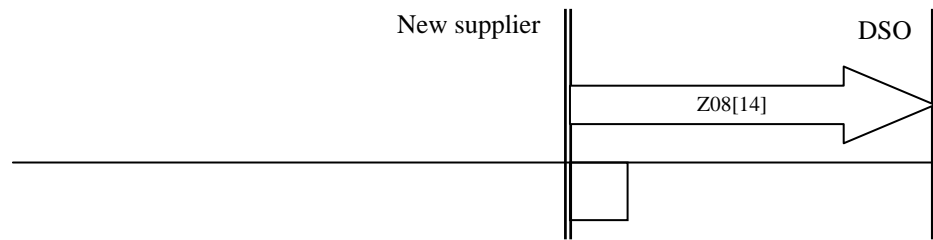
According to a government decree, the metering information of all hourly-metered sites, also those with a maximum of 3x63 amperes, must be primarily reported with a daily MSCONS message.

The Z11 message is not used for reporting the metering information of an hourly-metered metering point of over 3x63 amperes. The metering information of an hourly-metered metering point with over 3x63 amperes is delivered with a MSCONS message. There are more detailed instructions on the MSCONS procedure in the general EDIEL instruction at:

[www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset). See also item 3.8 in these instructions.

## 2.5 Messages related to the moving process

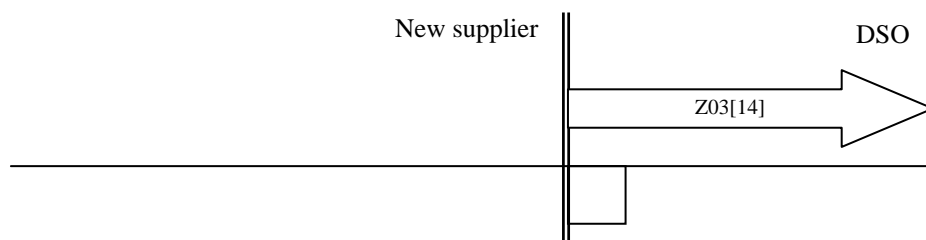
### 2.5.1 Supplier's notice to the system operator of the current metering point on the customer moving out Z08[14]



After concluding a new sale contract with a customer who is moving out of the current metering point, the supplier shall report this without delay to the distribution system operator of the current metering point with a Z08 message, using reason code 14. The moving process is carried through as quickly as possible.

In situations where the supplier in the metering point in question remains the same in connection with the customers' move, it is not necessary for the supplier to deliver to the DSO a separate notice of the termination of sale to the customer who is moving away. In such a case, the supplier shall send a notice of the incoming move of a new customer in accordance with the instructions in section 2.5.2, and this notice will also terminate any existing contracts for the metering point.

### 2.5.2 Supplier's notice to the system operator of the new metering point on the customer's move in Z03[14]



After concluding a new sale contract with a customer who is moving to a new metering point, the supplier shall report this to the DSO of the new metering point before the move takes place. Any contracts that may be valid in the metering point will be terminated at the time stated in the message.

The message is used in the same way also in cases where the customer is moving to a metering point that is taken into use for the first time, with no previous sale or network contracts. If the metering point ID for this kind of a site is not found in the metering point register, the new supplier shall request it from the system operator by e-mail.

### 2.5.3 DSO's notice to the current supplier on the termination of a sale contract as a result of moving out Z05[14]



After receiving the customer's or supplier's notice on a customer moving out (Z08[14]) or in (Z03[14]), the DSO shall immediately send an advance notice on the termination of the contract to the current supplier of the metering point. It is not necessary to send an advance notice if the current supplier of the metering point is the same as the sender of the Z03[14] or the Z08[14] message.

### 2.5.4 Metering information on the moving event Z11

The metering information of the metering point to be carried out as a result of a move is reported to each supplier according to the instructions in sections 2.2.5 and 2.4.2 in these procedural instructions.

### 3. Contents of the messages

More detailed contents of the messages are described in the instruction PRODAT inhouse määrietykset ja syykoodit. Description: [www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset). Specifications and clarifications to be remembered in electronic information exchange are presented in the following.

#### 3.1 Metering point ID

Before sending the first PRODAT message (Z03), the supplier must find out the user's metering point ID in the DSO's area of responsibility. The DSO's metering point ID must be entered in the user's network service invoice and/or the invoice in accordance with the contract of electricity supply. The DSO's metering point ID must also be included in the supplier's invoice if the supplier invoices for the network service in connection with energy invoicing.

However, to facilitate supplier switching, it is recommended that the suppliers also notify the network company's metering point ID in separate sales invoices and confirmations of contract. If the supplier also wants to use the supplier's individual metering point ID on the invoice, some other term must be specified for it, such as supplier's ID for the metering point.

The DSO must notify and maintain its up-to-date metering point information in the nationwide metering point register. If the information cannot be found in the register, it must be ensured that the company has an electronic mailbox for this purpose and for other urgent communications, which is read on a regular basis. This kind of enquiry concerning the metering point ID must be responded to without delay, however, not later than the next working day.

#### 3.2 Contract number

The supplier must give the contract number in the Z03 message. The number must be used in messages concerning the metering point in question until the end of the supply period. The same contract number may refer to several metering points.

