



File ref: 24-192

Instructions for the questionnaire Swedish Telecommunications Market 2023

Read the information about the survey before filling in the information.

Questions regarding investments, employees and turnover for the operations subject to notification (question 1-5) should be answered by all companies.

**The other parts should be completed if you have such operations.
Footnotes are found at the end of each section.**

The answers are to be submitted via the web questionnaire.

The answers should be submitted no later than 16 February 2024.

BACKGROUND AND INVESTMENST

Questionnaire for

**Basis for SMP assessments, The Swedish Telecommunications Market 2023,
official statistics on telecommunications operations 2023,
Basis for chargeable turnover
EU Commission and BEREC**

Question a) If you wish to change the pre-printed information concerning company/organisation name or registration number, you can select this below and enter new information on the next page.

Company/organisation name:	
Company/organisation registration number:	

Question b) Contact information for this questionnaire, Swedish Telecommunications Market

Contact person:	
Telephone:	
E-mail:	

Question c) Information about the company/organisation

Contact person for PTS:	
Address	
Address (continue)	
Postal code	
City	
Country:	
Telephone Switchboard:	
E-mail where PTS can send decisions, new permissions etc.	
Website:	

Question d) Which companies are included in the information that you report for the first half-year? Please enter names and registration numbers.

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Question e) Which operations have you acquired since 31 December 2022? Indicate whether these are included in this reporting or not.

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Question f) Which operations have you sold since 31 December 2022?

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Information about the questions: All revenue and turnover should be stated in thousands of Swedish krona (SEK)

Please be attentive of which unit is requested. For example questions regarding investments and revenues are to be reported in thousands of SEK. It is always specified if numbers should be presented in thousands.

I confirm that all information regarding revenue and turnover is reported in thousands of SEK.	Yes
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Question g) Within which area did you have operations in Sweden during 2023? Yes/No

<i>Fixed call services (also IP telephony):</i>	
<i>Interconnection in fixed networks:</i>	
<i>Mobile call and data services and mobile broadband:</i>	
<i>Interconnection in mobile networks:</i>	
<i>Internet subscriptions:</i>	
<i>Television services:</i>	
<i>Bundled subscriptions:</i>	
<i>Dark fibre and wavelength connections to operators and end users:</i>	

BACKGROUND AND INVESTMENST

*Data communications services to operators and end users:
Networks owner of networks in Sweden and operations as communication operator
(kommunikations operatör) in Sweden:*

Question h) If you have answered no on all areas on g), please describe which area of electronic communications you have operations.

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Question 1: Investments in own operation [1] related to telecommunications in Sweden [thousand SEK] during 2023:

Include total investment in property (land or buildings) and equipment (networks equipment, hardware, software, office equipment, and motor vehicles).

For active equipment, routers and switches are included.

	Total (thousand SEK)
Total investmests related to telecommunications (both tangible and intangible fixed assets) license fees excluded	
Total investments in tangible fixed assets related to telecommunications:	
<i>of which within fixed telephony operations:</i>	
<i>of which within mobile networks (investments in GSM, UMTS, LTE and 5G networks) :</i>	
<i>of which fixed broadband network (including passive and active equipment [2]):</i>	
<i>of which other related to telecommunications including computers and computer-controlled equipment:</i>	
Total investments in intangible fixed assets related to telecommunications (Do not include license fees):	

**Question 2: Number of full-time employees (35 hours or more per week) within Sweden on 31 Dec 2023:
If you do not have any employees, enter 0 (zero).**

	Men	Women	Total
Total number of full-time employees:			
Number of full-time employees within telecommunications operations:			

Foot notes

- 1 Include total investment in property (land or buildings) and equipment (networks equipment, hardware, software, office equipment, and motor vehicles).
- 2 For active equipment, routers and switches are included

CHARGEABLE TURNOVER/ FEE QUALIFYING REVENUE

Questions: please contact anmalningsplikt@pts.se

CHARGEABLE TURNOVER/ FEE QUALIFYING REVENUE

Companies and other organisations engaged in operations subject to an obligation to notify are obliged to pay certain fees to PTS. The fees are based on the so called chargeable turnover/ fee qualifying revenue in Sweden. By chargeable turnover/ fee qualifying revenue (In Swedish "avgiftsgrundande omsättning") is meant turnover during the preceding financial year concerning the operations subject to the obligation to notify according to chapter 2, Section 1 of the Electronic Communications Act (2022:482). The operations in Sweden subject to the obligation to notify according to chapter 2, section 1 of the Electronic Communications Act (2022:482) are defined as public electronic communications networks provided for remuneration and public available electronic communications services with the exception of numberindependent interpersonal communications services and activities that consist solely of the transmission of signals via wire for broadcast to the public of programs referred to in chapter 1, section 2 of the Fundamental Law on Freedom of Expression (Swedish: yttrandefrihetsgrundlagen).

If you report for two or more companies within the same group and these companies are separately notified to PTS, please enter one company and one amount per row in the question below.

SEK 0 (zero) shall be reported if no operation requiring notification is carried out and explain in the comment why the company need to be notified to PTS. If the company has no activities in Sweden regarding electronic communications, the company probably does not need to be notified. Instructions for withdrawal of notification: <https://www.pts.se/en/english-b/telephony/vc/>

PTS is entitled to estimate the notifier's chargeable turnover/fee qualifying revenue if it is inadequately or not reported and for the first year of operation (after notification). PTS estimate the chargeable turnover/ fee qualifying revenue on the notifier's previous annual report or previously reported numbers.

PTS fees are based on the reported or estimated chargeable turnover/ fee qualifying revenue and will be announced in a separate decision, before the fee is invoiced.

For further information regarding notification and fees:

<https://pts.se/en/english-b/telephony/vc/>

Notification of operators: <https://www.pts.se/en/english-b/telephony/vc/>

Guidelines for fee-qualifying revenue: <https://pts.se/sv/bransch/telefoni/anmalningsplikt/vagledning-for-avgiftsgrundande-omsattning2/>

More about sales within the same company group, see footnote [1] in the question below.

Question 3: Chargeable turnover/ fee qualifying revenue in Sweden in financial year 2023. By chargeable turnover (Swedish avgiftsgrundande omsättning) is meant turnover during the preceding financial year concerning the activities subject to notification.

More information about what is to be included can be found in Guidelines for fee-qualifying revenue, see links above and [1]. (Specify in thousand SEK)

	Specify concerned company/companies	Chargeable turnover in thousand SEK
	Total	

Comments:

Question 4: Chargeable turnover for the financial year 2023 equal to 30 million SEK or more the information must be certified. This is done through an authorized signatory (e.g. MD, CFO, Accounts Manager or similar) confirming the chargeable relevant turnover.

	I confirm that the chargeable turnover is accurate. If the chargeable turnover is incorrect, please insert correct chargeable turnover in question 3.	
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Name:	
Position:	

Question 5: Invoice adress

	Address	
	Address (continue)	
	Postal code	
	City/District	
	Country:	
	Invoicing reference	
	Invoicing reference 2	

Verify chargeable turnover

The chargeable turnover, according to question 3, should be greater than the sum of revenues reported in the questions in The Swedish Telecommunications Market, see below.
In this context, chargeable turnover refers to the turnover for the operations subject to notification according to the Swedish Electronic Communication Act, Chapter 2 Section 1.