#### 3.3 Annual consumption estimate

The DSO's invoicing forecast with curves 1, 2 or 3, or alternatively for the officially approved DSO-specific curve (local curve) are used as the basis for the annual consumption estimates at the start of supply.

The old items on curve 4 may stay on for as long as there is a curve 4 in the DSO's system.

The DSO notifies the valid annual consumption estimates to the supplier with a Z04 message that acknowledges the start of the supply, using reason code 1. The notification must be at the supplier's disposal within 5 working days of the notification of the start of new supply at the latest.

The changed annual consumption estimates resulting from the meter reading at the time of the start of supply are reported to the supplier with the Z11 message using reason code 1, and the changed data resulting from changing of the meter or metering method are reported with the Z10 message using reason code 12 within 10 working days of the start of new supply at the latest.

### 3.4 Meter readings at the start and end of supply and annual consumption estimates

The DSO reports the meter readings at the start of supply and the annual consumption estimates to the new supplier with a PRODAT Z11 message, using reason code 1, or with a PRODAT Z10 message, using reason code 12 (if the time of start is related to a change in meter or metering method) and the metering information to the previous supplier with a PRODAT Z11 message, using reason code 3, within 10 working days of the supplier switching time at the latest.

The reading is carried out within +/- 5 working days of the start/end of the contract. The reading information must be recorded for the start/end of the contract.

### 3.5 Party ID

All participants in the electricity market must have their own party ID. The party IDs are granted by transmission system operator Fingrid, and they are found on:

<http://www.fingrid.fi/portal/suomeksi/sahkomarkkinat/taseselvitysinformaatio> > [osapuolet.pdf](#). Contact details on balance settlement are also available on the same website.

### 3.6 Routing of messages

The routing of PRODAT messages is managed so that the EDI service providers stated in the table of PRODAT and MSCONS contact details (= PRODAT- ja MSCONS-yhteystiedot) in [www.energia.fi/sahkomarkkinat/sanomaliikenne/tiedonvaihdon-yhteystiedot](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/tiedonvaihdon-yhteystiedot) are entered as the address in the UNB segment. Further information: EDIEL sanomavälityksen yleiset sovellusohjeet: [www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/ohjeet-ja-suositukset).

### 3.7 PRODAT contact details

The table of PRODAT contact details with information on PRODAT messaging relating to the parties is presented in the address [www.energia.fi/sahkomarkkinat/sanomaliikenne/tiedonvaihdon-yhteystiedot](http://www.energia.fi/sahkomarkkinat/sanomaliikenne/tiedonvaihdon-yhteystiedot). The party that has submitted the information is responsible for the information contents of the table of contact details.

### 3.8 Hourly-metered sites

Of the PRODAT messages, only the messages related to the start and end of the contract (Z03, Z04, Z05, Z08) are used for reporting the metering point, customer and contract information of hourly-metered metering points of over 3x63 amperes.

- Thus, it must be remembered that the consumer profile referred to in the messages is 0.
- The metering information of an hourly-metered metering point with over 3x63 amperes is delivered with a MSCONS message instead of a

PRODAT Z11 message. In MSCONS and DELFOR messages, the universal metering point ID is used as the site ID:

*FI\_SUPPLIER\_SYSTEM\_DSO's metering point ID*  
E.g. FI\_VF\_HKE000\_83625

- In PRODAT messages (PRODAT Inhouse message description field 'metering point ID'), only the end part is used as the site identifier, i.e. DSO's metering point ID (in example 83625).

The metering information of an hourly-metered metering point with a maximum of 3x63 amperes can be transmitted in two alternative ways until 31 December 2011 in sites where the customer does not have a product based on hourly pricing. According to a government decree, the metering information of all hourly-metered sites, also those with a maximum of 3x63 amperes, must be primarily reported with a daily MSCONS message. This is explained in further detail in section 2.3.3 of this document, in the Electricity market procedural instructions and in the general Ediel instructions, which are available on [www.energia.fi/sahkomarkkinat/sanomaliikenne](http://www.energia.fi/sahkomarkkinat/sanomaliikenne).

### 3.9 Reason codes and IDs

The following table presents in further detail the reason codes used in PRODAT messaging and the measurement types. It should be noted that it is not permitted to leave a reason code field empty.

It is recommended that the fuse size is recorded in the messages on the following terms: without spaces, using lower case (x) and without the ampere sign (A, a), for example, 3x25. If the site has several connection lines, the recording method is, for example, 2x3x63; 1x3x63 is not permitted.

Use case ID (reason code)	Z03	Z04	Z05	Z06	Z08	Z09	Z10	Z11
1=new data	○	○	○		○	○		○
2= confirmation of a request for reconnection / implemented reconnection					x			x
3=meter reading (end/move)								x
4=								
5=invoicing reading								x
6 =intermediate meter reading								x
7=change of meter/metering method							○	
8=								
9= confirmation of disconnection / implemented disconnection					x			x
10=change of measurement type				x				
11= change of invoicing mode				x				
12= meter switch taking place at the beginning of sale							x	
13=fuse size has changed				x				
14=move	x		x		x			
N=negative answer *1)		x			x			

Invoicing mode: (who invoices the customer for network service/energy)								
1=supplier invoices for energy, and DSO invoices network service (default value)	○	○		○		○		
2=DSO invoices for both	x	x		x		x		

2=supplier invoices for both	x	x		x		x		
------------------------------	---	---	--	---	--	---	--	--

Measurement type ID *2)								
0=hourly metering *3)	x	x		x			x	
1=single-rate metering	0	0		0			0	
2=two-rate metering, night/day	x	x		x			x	
3=two-rate metering, winter/summer	x	x		x			x	

Consumer profile ID								
0=hourly metering	x	x		x			x	x
1=group 1	x	x		x			x	x
2=group 2	x	x		x			x	x
3=group 3	x	x		x			x	x
6=hourly-metered site in group 1	x	x		x			x	x
7=hourly-metered site in group 2	x	x		x			x	x
8=hourly-metered site in group 3	x	x		x			x	x

**0 = default value**

**x = available**

\*1) Negative answer is used for notifying that a new contract cannot be started.

\*2) Nationwide measurement type IDs are in the format 0=hourly metering, 1=single-rate metering, 2=two-rate metering night/day or 3=two-rate metering winter/summer.

Company-specific measurement type IDs are in the format:

code(0-3) + company ID (2-4 letters)+(3-4) numbers

e.g.: 2SPS1

\*3) Hourly metering shall primarily be identified with the consumer profile number stated in the Z03, Z04 and Z10 message, which is zero for hourly-metered sites. The measurement type ID for an hourly-metered metering point may deviate from zero.

### Nationwide time division of metering services

It is of primary importance that the first character of the ID is always one of the following codes so that the measurement type IDs used can be unambiguously identified by the systems:

**0** = hourly metering

**1** = single-rate metering

**2** = two-rate metering, night/day

**3** = two-rate metering, winter day/other time

If the time divisions used by the company fully comply with the above-mentioned decree, it is deemed that the ID on its own is sufficient information, e.g.: **2**.

### Company-specific measurement type IDs

Companies are not obliged to follow the time divisions of the decree. The ID of a company-specific time division deviating from the decree must be in the following format:

**CODE(0-3)+COMPANY ID(2-4 characters)+IDENTIFIER(1-4 characters)**

e.g.: **2SPS1**

The length of the timing zone field is 8 characters and therefore, if the company's ID is 4 characters long, the length of the identifier may be a maximum of 3 characters.

#### 4. Aperak messages

Aperak is an acknowledgement message between applications in order to ensure successful message exchange and to verify the message contents.

All of the PRODAT messages referred to in these instructions are responded to with an Aperak message if there is an Aperak request in the original message that needs to be acknowledged. The sender of the message is always responsible for the delivery of the message all the way to the acknowledgement message, so the sender should always make sure that the message to be sent has an Aperak request.

All messages contradicting these procedural instructions (e.g. shortcomings or errors in the message contents or time) are responded to with a negative Aperak. However, this does not apply to the optional fields of the messages.

It must be checked from the received Z03 messages, e.g. that the metering point ID is found in the area of the system operator in question. It is always checked from the other messages that the supplier's contract number and the metering point ID match with each other.

It is not permitted to send a negative Aperak message on an erroneous address in a Z03 message, but the DSO may check the address and notify of the error, for example, by email.

A negative Aperak acknowledgement message sent by the recipient always means that the information in the message in question is not entered into the system. Matters that the sender of the original message cannot rectify with a new message must be attended to by e-mail.

An Aperak message must be sent at least once every working day. The intention is that the system responds immediately to an Aperak request.

When using an Aperak message, the Contrl message is not used. An Aperak message is not responded to with another Aperak message.

A negative Aperak message may sometimes be due to an error in the recipient's system while the original message to be acknowledged is completely faultless.

If the error (that causes a negative Aperak) is in the recipient's system, the parties should agree on remedial measures. If the recipient has sent a negative acknowledgement message without cause, a correct positive acknowledgement message may be sent after the first one within a short period of time once the error in the recipient's system has been removed. However, it is not possible to act the other way round, i.e. it is not possible to send a negative acknowledgement after a positive one with respect to the same event.

## Description of the use of messages

### Z03[1], Z05[1], Z08[1/N], Z04[1/N] messages; Supplier switching

- **Z03[1] message;** The new supplier notifies the DSO of the new sale contract to the metering point located within the network area of the DSO
  - In this case, the contract is concluded with a customer who is the other party of the network contract of the metering point in question.
  - On receipt of this message, the distribution system operator launches a supplier switching procedure, consisting of a chain of PRODAT messages between the parties (DSO, current supplier, new supplier). The messages in this chain are Z05[1], Z08[1] or Z08[N] and Z04[1] or Z04[N].
  - Without analysing or intervening in the contents of the message in any way, the network company transmits this notice immediately to the current supplier of the metering point in the form of a **Z05[1] message** as a notification of termination of the current sale contract.
  - The ID and contract number of the new supplier must not be forwarded in a Z05[1] message.
  - The current supplier checks whether the contract can be terminated at the proposed time and notifies this immediately to the network company with a Z08[1] or a Z08[N] message.
  - If the current supplier does not respond within 5 working days, the network company confirms the start of sale with a Z04[1] message. See further details hereafter.
- **Z08[1] message;** notification of the termination of current sale contract
  - Supplier switching will take place at the time given in the network company's Z05[1] message.
  - The network company records the supplier switching event in its system so that the supply by the current supplier terminates at the time given in the Z08[1] message and the supply by the new supplier who has sent the Z03[1] message will start immediately after the termination of the previous contract. The contracts are valid for periods of full 24 hours.
  - The network company immediately notifies the new supplier of the start of supply, including metering point information, with a Z04[1] message.
  - The network company reads the meter at the proposed time.
  - The network company will notify to the old supplier the metering information at the time of the end of supply; the meter readings and balance energies with a Z11[3] message.
  - The network company passes to the new supplier the metering information at the start of supply; the meter readings and forecasts with a Z11[1] message.
  - The network company will take no account of the energies of the metering point in question after the time entered in the current supplier's balance.
  - The network company will take account of the energies of the metering point in question starting from the time entered in the new supplier's balance.
  - If the message is not processed as part of the supplier switching process, but as a notice of termination of supply based on the current sale contract (e.g. fixed-