Verify that your information regarding chargeable turnover is stated correctly.

Provide an explanatory comment below if the chargeable turnover is below the sum of the questions above.

Totalt

Chargeable turnover according to question 3 (thousand SEK):

Question	<p>Sum of revenues in The Swedish Telecommunications Market excluding revenues from TV-subscriptions (thousand SEK):</p> <p>Specification below of which questions that are sum of revenues</p> <p>6 Fixed call services (also IP telephony):</p> <p>9 Interconnection in fixed networks:</p> <p>14 Mobile call and data services and mobile broadband:</p> <p>18 M2M</p> <p>19 Revenues from leased networks for MVNO</p> <p>21 Interconnection in mobile networks:</p> <p>26 Internet Services (exkl. Mobile Data)</p> <p>32 Data communications services to operators:</p> <p>33 Data communications services to end users:</p> <p>34 Wavelength connections to operators and end users:</p> <p>35 Dark fibre connections to operators and end users:</p> <p>38 Revenues for broadband access to end users</p>	<div style="border: 1px solid black; width: 100px; height: 20px; background-color: #e0ffff; margin: 0 auto;"></div>	
		Revenues 2023	Revenues 2022
Comments:			

1 Sales within the same company group

PTS believes that revenue (i.e. such revenue pertaining to operations which are subject to an obligation to notify),- which is due to sales within the same company group, should be included in chargeable turnover/fee-qualifying revenue, with the following exceptions:

PTS believes that revenue from wholesale sales which take place

within the same company group, from one notified company (A) to another in Sweden notified company (B) shall not be included in the chargeable turnover/fee-qualifying revenue provided that the company buying the services or network (B) uses those in its provision of notifiable services/network to its end customers in Sweden.

This means that the revenue for the same services/network provisioned within the same company group is the basis for the chargeable turnover/fee-qualifying revenue only once.

FIXED CALL SERVICES

If you have reported a number of subscriptions on one type of subscription then you also need to report the revenues and the number of traffic minutes for the same type of subscription.

Question 6: Number of active subscriptions for fixed telephony (PSTN, ISDN, IP-based and internet-based telephony [1]). Only subscriptions which have generated traffic the last three months. SIP-trunks not included. 31 Dec 2023:

	Private	Business	Total
Subscriptions with both telephony and traffic[2]:			
of which via PSTN-access[4]/GTA[3]/ISDN-access[5]			
of which via ip-based access (xDSL, kabel-tv, LAN, other ip-based access [9]):			
Total number of subscriptions:			

Comments:

Question 7: Revenues (thousand SEK) for fixed telephony (PSTN and ISDN, IP-based and internet-based telephony) SIP-trunks not included, during 2023:

	Private	Business	Total
Subscription charges from PSTN, ISDN, and IP-based-subscriptions as in question 6:			
Other fixed charges (installation charges, transfer charges etc.):			
Variable charges			
Total revenues for fixed telephony from end users:			

Question 8: Number of outgoing traffic minutes (in thousands) from end users for fixed telephony (PSTN, ISDN, IP-based and Internet-based telephony). SIP-trunks not included. As of 31 December 2023:

	Private	Business	Total
Calls from national fixed networks to national fixed networks[12]:			
Calls from fixed networks to mobile networks:			
Calls from national fixed networks to international fixed and mobile networks:			
Other telephony services:[13]:			
Total number of outgoing traffic minutes for fixed telephony:			
of which traffic minutes from IP-based telephony:			

Question 9: Number of outgoing calls (in thousands) from end users for fixed telephony (PSTN, ISDN, IP-based and Internet-based telephony). SIP-trunks not included. As of 31 December 2022:

	Private	Business	Total
Calls from national fixed networks to national fixed networks[12]:			
Calls from fixed networks to mobile networks:			
Calls from national fixed networks to international fixed and mobile networks:			
Other telephony services[13]:			
Total number of outgoing calls for fixed telephony:			
of which calls from IP-based telephony:			

FOOT NOTES

- 1 Relates here to the form of IP-based telephony where the telephone call made by a subscriber to IP-based telephony should be able to reach and be reached by telephones connected to the PSTN and ISDN networks. PBXs that are connected via IP protocol should also be included. Exclude Internet telephony with which it is not possible to call ordinary telephone numbers and that is not connected to the traditional telephone network.
- 2 Relates to subscriptions that includes both telephony access and traffic (that is pre-selected subscriptions excluded)
- 3 Wholesale line rental. Relates to resale under agreements concluded with Telia Company, both prior to and after 18 May 2005.
- 4 A PSTN subscription is equivalent to a main line to an own end user, where subscriptions for analogue telephony are supplied. The operator with subscription customers usually owns the main line, leases the main line from a network operator (for example by full or shared access) or purchases wholesale line rental for telephony subscriptions. An indirectly connected customer (i.e. a customer connected via WLR, a pre-selection customer or a prefix customer) should not be included here.
- 5 An ISDN subscription is equivalent to a main line to an own end user, comprising either basic rate or primary rate ISDN. The operator with subscription customers usually owns the main line, leases the main line from a network operator or purchases wholesale line rental for telephony subscriptions. An indirectly connected customer (i.e. a customer connected via WLR, a pre-selection customer or a prefix customer) should not be included here.
- 6 A 'LAN network' means a fixed connection (local area network, property network) usually based on Ethernet technology. The LAN is linked to a public fibre network; for example, an area network.

Changes since STM2022

Question 6, STM 2022

Removed row

Removed question

- 7** Relates to active pre-selection customers where the customer is indirectly connected. 'Active' means that the customer has made at least one call during the last quarter in the period. Please note that if a customer has different pre-selections for national and international calls, this only corresponds to one customer. Corresponds to the English term 'Carrier PreSelect' (CPS). Relates to pre-selection for both PSTN and ISDN.
- 8** Local Loop Unbundling, dvs. tillträde för andra operatörer till konventionella abonnentledningar via det reglerade tillträdet i form av LLUB (fullt eller delat tillträde).
- 9** Refers to IP-based telephony subscriptions where the form of access is unknown.
- 10** Refers to a subscription for fixed telephony where the customer is not charged by the minute for calls made to fixed and mobile networks in Sweden. Thus it does not matter, from a cost point of view, whether the customer makes a call to a geographical telephone number or to a mobile number.
- 11** Excluding subscription charges from xDSL, fixed charges for value-added services and supplementary services.
- 12** Does not include calls to dial-up Internet access, calls to mobile networks, free-phone, calls with shared cost, pay telecom services and mass call services or directory enquiry services.
- 13** Relates to calls from/using pre-paid telephone cards from payphones (both national and international calls); calls with shared cost (077-); directory enquiry services (118 XYZ); pay telecom service and mass call service (0900-, 0939-, 0944- and 099-). Also relates additional services, free-phone services and value added services. Examples of additional services are wake-up calls, voice mailbox, invoice specifications, call minder, incoming phone number presentation, blocking of certain incoming numbers, forwarding to another phone number, direct call to a pre-set number when receiver is lifted, repetition of the last used number, speed numbers.
- 14** Only such calls to dial-up Internet access that are invoiced to the operator's own end users are reported, i.e. the calls that are registered as calls to dial-up Internet access on the customer's invoice. Only relates to dial-up Internet access; i.e. via PSTN and ISDN.