term contract) and there is no new sale contract for the metering point after the presented time, the network company will disconnect the electricity at the metering point at an agreed time.

- **Z08[N] message**; notification of the continuation of current sale contract
  - Supplier switching will not take place at the time given in the network company's Z05[1] message.
  - The current supplier shall report the first possible day of termination of the valid contract in its message if there is a maximum of 30 days' difference between the starting day of the proposed new contract and the day of termination of the current contract.
  - The network company immediately notifies the supplier who has sent the Z03[1] message of an impediment for the implementation of supply with a Z04[N] message.
  - The network company will still take account of the energies of the metering point in question in the current supplier's balance.
- **Z04[1] message**; Distribution system operator confirms the start of supply, including metering point data, to the new supplier
  - It must be noted that with this confirmation the distribution system operator also assumes the responsibility for taking account of electricity use in the metering point in question in the new supplier's energy balance as from the starting day of supply stated in the message.
  - Deviating from the other messages, the name of the customer in the network contract of the metering point is stated in this message. If there are different names, the suppliers should find out the reason for this. It is recommended that the suppliers draw up sale contracts for the name that is stated in the network contracts.
- **Z04[N] message**; Distribution system operator notifies the new supplier that the supply cannot be started
  - If the current sale contract cannot be terminated, the network company immediately transmits a notification on the rejection of the new sale contract, without analysing it or intervening in the contents of the Z08[N] message in any way, to the sender of the message in the form of a **Z04[N] message**.
  - The information received from the current supplier on the first possible day of termination of the contract is transmitted in the message.
  - The current supplier's ID and contract number must not be forwarded in the Z04[N] message.

#### **Z03[14] message; Moving in**

- With this message, the customer's supplier notifies the network company of a new sale contract on a certain metering point of the network company, also on a completely new metering point. The contract has been concluded with a customer who is moving into the metering point stated in the message.
- The contract is based on information given by the new customer of the supplier (notifier) and the metering point information acquired by the supplier.
- With this message, the supplier, authorised by the customer, assumes the responsibility for terminating the effective network and sale contracts on the metering point in question (this does not apply to completely new metering points to be taken into use)

and for drawing up a new network contract for the customer name referred to in the message.

- The new customer may be moving into the metering point, the electricity supplier of which is the party that sent the message. In these situations where the supplier of the metering point remains the same when the customer changes, the supplier does not have to send a separate message for terminating the supply due to expiring contracts with a customer who is moving out.
- The network company terminates the current network contract of the metering point in question on the day before the date presented in the message, if such a contract is effective (the customer who has moved out has not given notice of the move), and invoices the old customer for the electricity consumed until the day of move.
- The network company draws up a new network contract for the customer name given in the message starting from the day given in the message.
- If there is a sale contract for the metering point, the network company will immediately deliver an advance notice of the termination of the current contract to the current supplier of the metering point with a Z05[14] message (due to the customer moving out). It is not necessary to send an advance notice if the sender of the message on moving in is the same as the current supplier of the metering point (the supplier of the metering point remains unchanged but the customer parties of the sale contract change).
- The network company acknowledges the start of supply to the new supplier (the sender of the (Z03[14] message) with a Z04[1] message, including the metering point information.
- The network company reads the meter at the proposed time.
- If the metering point has a sale contract, the network company will notify the old or notifying supplier of the metering information for the time of the end of supply; the meter readings and balance energies with a Z11[3] message.
- The network company notifies the new/notifying supplier of the metering information at the start of supply; the meter readings and forecasts with a Z11[1] message.
- If the metering point has a sale contract, the network company will take no account of the energies of the metering point in question after the time entered in the current supplier's balance if the supplier parties have changed.
- If the metering point has no sale contract, the network company will connect the power at the presented time and takes into account the energies of the metering point in the new supplier's balance starting from the presented time.

#### **Z08[14] message; Moving out**

- The current or new supplier (with whom the customer has a contract on the metering point where the customer is moving to) of the customer moving out will notify the network company of the customer's move out of a certain metering point of the network company.
- The notice is based on the new sale contract between the customer who is moving out and the supplier this customer has chosen, concerning the metering point, which may also be located in the current network area.
- The network company will immediately deliver an advance notice on the termination of the current sale contract to the current supplier of the metering point using a Z05[14] message and terminates the network contract of the customer who is moving out. If the

customer's new supplier is the same supplier the customer had in the old metering point, there is no need to send an advance notice.

- The network company reads the meter at the proposed time.
- The network company will notify the old supplier of the metering information at the time of the end of supply; the meter readings and balance energies with a Z11[3] message.
- The network company will take no account of the energies of the metering point in question after the time entered in the current supplier's balance.
- If the metering point does not have a new sale contract after the presented time, the network company will disconnect the electricity to the metering point at an agreed time.

**Z05[14] message;** The network company's advance notice to the current supplier on the termination of supply due to the customer's move out.

### **Z11 messages; Notice of metering information**

With the metering information message, the distribution system operator reports all of the reading use cases and the changed annual consumption estimates as a result of the reading use case.

- **Z11[1] message;** Notice of metering information at the start of supply
  - Along with the message revision, this updated message is used for reporting, in addition to the meter readings, the changed balance energy forecasts and annual consumption estimates to be taken into account in the energy balance and invoicing, starting from the reading use case.
  - With this message, the distribution system operator confirms that the consumption based on the new estimate for the metering point will be taken into account in the supplier's balance starting from the beginning of the metering period/supply.
- **Z11[3] message;** Notice of metering information at the end of supply
  - The use case may only be based on a Z08[1], Z08[14] or Z03[14] message notifying the end of the sale contract or on a notice of move given by the customer to the distribution system operator.
  - This message is also used by the distribution system operator to provide information on the fact that the consumption in the metering point in question will not be taken into account in the supplier's energy balance after the metering period/day of termination stated in the message.
- **Z11[5] message;** Notice of metering information during supply, used as a basis for invoicing
  - Along with the message revision, this updated message is used for reporting, in addition to the meter readings, the energy consumed during the metering period and the amount of energy taken into account in the balance, the changed balance energy forecasts and annual consumption estimates, which are to be taken into account in the energy balance and invoicing, starting from the reading use case.
  - With this message, the distribution system operator confirms that the consumption based on the new estimate for the metering point will be taken into account in the supplier's balance starting from the end of the metering period/supply.
  - The distribution system operator's own customer balancing or actual consumption-based invoicing shall be based on the metering information of this message.
- **Z11[6] message;** Notice of metering information of intermediate meter readings carried out monthly or at another intervals

- This message is used for the notification of so-called intermediate and control meter readings i.e. the meter readings that the network company does not use for the balance settlement of the customer invoice or invoicing based on actual consumption.
- **Z11[9] message;** The distribution system operator notifies the metering information at the time of disconnection of the metering point to the current supplier of the metering point
  - The disconnection may be due to a delayed payment of the sales or network service invoices.
  - It must be noted that disconnection is not the same as a termination of a sale contract. For this kind of metering point, the balance energy during disconnection must be 0.
- **Z11[2] message;** The distribution system operator notifies the current supplier of the metering point of the metering information at the time of reconnection of the metering point

### **Z06 and Z10 messages; Notice of changed information**

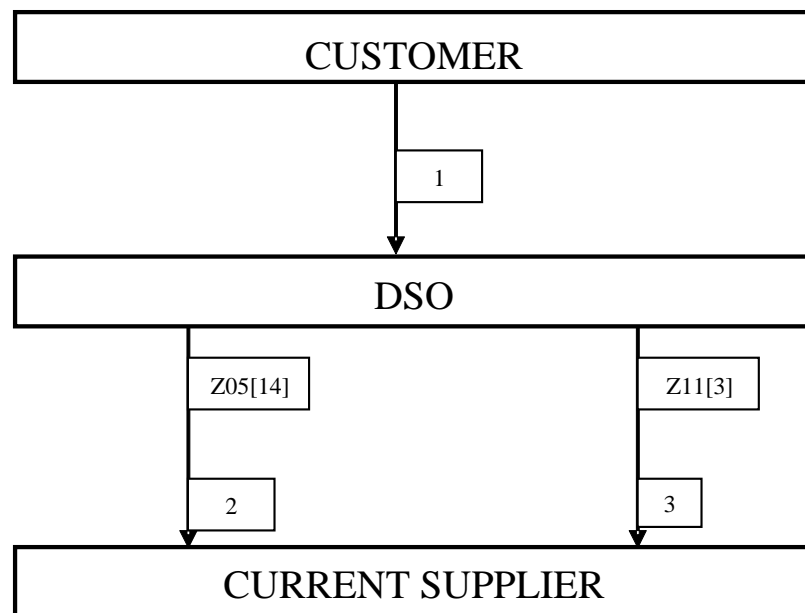
At the beginning of or during supply, there are often situations where the customer or a supplier authorised by the customer orders changes to the energy metering referred to in the network contract and used as a basis for invoicing, or only to the invoicing contract. Without exception, these changes have an impact on the effective revisions of the network and/or invoicing contracts. In such a case, the old contract must be terminated and a new one drawn up. Such an event always requires meter reading, in which case the invoicing and balance energy forecasts may also change. It may also be a question of maintenance measures or updates on metering carried out by the distribution system operator, in which case the meter readings recorded on the event may also result in changes in the above-mentioned forecasts. The Z10 message is used for reporting information that has changed as a result of the meter or the change of the metering method. The Z06 messages are used for reporting changes resulting from other measures. Reason codes are used for reporting the event of a change having an impact on the contractual contents. Other information in the message is related to consumption and balance settlement and management.