INTERCONNECTION IN FIXED NETWORKS

Interconnection in fixed networks, concerns here only with wholesale and refers to exchange of traffic between operators.

Question 10: Termination [1] of incoming traffic to own fixed networks:

	Yes/No
Do you provide termination of incoming traffic to own fixed networks?	

Question 9: Interconnection revenues [3] (thousand SEK) in fixed networks (incl. group internal revenues) during 2023:

	Total	of which group internal
Termination of incoming traffic from national operators' networks[1]:		
<i>of which revenues from voice traffic excluding fixed costs[3]:</i>		
Termination of international incoming traffic:		
<i>of which traffic originated outside of EU/EES[4]:</i>		
Interconnection revenues from originated traffic[5]:		
Total interconnection revenues for fixed telephony:		

Question 10: Number of interconnection minutes (in thousands) in fixed networks (incl. group internal traffic) during 2023:

	Total	of which group internal
Number of terminated traffic minutes from national operators' networks[1]:		
Number of terminated traffic minutes from international incoming traffic:		
<i>of which traffic minutes originated outside of EU/EES[6]:</i>		
Number of traffic minutes from originated traffic[5]:		
Total number of interconnection minutes:		

FOOT NOTES

- 1 Call termination covers the transfer of calls from the point of interconnect, regardless level in the public communication
- 2 Relates to gross revenues including fixed charges and group internal revenues, i.e. before any set-off.
- 3 The statistics is used for interconnection fixed networks regulation and EU questionnaire BEREC Benchmark Termination
- 4 The question is used for the follow up on price regulation on the markets fixed call and mobile call termination
- 5 Call origination is defined in the corresponding mirror image as call termination.
- 6 The information is collected to follow up article 5a in European parliaments and council regulation (EU) 2015/2120 of 25

MOBILE CALL AND DATA SERVICES AND MOBILE BROADBAND

If you have reported a number of subscriptions for a type of subscription on question 11, you also need to answer the questions about revenues and traffic minutes for the same type of subscriptions. In question 11-17 M2M-subscriptions should not be included.

Question 11: Number of subscriptions[1] for mobile telephony and mobile data (excludes customers of service providers that are not owned by an operator; i.e. indirect customers[2]), distributed by form of subscription and rate. **FWA subscriptions should be included as well as reported separately on question 12. As of 31 December 2023:**

Reported business subscriptions should be connected to the usage of mobile numbers, for example, if a company uses 200 numbers this should be reported as 200 subscriptions.

	Private	Business	Total
Number of mobile telephony subscriptions [1] for voice only [3]: of which active pre-paid cards (3-month rule)[4]: of which contract subscriptions:			
Number of mobile telephony subscriptions [1] for voice and mobile data[5]: of which active pre-paid cards (3-month rule)[4]: of which contract subscriptions:			
Number of mobile subscriptions[1] for mobile data only [7]: of which active pre-paid cards (3-month rule)[4]: of which contract subscriptions (include FWA subscriptions via mobile networks):			
Total number of subscriptions [1] for mobile telephony and data at the end of the period:			
Number of subscriptions that have used services in GSM networks (3-month rule):			
Number of subscriptions that have used services in UMTS networks (3-month rule)[8]:			
Number of mobile subscriptions which have used services in LTE networks[9]:			
Number of mobile subscriptions which have used services in 5G networks:			

Question 12: Number of active FWA subscriptions. See definition. As of 31 December 2023:

Definition of Fixed Wireless Access FWA (all criterias must be fulfilled):

- 1) FWA subscriptions are data transmission subscriptions delivered via mobile networks (for example LTE, 5G).
- 2) FWA subscriptions has allocated certain resource reservation (e.g. frequency band or band width, network slicing or traffic managing) to guarantee adequate level of service for an individual subscription.
- 3) FWA subscriptions are offered with specified lowest data transmission speed and where applicable other quality information (for example highest speed, response time, package loss) in the same way as fixed network subscriptions.
- 4) FWA subscriptions are sold to a particular address, and thus have a fixed point of use.

FWA via Fixed radio access should be reported under Fixed radio in the subform Internet.

	Private	Business	Total
Number of FWA subscriptions (meets the defintions in point 1,2,3 and 4 above):			
Number of FWA subscriptions that meets the definitions in point 1 and 4, but <u>not</u> 2 and 3 above:			
Total number of FWA subscriptions:			
Outgoing and incoming mobile data traffic (GB):			
Comments:			

MOBILE CALL AND DATA SERVICES AND MOBILE BROADBAND

Question 15: Number of subscriptions for mobile telephony and mobile data (excludes customers of service providers that are not owned by an operator; i.e. indirect customers[2] distributed by data allowance and month [31], [33]. As of 31 December 2023:

	Private	Business	Total
Number of contract subscriptions[1] for both mobile telephony and mobile data (from question 13)[4]:			
<i>of which less than 100 GB data</i>			
<i>of which 100- 200 GB data</i>			
<i>of which 201 GB data or more, although limited amount of data</i>			
<i>of which unlimited data</i>			
Sum of contract subscriptions for both mobile telephony and mobile data			
Number of contract subscriptions[1] for mobile data only (from question 13)[7]:			
<i>of which less than 100 GB data</i>			
<i>of which 100- 200 GB data</i>			
<i>of which 201 GB data or more, although limited amount of data</i>			
<i>of which unlimited data</i>			
Sum of contract subscriptions for mobile data only			
Comments:			

Question 13: Number of active mobile subscriptions and add-on services (such as watches) where the used SIM card is an eSIM and number of eSIM for wearables. By eSIM is meant a programmable SIM card where the functionality is built into the terminal.[34] , As of 31 December 2023:

eSIM is a technology that facilitates for the end users to switch providers of electronic communications networks and services, which is particularly important for providers and end users of M2M services.

	Private	Business	Total
Number of mobile subscriptions and add-on services (such as watches) where the used SIM card is an eSIM card:			
Comments:			

MOBILE CALL AND DATA SERVICES AND MOBILE BROADBAND

Question 14: Total revenues (thousand SEK) from end users for mobile call and data services[13] [31] for subscriptions in question 11. Revenues from FWA should be included. During 2023:

Please note that revenues should be stated in thousand SEK

Charges	Private	Business	Total
Fixed charges			
Subscription charges[14]:			
Variable charges			
Total revenues for mobile call and data services from end users:			
<i>of which revenues from contract subscriptions:</i>			
<i>of which revenues from pre-paid cards[4]:</i>			

of which are revenues from subscriptions for mobile data services only, no voice (both fixed and variable charges) [32]:

Question 15: Number of outgoing voice traffic minutes (in thousands) from end users for mobile telephony (excluding data traffic and international roaming). As of 31 December 2023 [20]:

Please note that traffic minutes should be stated in thousands

	Private	Business	Total
Outgoing voice traffic from mobile telephones to national mobile networks:			
Outgoing voice traffic from mobile telephones to national fixed networks:			
Outgoing voice traffic from mobile telephones to international fixed and mobile networks:			
Outgoing voice traffic from mobile telephones to other call services:			
Total number of voice traffic minutes for mobile telephony:			
<i>of which voice traffic minutes from GSM networks:</i>			
<i>of which voice traffic minutes from UMTS networks:</i>			
<i>of which voice traffic minutes from LTE networks (VoLTE):</i>			
<i>of which voice traffic minutes from NR networks (5G):</i>			
<i>of which voice traffic minutes in unknown networks:</i>			

MOBILE CALL AND DATA SERVICES AND MOBILE BROADBAND

Question 16: Outgoing and incoming traffic from end users[5][24] for mobile data services. Report Mobile data (Gbyte) in binary format [23]. Mobile data for FWA subscriptions should be included. As of 31 December 2023:

	Private	Business	Total
Mobile data via mobile broadband - subscriptions for only data[7]:			
Mobile data via mobile broadband - subscriptions for both voice and mobile data:			
Mobile data traffic (Gbyte) unknown if upstream or downstream:			
Total quantity of mobile data traffic (Gbyte):			
of which traffic in 4G network:			
of which traffic in 5G network:			
Comments:			

Question 17: Number of text messages (in thousands) and MMS (in thousands) sent during 2023 [25]:

	Private	Business	Total
Number of text messages sent from mobile telephones [26]:			
Number of SMS send from computer system or application[35]:			
Number of MMS sent from mobile telephones:			

M2M = machine-to-machine and IoT=Internet of things

Question 18: Revenues, traffic and number of M2M SIM cards [11] (excludes customers of service providers that are not owned by an operator; i.e. indirect customers, for example with MVNOs etc.), during 2023:

	Totalt
Number of SIM cards for M2M/IoT [11],[12][36] :	
of which used in Sweden:	
of which M2M using eSIM [34]:	
Revenues from SIM cards for M2M/IoT [19] (SEK 000s):	
of which used in Sweden:	
Total quantity of mobile data traffic from SIM cards for M2M/IoT (Gbyte):	
Comments:	

Leased networks for MVNO/Reseller business. To be answered by operators that are offering leased network capacity for MVNO or Reseller business.

Question 19: Revenues from leasing of network capacity for mobile call and data services to service providers [27](Reseller and MVNO) during 2023:

	Total
Revenues from leased networks for MVNO/Reseller business [28] for mobile call and data services (thousand SEK):	

MOBILE CALL AND DATA SERVICES AND MOBILE BROADBAND

Question 20: Which service providers^[27] (Reseller and MVNO) leased network capacity for mobile call, and data services to end users during 2023?

Name of company and corporate identity number
1
2
3
4
5
6
7
8

FOOT NOTES

- 1** "Subscription" refers to both contract subscriptions and pre-paid cards; pre-paid cards are reported under 'Private' and according to the 3-month rule (see 'pre-paid card' for definition). M2M, or Machine to Machine, should not be included, but should be reported separately in question.
- 2** Customers of service providers that are at least 50 per cent owned by the network operator itself are considered to be directly connected customers.
- 3** Also include those with subscriptions for a voice service that also have subscriptions for data but have not used the data access at least once during the last quarter of the period for which subscription charges have not been paid during the last quarter of the period.
- 4** Pre-paid cards must have been topped up or have generated (outgoing or incoming) traffic (minutes or data) or revenues during the last quarter of the period; all pre-paid cards are reported under 'Private'.
- 5** Only include subscriptions for a voice service that also allows the transmission of packet data and where the data access has been used at least once during the last quarter of the period or where a separate charge for mobile packet data has been paid during the last quarter of the period.
- 6** Refers to bundling products where the subscriber has purchased at least 1 GByte of data traffic. In practice, this means smartphones used for both calls and mobile broadband.
- 7** Include subscriptions which are used for mobile data and has been used at least once the last three months or the subscription fee has been payed during the last three months in the period. The subscription must not have generated any voice minutes.
- 8** Active GSM, UMTS and LTE subscriptions must have generated traffic (minutes or data) in the GSM, UMTS or LTE networks during the last quarter of the period.
- 9** LTE (Long Term Evolution). Also called 4G, fourth generation mobile networks.
- 10** Refers to mobile subscriptions with a fixed network number connected to SIM card as an add-on service.
- 11** M2M = machine-to-machine. SIM cards for M2M relates to services for communication between machines or other equipment (cars, trains, electric meters, consumer electronics etc.) and which are not a part of a private or company subscription. Subscriptions on mobile broadband (like tablets) should not be included here.
- 12** Customers of service providers that are at least 50 per cent owned by the network operator itself are considered to be directly connected customers.
- 13** Including active pre-paid cards, SMS, MMS, mobile data traffic and mobile value-added services. Excluding interconnection, international roaming abroad, machine-to-machine (reported separately) and group internal revenues. Supplementary charges or other instalment payments for discounted mobile telephones should also be excluded. Revenues from pre-paid cards are reported under 'Private'.
- 14** Fixed charges includes extra data that can be purchased as add-on services for a mobile subscription (with or without voice calls), when the included amount of data is finished. Exclude additional fees or other instalment payments for discounted mobile telephones (so called 'handset revenues'). Revenues from pre-paid cards are reported under 'Private'.
- 15** Only Voice traffic. Revenues from SMS, MMS, machine-to-machine (reported separately), mobile data traffic and mobile broadband should not be included.

MOBILE CALL AND DATA SERVICES AND MOBILE BROADBAND

- 16 Excluding revenues from value-added in premium SMS.
- 17 Including revenues from mobile broadband.
- 18 Excluding active pre-paid cards, SMS, MMS, mobile value-added services, interconnection, international roaming abroad, machine-to-machine (reported separately) and group internal revenues. Supplementary charges or other instalment payments for discounted mobile telephones should also be excluded. Do not include revenues from mobile "apps" (applications). Revenues from pre-paid cards are reported under 'Private'.
- 19 Revenues from both subscriptions and traffic.
- 20 State outgoing voice traffic minutes, regardless of whether they are debited or not. Voice traffic minutes from pre-paid cards are reported under 'Private'.
- 21 For service providers/third party operators where network capacity is purchased from a mobile network operator, 'voice traffic'/sms relates to voice traffic that terminates in the same network to which the service provider is connected.
- 22 Calls from pre-paid cards are reported under 'Private'.
- 23 1GByte=1 073 741 824 =(230 = 10243) bytes
- 24 Traffic from and to pre-paid cards is reported as 'Private'.
- 25 SMS and MMS sent from pre-paid cards are reported under 'Private'.
- 26 This refers to text messages sent from mobile terminals. Also includes text messages sent without being debited per item (those included in subscriptions of the type '3 000 free text messages'). Person-to-person.
- 27 Exclude those service providers that are owned 50 per cent or more by the network operator itself. Include other service providers and MVNOs.
- 28 Including all one-off charges plus fixed and variable charges.
- 29 Refers only to the revenues and traffic minutes for termination of calls payable to the service provider.
- 30 Refers to both national and international incoming traffic.
- 31 Includes revenue from extra data that can be purchased as an add-on service (so called 'data topups') for a mobile subscription with voice calls, when the amount of data is finished.
- 32 Includes revenue from extra data that can be purchased as an add-on service (so called 'data topups') for a mobile subscription without voice calls, when the amount of data is finished.
- 33 If a number of subscriptions share the amount of data (sometimes referred to as 'family subscriptions') report the total amount of data for the main subscription, and 'less than 1 GB data' for the other subscriptions. Also report subscriptions with variable amount of data as 'less than 1 GB data'. Do not include data topups. Family subscriptions with unlimited amount of data: Report all subscriptions in the family subscription under 'unlimited'
- 34 eSIM is an abbreviation of embedded sim and works basically like the physical SIM card you insert into the mobile telephone. The difference is that the information about a subscription is no longer linked to a physical SIM card, but can be sent wireless directly to, for example, the mobile phone, the watch or the tablet. eSIM can be programmed remotely.
- 35 This refers to text messages sent from computer systems eg. such as reminder of time booking, mass mailing as advertising or confirmation of ticket purchase. Machine-to-person.
- 36 IoT and M2M provide remote access for exchanging information among machines without human intervention. The key difference between IoT and M2M is that IoT connects any device to the Internet for better performance, and M2M is the connection of two or more than two devices with the Internet for data sharing and analytics.