- **Z06[11] message;** The distribution system operator confirms the change in the invoicing method to the current supplier
  - This notice must be based on the supplier's notice, a PRODAT Z09[1] message, which the supplier uses for notifying of the change made to the sale contract in order to change the invoicing method. Based on this notice, the distribution system operator terminates the invoicing contract connected to the customer's effective network contract and draws up a new invoicing contract for the metering point in question, with the electricity supplier of the metering point as the customer.
  - The meter must be read as a result of the event.
- **Z06[10] message;** The distribution system operator notifies the current supplier of the change of timing zone
  - With older metering equipment, this change can be implemented only in two-rate metering when the change is made from night-time electricity (measurement type ID 2) to seasonal electricity (measurement type ID 3) or vice versa. In other cases, the event must be implemented by changing the meter. In such a case, the notice to the supplier must be made with a Z10 message.
  - With modern metering equipment, this change can be implemented in all cases just by reading the meter at the time of change.

- **Z06[13] message;** The distribution system operator notifies the current supplier of the change of fuse size
  - Several network and supply companies are using tariffs where the contracts include, for example, a product known as fixed charge, which is usually based on the size of the front or tariff fuse of the metering.
- **Z10[12] message;** The distribution system operator notifies the new supplier of the metering point of the metering information at the start of supply and the change of the meter or metering method timed for the start of supply
  - As the metering technology has developed, the network companies have adopted a practice to carry out the meter change at the same time as the supplier of the metering point changes.
  - The purpose of this message is to replace the information on metering, reported previously to the supplier with a Z04 message, and to notify the readings and forecasts at the beginning of supply.
- **Z10[7] message;** The distribution system operator notifies the current supplier of the metering point of changes in the meter or metering method that have taken place during supply.
  - This message is used for notifying not only the readings of the old, removed meter and the energy consumed during the measurement period, and the amount of energy taken into account in the balance, but also the metering information of the new meter, and the annual consumption estimates that have changed as from the event.
  - The message can also be used for the change in metering method even if the meter is not changed.

**Z09[1] message; The current supplier of the metering point notifies the distribution system operator of the change in the invoicing method**

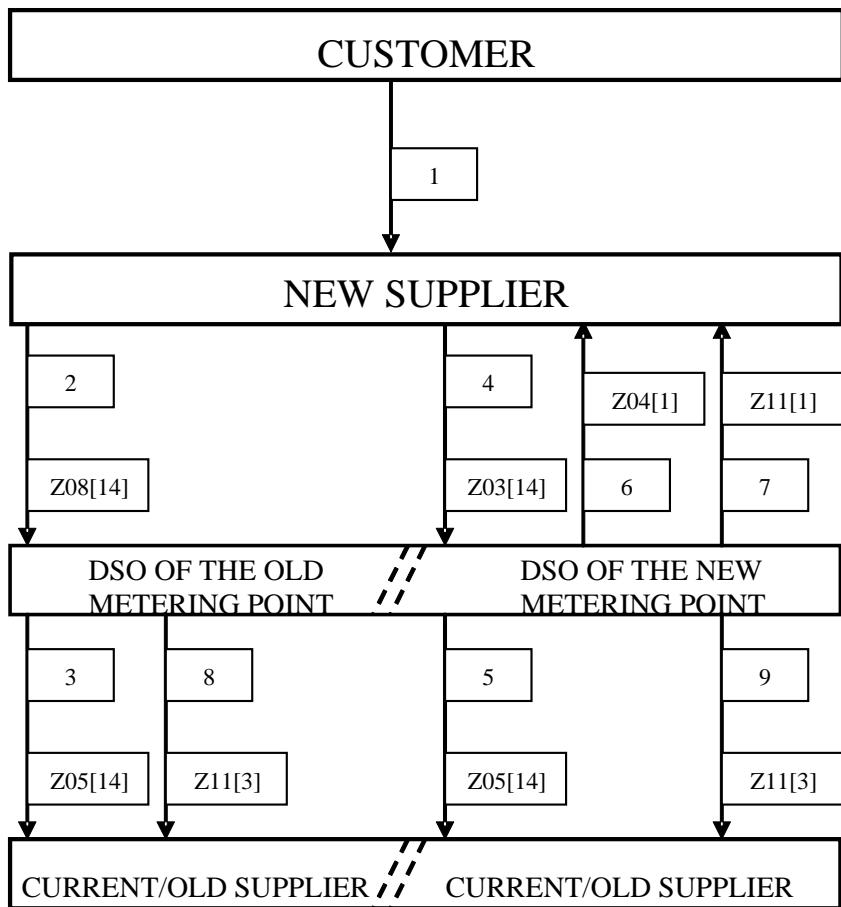
The supplier and the customer may agree on the customer's invoicing practice in the middle of the supply period so that the network service and sales invoices related to the electricity use are received only from the other company. In such a case, the most common practice is that the supplier invoices for both network service and sale.

**MESSAGES RELATED  
TO THE MOVING PROCESS****CUSTOMER NOTIFIES THE SYSTEM OPERATOR OF THE MOVE**

1. The customer notifies the DSO of the move
2. DSO sends the supplier of the metering point an advance notice of the move out.
3. DSO reports to the supplier the metering information at the end of supply

**MESSAGES RELATED TO THE MOVING PROCESS**

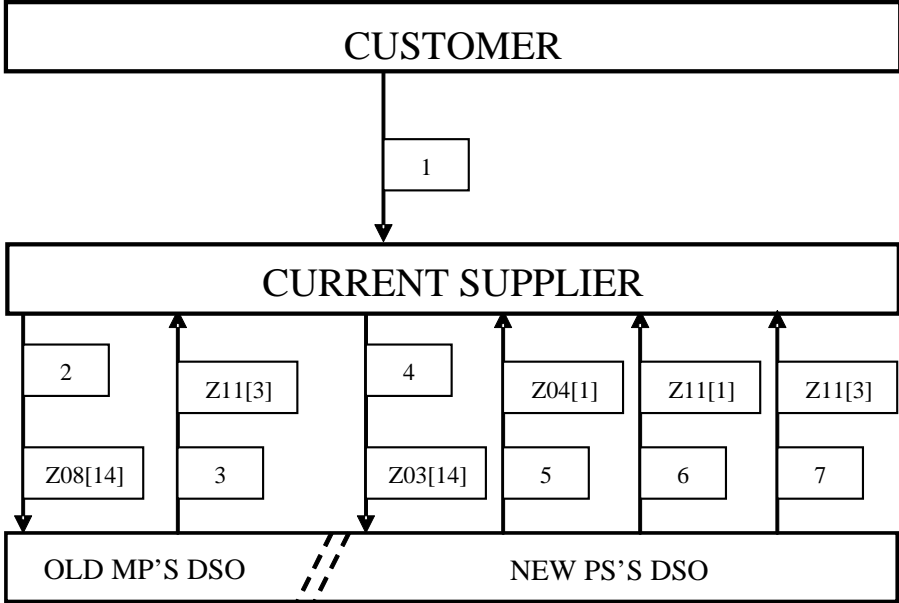
**CUSTOMER'S NEW SUPPLIER (DIFFERENT FROM THE CURRENT SUPPLIER) NOTIFIES OF THE CUSTOMER MOVE**



1. The customer concludes a contract for the new metering point with the new supplier of his choice who then notifies of the move out of the current metering point, authorised by the customer.
2. The new supplier notifies the DSO of the old metering point of the move out.
3. The DSO of the old metering point sends an advance notice of the move out to the current supplier of the metering point.
4. The new supplier notifies of its customer's move into the new metering point.
5. The DSO of the new metering point sends an advance notice of the move out to the current supplier of the metering point.
6. The DSO of the new metering point acknowledges the start of new supply including metering point information.
7. The DSO of the new metering point reports the metering information at the start of supply to the new supplier.
8. The DSO of the old metering point reports the metering information at the end of supply to the old supplier.
9. The DSO of the new metering point reports the metering information at the end of supply to the old supplier.

**MESSAGES RELATED TO THE MOVING PROCESS**

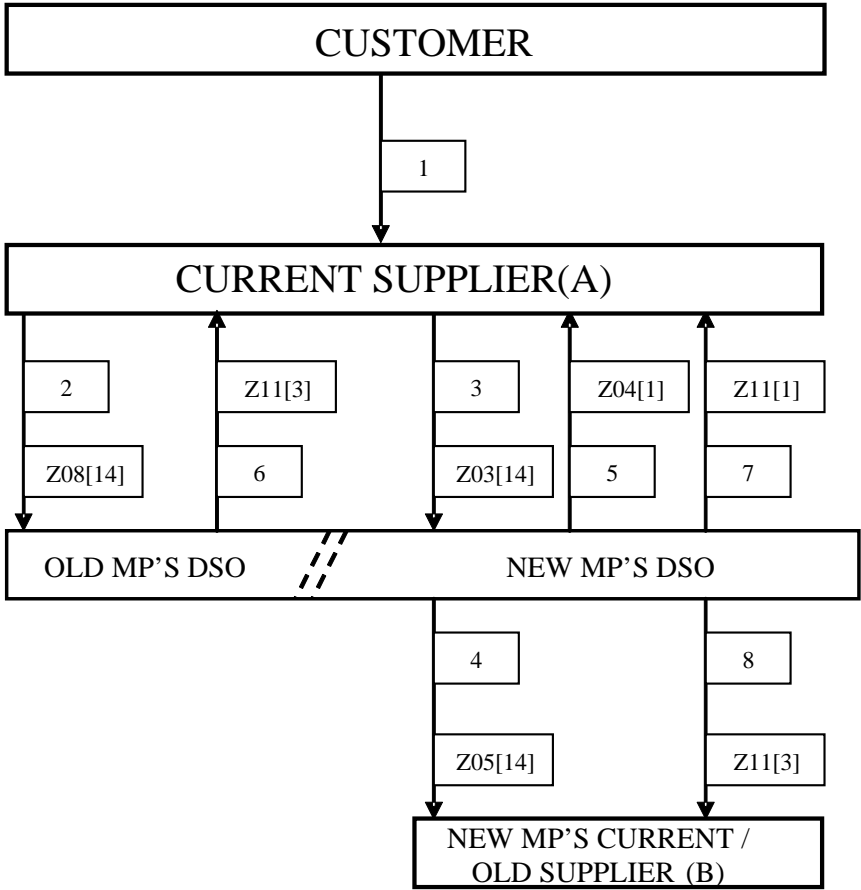
**CUSTOMER'S CURRENT SUPPLIER MAKES NOTIFICATION. CUSTOMER MOVES TO NEW METERING POINT TO WHICH THE SUPPLIER HAS AN EXISTING SALE CONTRACT**