INTERCONNECTION IN MOBILE NETWORKS

Interconnection in mobile networks, concerns here only with wholesale and refers to exchange of traffic between operators. The section "Mobile call services" deals with end customer /user.

Question 24: Termination [1] of incoming traffic to own mobile network during 2022:

	Yes/No
Do you currently provide termination of incoming traffic to your own mobile network?	

Question 21: Interconnection revenues [2](thousand SEK) in mobile networks incl. group internal revenues during 2023:

	Total
Termination of incoming [1] traffic from the networks of national operators:	
<i>of which revenues from voice traffic excluding fixed costs[3]:</i>	
<i>of which group internal revenues:</i>	
Termination of international incoming traffic:	
<i>of which revenues from traffic originated outside of EU/EES[4]:</i>	
Total interconnection revenues for	

Question 22: Interconnection minutes in mobile networks (in thousands) incl. group internal traffic during 2023:

	Total
Number of terminated call minutes [3] from	
<i>of which group internal traffic:</i>	
Termination of international incoming traffic:	
<i>of which traffic minutes to EU/EES[6]:</i>	
Total interconnection for mobile	

FOOT NOTES

- 1 Call termination covers the transfer of calls from the point of interconnect, regardless level in the public
- 2 Relates to gross revenues including fixed charges and group internal revenues, i.e. before any set-off.
- 3 The statistics is used for interconnection fixed networks regulation and EU questionnaire BEREC Benchmark
- 4 The question is used for the follow up on price regulation on the markets fixed call and mobile call termination
- 5 Call origination is defined in the corresponding mirror image as call termination.
- 6 The information is collected to follow up article 5a in European parlements and council regulation (EU)

INTERNET SUBSCRIPTIONS

Filter question Internet subscriptions. Which forms of access do you provide?

Yes/no

Cable television	
Fibre and Fibre-LAN	
xDSL, satellite, fixed radio or other fixed Internet access	

Question 23: Number of active subscriptions [1] for Internet service (access) distributed by form of access downstream, 31 December 2023:

	Private	Business	Total
Satellite:			
of which above 144 Kbps and below 2 Mbps:			
of which 2 Mbps and above (and below 10 Mbps):			
of which 10 Mbps and above (and below 30 Mbps):			
of which 30 Mbps and above (and below 100 Mbps):			
of which 100 Mbps and above:			
xDSL:			
of which above 144 Kbps and below 2 Mbps:			
of which 2 Mbps and above (and below 10 Mbps):			
of which 10 Mbps and above (and below 30 Mbps):			
of which 30 Mbps and above (and below 100 Mbps):			
of which VDSL 30 Mbps and above (and below 60 Mbps):			
of which VDSL 60 Mbps and above (and below 100 Mbps):			
of which 100 Mbps and above:			
xDSL via LLUB and other wholesale products (same subscriptions as xDSL above):			
of which xDSL end users connected via LLU (full access/line)[2]:			
of which xDSL end users connected via LLU (shared access/line) [2]:			
of which xDSL end users connected via other wholesale products [3]:			
Cable television:			
of which above 144 Kbps and below 2 Mbps:			
of which 2 Mbps and above (and below 10 Mbps):			
of which 10 Mbps and above (and below 30 Mbps):			
of which 30 Mbps and above (and below 100 Mbps):			
of which 100 Mbps and above (and below 250 Mbps):			
of which 250 Mbps and above (and below 500 Mbps):			
of which 500 Mbps and above (and below 1000 Mbps):			
of which 1000 Mbps and above:			
Fixed radio access[4]:			
of which above 144 Kbps and below 2 Mbps:			
of which 2 Mbps and above (and below 10 Mbps):			
of which 10 Mbps and above (and below 30 Mbps):			
of which 30 Mbps and above (and below 100 Mbps):			
of which 100 Mbps and above:			
Fibre and Fibre-LAN[5]:			
of which above 144 Kbps and below 2 Mbps:			
of which 2 Mbps and above (and below 10 Mbps):			
of which 10 Mbps and above (and below 30 Mbps):			
of which 30 Mbps and above (and below 100 Mbps):			
of which 100 Mbps and above (and below 250 Mbps):			
of which 250 Mbps and above (and below 500 Mbps):			
of which 500 Mbps and above (and below 100 Mbps):			
of which 1000 Mbps and above:			
Other fixed Internet access (state what under 'Comments'):			
of which above 144 Kbps and below 2 Mbps:			
of which 2 Mbps and above (and below 10 Mbps):			
of which 10 Mbps and above (and below 30 Mbps):			
of which 30 Mbps and above (and below 100 Mbps):			
of which 100 Mbps and above:			
Total number of active subscriptions downstream:			

INTERNET SUBSCRIPTIONS

Question 24: Number of active subscriptions [1] for Internet service (access) distributed by form of access upstreams. 31 December 2023:

	Private	Business	Total
Cable television upstreams			
of which over 144 kbit/s and under 2 Mbit/s:			
of which 2 Mbit/s and over and under 10 Mbit/s:			
of which 10 Mbit/s and over and under 30 Mbit/s:			
of which 30 Mbit/s and over and under 100 Mbit/s:			
of which 100 Mbit/s and over and under 250 Mbit/s:			
of which 250 Mbit/s and over and under 500 Mbit/s:			
of which 500 Mbps and above (and below 1000 Mbps):			
of which 1000 Mbps and above:			
Fiber and fiber-LAN [5] upstreams:			
of which over 144 kbit/s and under 2 Mbit/s:			
of which 2 Mbit/s and over and under 10 Mbit/s:			
of which 10 Mbit/s and over and under 30 Mbit/s:			
of which 30 Mbit/s and over and under 100 Mbit/s:			
of which 100 Mbit/s and over and under 250 Mbit/s:			
of which 250 Mbit/s and over and under 500 Mbit/s:			
of which 500 Mbit/s and over and under 1000 Mbit/s:			
of which 1000 Mbit/s and over:			
Satellite:			
of which above 144 Kbps and below 2 Mbps:			
of which 2 Mbps and above (and below 10 Mbps):			
of which 10 Mbps and above (and below 30 Mbps):			
of which 30 Mbps and above (and below 100 Mbps):			
of which 100 Mbps and above:			
xDSL, fixed radio and other fixed internet access (upstreams):			
of which over 144 kbit/s and under 2 Mbit/s:			
of which 2 Mbit/s and over and under 10 Mbit/s:			
of which 10 Mbit/s and over and under 30 Mbit/s:			
of which 30 Mbit/s and over and under 100 Mbit/s:			
of which 100 Mbit/s and over:			