1. The customer notifies his current supplier of his move out of the current metering point and concludes a contract for the new metering point.
2. The supplier notifies the DSO of the customer's metering point of the termination of contract due to moving out.
3. The DSO reports the metering information at the end of supply to the supplier.
4. The supplier notifies of its customer's move into the new metering point.
5. The DSO of the new metering point acknowledges the start of new supply including metering point information.
6. The DSO of the new metering point reports the metering information at the start of supply to the supplier.
7. The DSO of the new metering point reports the old contract's metering information at the end of supply to the supplier.

**MESSAGES RELATED TO THE MOVING PROCESS**

**CUSTOMER'S CURRENT SUPPLIER MAKES NOTIFICATION. CUSTOMER MOVES TO NEW METERING POINT WITH A DIFFERENT SUPPLIER FROM THE NEW ONE CHOSEN BY THE CUSTOMER.**



1. The customer notifies his current supplier (A) of his move out of the current metering point.
2. The supplier (A) notifies the DSO of the customer's metering point of the termination of contract due to the move.
3. The supplier (A) notifies the DSO of the customer's move into the new metering point.
4. The DSO of the new metering point sends an advance notice of the move out to the current supplier of the new metering point (B).
5. The DSO of the new metering point acknowledges the start of new supply to the new metering point including metering point information to the new supplier (A).
6. The DSO of the old metering point reports the metering information at the end of supply at the old metering point to the supplier (A, which continues as the customer's current supplier).
7. The DSO of the new metering point reports the metering information at the start of supply to the new supplier (A).
8. The DSO of the new metering point reports the metering information at the end of supply to the old supplier (B) of the new metering point.

## Use of reading dates in PRODAT messages

In PRODAT messages, the start and end dates of the reading period, as well as all other time stamps transmitted in the messages, are transmitted in accordance with the Ediel application instructions. The time of start is part of the period, and the end date is the first moment of time outside this period.

In Z11[1]-, Z11[3] ja Z10[12] messages, the start and end times of the reading period must correspond to the start and end times of the contract, regardless of the actual moment of reading. The contracts are always valid for full 24-hour periods, i.e. they start at 0.00 at the beginning of the first day of contract and they are terminated at the end of the last day of contract.

In other messages, such as in Z11[5] and Z11[6] messages, it is also possible to transmit the end time directly at the exact time of the reading event.

End reading, i.e. an Z11[3] example:

- If the contract terminates on 31 December 2008, the figure 200901010000 is recorded in the 'Metering period end date' field of the message. In the example, local time has been used, i.e. the transition of the time stamps in the message is 2 hours compared with the UTC time.

Invoicing and intermediate meter readings, i.e. a Z11[5] or Z11[6] example:

- If the reading takes place at 15.00 hours on 31 December 2008, the figure 200812311500 is recorded in the 'Metering period end date' field in the message. In the example, local time has been used, i.e. the transition of the time stamps in the message is 2 hours compared with the UTC time.
- If the reading takes place some time on 31 December 2008, but the exact time is not known or the sender does not want to specify it, the metering period is recorded to terminate at the end of 31 December by entering the figure 200901010000 in the 'metering period end date' field. In the example, local time has been used, i.e. the transition of the time stamps in the message is 2 hours compared with the UTC time.

**N.B.!** If the message contains a reading related to the start or the end of the contract, the start and end times of the metering period must correspond to the start and end times of the contract in question, regardless of the actual time of reading.

An example:

- If a Z11[5] or Z11[6] message follows the start of the contract, the start time of reading is expressly the start time of the contract that has been previously notified in the Z11[1] message. Therefore, in the reading message (Z11[5] or Z11[6]) following the start of the contract, the time of the 'metering period begin' time stamp must be 00.00.

### **Rounding up the time stamp to the nearest 24 hours when using invoicing and intermediate meter readings**

The technical group recommends that the time of the invoicing and intermediate meter readings should always be rounded up in invoicing and other use, i.e. to the end of the 24-hour period in question.

An example on the following page:

<b>Time of reading</b>	<b>Reading message used</b>	<b>Dates on the invoice</b>	<b>Invoicing period in the system</b>
1.1. 15:49	Meter reading, start of the period Z11[1] 1.1. 00:00		
15.1. 12:32	Invoicing meter stand Z11[5] 1.1. 00:00 - 15.1. 12:32	1.1. – 15.1	1.1. 00:00 – 16.1. 00:00
28.2. 21:48	Meter reading, end of the period Z11[3] 15.1. 12:32 – 1.3. 00:00	16.1. – 28.2.	16.1. 00:00 – 1.3. 00:00

**N.B.!** If an actual reading for the turn of the 24-hour period is available on the site, this must be used in messages related to the start and end of the contract.