Total active subscriptions upstream:

Comments:

Question 25: Number of active subscriptions [1] for Internet service (access) divided by a specific incoming (downstream) speed and a specific outgoing (upstream) speed. As of 31 December 2023:

This question refers to the same fibre and fibre LAN subscriptions as in previous questions but this question is divided by a specific incoming (downstream) speed and a specific outgoing (upstream) speed. The purpose of this question is primarily to understand the structure and conditions of the current broadband market better and which broadband subscriptions are bought. This is of importance for the analysis of the market. If you have questions, please contact Jesus.CumplidoBarreiro@pts.se

	Private	Business	Total
Total number of fibre and fibre LAN fibre and fibre-LAN subscriptions according to the previous question:			
Downstreams /Upstreams speed (Mbit/s):			
10/10 Mbit/s			
50/10 Mbit/s			
50/50 Mbit/s			
100/10 Mbit/s			
100/50 Mbit/s			
100/100 Mbit/s			
150/10 Mbit/s			
150/100 Mbit/s			
150/150 Mbit/s			
250/10 Mbit/s			
250/100 Mbit/s			
250/250 Mbit/s			
300/100 Mbit/s			
300/150 Mbit/s			
300/300 Mbit/s			
500/100 Mbit/s			
500/250 Mbit/s			
500/500 Mbit/s			
600/100 Mbit/s			
600/600 Mbit/s			
1000/100 Mbit/s			

INTERNET SUBSCRIPTIONS			
1000/1000 Mbit/s			
1200/100 Mbit/s			
10000/10000 Mbit/s			
Other speeds			
Total number of fibre and fibre LAN fibre and fibre-LAN subscriptions			
Comments:			

Question 26: Revenues (thousand SEK) from end users for active subscriptions[6] for Internet service (access), regardless of form of access. Including startup charges, and fixed and variable charges. Excluding mobile broadband and group internal revenues. During 2023:

	Private	Business	Total
xDSL :			
Cable television :			
Fibre and fiber-LAN [5] [10]:			
Other forms of access (Excl. mobile broadband):			
Total revenues for Internet subscriptions:			

Question 27: Number of active internet subscriptions and bundled subscriptions [7] which are group connections. Group connections refer to internet subscriptions that have been signed between the operator and, for example, landlords or housing cooperatives, rather than directly with the end users. State the number of active subscriptions, not the number of landlords etc. As of December 2023:

	Subscriptions
xDSL - subscriptions which are group connections	
Cable television - subscriptions which are group connections:	
Fibre and Fibre-LAN - subscriptions which are group connections	
Total number of internet subscriptions which are group connections:	
Comment to the answer:	

FOOT NOTES

- Active subscription' refers to a subscription that has used the access at least once during the last quarter in the period (only applies to customers who do not pay subscription charges). If the customer pays a subscription charge, the customer is deemed to be active if payment is made during the second quarter of 2011. If a tenant-owners' association or the equivalent is an end user, the number of underlying active Internet accesses shall be stated under 'Private' instead of the number of subscriptions. PLEASE NOTE: Here, this only relates to end users of ISPs. Operators that only provide broadband access without an Internet service should not include these customers.
- Local Loop Unbundling; i.e. access for other operators to conventional subscriber lines via the regulated access in the form of LLU (full or shared access).
- For example, pure resale products or products that are more raw, such as 'bitstream products'.
- Fixed radio - exclude subscriptions which are using the mobile network (i.e. exclude subscriptions for mobile data, M2M and FWA).
- Internet access is reached via a property network, i.e. a LAN (Local Area Network), usually based on Ethernet technology. The property network is linked to a public fibre network, for example, an area network. The property network, which may comprise optical fibre cable or copper-based cable, links the individual dwellings/operations with the property node, which in its turn is connected to the area networks.
- Includes e-mail only if this is a part of the fixed charge. Does not refer to revenues from data communications services.
- This refers to both bundled subscriptions that are marketed as an offering with pricelist for the bundled services, and services not marketed together as a special offering, i.e. where an end user buys two or three services separately, perhaps at two different occasions. PLEASE NOTE: This does not refer to subscriptions bundled with OTT-services such as Spotify.
- That is, local physical access for other operators to dark fibre in fibre access networks, where the leasing operator is responsible for/owns the transmission equipment.
- For example, transmission products from communication operators or pure resale products.
- If you are buying or renting the network access from another operator, include also revenues to you from end customers regarding network fee that the consumer must pay in order to use an internet subscription.

TELEVISION SERVICES

Questions about television services are intended for stakeholders having contracts with households or landlords for subscriptions concerning a basic package of television channels. These questions concern traditional pay TV subscriptions. This does not include subscription video on demand, such as Netflix.

Question 28: Number of active [1] subscription contracts on basic packages [2] concluded with households/end users or landlords 31 Dec 2023:

For reporting cable network subscriptions, contact PTS at e-komstat@pts.se

	Total
Analogue television in cable network [2][3]:	
<i>of which through contracts with landlord [2] [5]:</i>	
<i>of which contracts directly with households without subscription contracts with</i>	
Digital basic packages in the cable network [2][4]:	
<i>of which through contracts with landlord [2] [5]:</i>	
<i>of which contracts directly with households without subscription contracts with</i>	
Digital television in cable network where you have analogue contracts directly (i.e a direct invoice -relation) with households which, in turn, have contracts of basic packages via landlords:	
Digital television in cable network where you have digital contracts directly (i.e a direct invoice -relation) with households which, in turn, have contracts of basic packages via landlords:	
IPTV in fibre or fibre LAN [6]:	
<i>of which through contracts with landlord [5]:</i>	
<i>of which contracts directly with households without subscription contracts with</i>	
Digital television in IP-TV network where you have digital contracts directly (i.e a direct invoice -relation) with households which, in turn, have contracts of basic packages via landlords.	
Iptv via xDSL:	
IPTV via other infrastructure (please specify under 'Comments'):	
Television via terrestrial network:	
Television via satellite:	
Total number of subscriptions:	
Total number of subscriptions excluding those cable TV subscriptions that also have contracts with landlords [9]:	
Comment to the answer:	

Question 29: Revenues (thousand SEK) for the provision of television services to households [8] in the form of subscriptions for a basic package [9], package options and channel options [10] and other revenues from television services during 2023:

	Basic package [9] (thousand kronor)	Package options and channel options[10] (thousand kronor)
Analogue television in cable network [3]:		
<i>of which through contracts with landlords[5]:</i>		
<i>of which revenues from households:</i>		
Digital television in cable network[4]:		
<i>of which through contracts with landlords[5]:</i>		
<i>of which revenues from households:</i>		
IPTV in fibre or fibre LAN [6]:		
<i>of which through contracts with landlords [5]:</i>		
<i>of which revenues from households:</i>		
Iptv via xDSL		
IPTV via other infrastructure (please specify under 'Comments'):		
Television via terrestrial network:		
Television via satellite:		
Total revenues:		
Comment to the answer:		

The question below is intended for programming agencies that sell television channels to (for example) network or landlords and cable television operators (SMATV). Sappa and Allente run this type of operation.

Question 30: Number of households reached through agencies for programme companies. *'Agencies' refers to programming agencies that sell television channels to, for example, network and property owners and cable television operators SMATV). As of 31 december 2023:*

	Total number of households:
Agency operations	
<i>of which in cable television network:</i>	
<i>of which in fibre and fibre LAN:</i>	
Comment to the answer:	

FOOT NOTES

- 1 The TV subscription can be a contract with households or landlords or also t.ex. bostadsrättsföreingar. The subscription is active if a fee has been paid during the last 3 months in the period.
- 2 If the household has one analogue subscription indirect via the landlord and one digital direct between operator and household, the analogue subscription indirect via the landlord is reported as "analogue cable TV subscription via the landlord" and the digital cable TV subscription direct between operator and household is reported as "Digital cable TV subscription where the operator has contract directly (i.e a direct invoice -relation) with the household, which, in turn, has an analogue cable tv subscription via a land lord". In the case a household has dual cable TV subscriptions on basic package, one analogue and one digital, both indirect via a landlord, only the digital cable TV subscription is reported, to avoid double counting. This business model was used by Tele2 until 2013 and by Telenor from first half year 2014 (after the acquisition of Tele2s cable TV business). Subscriptions via minor cable TV nets and landlords are included in "SMATV" to avoid double counting.
- 3 The subscription is to be viewed as analogue if the signal distributed to the individual household is analogue.
- 4 The subscription is to be viewed as digital if the signal distributed to the individual household is digital.

- 5** Property owner' refers to a contract with a property owner that owns an apartment building or similar associations (eg. housing cooperatives). This means that the property owner is not the same as the household living there.
- 6** A 'LAN network' means a fixed connection (local area network, property network), usually based on Ethernet technology. The LAN is linked to a public fibre network, for example, an area network. Fibre and fibre-LAN means FTTH (fibre to the home) and FTTB (fibre to the basement)
- 7** The sum "Total number of subscriptions excluding those cable TV subscriptions that also have contracts with property owners" consists of "Total number of subscriptions" minus "Digital subscriptions (in cable TV networks and/or IPTV via fibre) where there is a direct contract (i.e. a billing relationship) with a household which, in turn, also has an analogue subscription via the property owner". This sum is an estimate of the number of households.
- 8** Revenues from provision of TV services, either via a contract directly with the household/end customer or via a landlord or similar.
- 9** Basic packages include all revenues which are attributable to a subscription on a basic package: current subscription expenditure, starting fees, rental or sale of digital TV-boxes and program cards.
- 10** Add-on subscription: A subscription on add-on services such as a package of special digital channels. Include all revenues which are attributable to the add-on subscription: current subscription expenditure, starting fees, rental or sale of digital TV-boxes and program cards (do not include revenues from basic packages). Do not include revenues from transaktionsbased VOD (video on demand) and pay-per-view. Do not include revenues from streaming services (such as Netflix)

BUNDLED OFFERS

Do not include OTT services like Spotify.

Question 31: Number of end users with two or more services where the price the end user pay is permanently lower than the price they would pay for the equivalent services if they bought separately. Please note definition, footnote 2. As of 31 Dec 2023:

Type of bundled subscription	Private	Business	Total
Double-play:			
Fixed telephony and fixed broadband:			
Fixed telephony and television:			
Fixed telephony and mobile telephony/mobile broadband:			
Mobile telephony/mobile broadband and fixed broadband:			
Mobile telephony and mobile broadband ^[1] :			
Mobile telephony/mobile broadband and television:			
Television and fixed broadband:			
Other combinations; state what under comments:			
Total number of double play end users:			
Triple play, three services:			
Fixed telephony and fixed broadband and television:			
Fixed telephony and fixed broadband and mobile telephony/mobile broadband:			
Fixed telephony and mobile telephony/mobile broadband and television:			
Mobile telephony/mobile broadband and fixed broadband and television:			
Other combinations; state what under comments:			
Total number of triple-play subscriptions:			
Quadruple play, four services			
Fixed telephony and fixed broadband and television and mobile telephony/mobile broadband:			
Other combinations; state what under comments:			
Total number of quadruple play subscriptions:			
Total number of double, triple and quadruple play subscriptions:			
Comment to the answer:			

FOOT NOTES

¹ This does not include twin cards.

2 The term "equivalent services" refers to the actual services delivered to the end user. In other words, it takes into consideration also those cases where the end user gets extra benefits, either in form of a upgraded service or extra services without an extra cost (thus, paying a lower price).

Take in consideration both the subscriptions including several services are sold as a whole package under a single price, as well as when products sold separately if it entitles a better price when comparing with the price of the equivalent services independently.

The term "permanent" means that provisional offers are not included, just those that has no time limit or that apply until the end of the contractual period.

Examples - include products such as: Telia Life and Telia joint mobil and broadband. Telenor Kombo, Tele2 broadband and fixed line.

Examples - do not include products such as: Family subscriptions for mobile lines, twin SIM cards, mobile phone device included with the mobile line subscription.

WHOLESALE HIGH-QUALITY ACCESS

If you have questions contact e-komstat@pts.se or Andreas Wigren, phone +46 8 678 55 00

PTS need data regarding both end-user as well as wholesale markets needs to get a good picture of the market and it's valuechains.

Wholesale high-quality access are digital leased lines typically demanded by business customers with specific requirements regarding quality, availability and/or servicelevels. High-quality access is often used by business customers to connect their multiple sites and for more high-quality internet, telephony and virtual private network connections which are often delivered to this customer segment. Wholesale high-quality access includes digital leased lines with both dedicated and none-dedicated capacity, with or without quality of service (QoS). A wholesale high-quality access is a connection provided between a fixed network accesspoint at the business customers site and a delivery point where the wholesale customer/operator can take over the transmission and pass it further in its own network.

If you do not sell these services, ie only have dark fibre, please enter "0" on all questions in this section.

Please note! Sales of high-quality access for mobile backhaul should not be included in the below reported figures. Neither should wholesale services used for private consumers' internet connections (communications operator services) be included.

Question 32: Revenues (in thousand SEK) from sales of high quality access [6] to wholesale customers[7] in Sweden under 2023. Do not include services provided by communications operators:

	Total	Internal sales[9]	External sales[10]
Revenues from sales of TDM-based (SDH/PDH) high-quality accesses:			
Revenues from sales of Ethernet-based [8] high-quality accesses			
Revenues from sales of other types of digital high-quality accesses:			
Total revenues from high-quality accesses:			

FOOT NOTES

- 6** Wholesale high-quality access includes digital leased lines with both dedicated and none-dedicated capacity, with or without quality of service (QoS). A wholesale high-quality access is a connection provided between a fixed network accesspoint at the business customers site and a delivery point where the wholesale customer/operator can take over the transmission and pass it further in its own network. High-quality access are digital leased lines typically with specific requirements regarding quality, availability and/or servicelevels. High-quality access is often used by business customers to connect their multiple sites and for more high-quality internet, telephony and virtual private network connections very often delivered to this customer segment.
- 7** Revenue from sales of high-quality access to wholesale customers produced either with own passive infrastructure or with leased passive infrastructure. Revenue from sales of high-quality access to retail customers should not be included. Neither should revenue from sales of high-quality access to the own retail business be included.
- 8** Refers to providing high-quality access with none-dedicated capacity, with or without quality of service (QoS)
- 9** Refers to revenues from selling high-quality access to the own business. If group internal sales are not separately reported, the value of revenue should be estimated.
- 10** Revenue from sales of high-quality access to external operators.

DATA COMMUNICATIONS SERVICES TO END-USER

If you have questions, contact PTS at e-komstat@pts.se

Question 33: Revenues (thousand SEK) from network services to business customers , with or without service level agreement. Do not include wholesale services used for private consumers' internet connections (communications operator services)[1]. In Sweden during 2023:

	Total
Digital SDH-based [2] leased lines to end users[1]:	
Digital Ethernet-based [3] leased lines to end users[1]:	
Analogue line capacity for end users:	
IP VPN[4]:	
Total revenues:	
Comment to the answer:	

FOOT NOTES

- 1 Refers to the retail market, i.e. sales made to end users. Wholesale sales, i.e. sales made to
- 2 Refers to TDM, PDH and SDH-based leased lines as a separate service.
- 3 Refers to point-to-point, Ethernet-based, non-overbooked leased lines, based on SHDSL or fibre access
- 4 IP-VPN relates to the following standards: IPsec VPN, IP MPLS VPN and IP SSL VPN.

DARK FIBRE AND WAVE LENGTH CONNECTIONS FOR WHOLESALE CUSTOMERS AND END USERS

Changes since S

If you have questions, contact Karin Fransén or Björn Backgård,
e-komstat@pts.se, +46 8 678 55 00

Question 34: Revenues (thousand SEK) for wavelength [4] connections for wholesale customers and end users in Sweden during 2023

Total	
Total revenues for wavelength connections:	
<i>of which group internal revenues[2]:</i>	

Question 35: Revenues (SEK thousands) from leasing of dark fibre connections[5] for wholesale customers and end users within Sweden during 2023:

Total	
Total revenues for dark fibre connections	
<i>of which group internal revenues[2]:</i>	

The questions below are only to be answered by network owners who during the year have rented out dark fibre connections in Sweden which are terminating in a building or mobile mast (monofiber, fiber pair or similar).

Question 36: Is it possible in your systems to distinguish if the leased dark fibre is used to produce broadband services via fibre to end-customers or if it is used to connect mobile masts?

yes

no

Change in form

37a: Number of dark fibre connection between node to residential building leased as of 31 December 2023 per category.

Change in form

If you can not distinguish between categories, enter all in Total and comment on what building types are included.

Do not include node to node connections or connections provided by communications operators.

	Multi dwelling unit	Single dwelling unit	Total (excl. master)	Mast
Product type:				
<i>Number of monofibre, fibre pair or similar</i>				
<i>Comments:</i>				

37b: Number of dark fibre connection between node to residential building leased as of 31 December 2023.

Change in form

If you can not distinguish between categories, enter all in Total and comment on what building types are included.

Do not include node to node connections or connections provided by communications operators.

	Multi dwelling unit	Single dwelling unit	Total
Product type:			
<i>Number of monofibre, fibre pair or similar</i>			
<i>Comments:</i>			

PRISER och AVGIFTER

Filter question Fiber: Is your company a communication operator in a city fibre network in Sweden or in any of the national or regional fibre providers networks?

Yes/No

REVENUES FOR BROADBAND ACCESS AND RECURRING FEES

The question is directed to operators that own fibre broadband networks i Sweden.

Question 38: Total revenues for broadband access to end users (thousand SEK) during 2022 in Sweden. Here revenues from end users regarding installation of fibre to for example house or company. Installation of fibre connections largely consists of contract work, e.g. excavation on the end user's plot. Revenues from such contract work shall be included in the reported amount.

Total**Revenues from broadband access to end users**

of which one-time revenues from end users. For example fees for connecting a fibre line to the end user's home.

of which recurring fees. For example a network fee that the consumer must pay in order to use an internet subscription provided by another operator. If you sell internet subscriptions where such a charge is included in the subscription fee, the revenues should not be reported here but reported in the question about subscriptions in subform Internet subscriptions. Revenues from internetconnection to end customers are not to be include in this question but only in the question about subscriptions in subform Internet subscriptions

Comment to the answer:

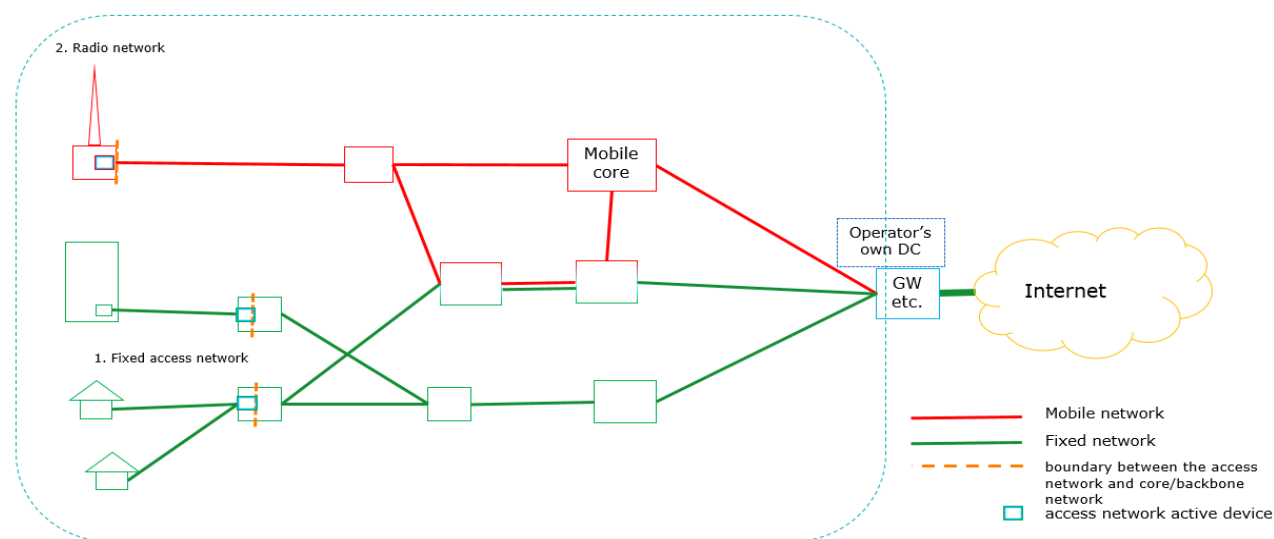
Energy consumption in communication networks

For inquiries please contact Martin.Lindqvist@pts.se or Karin.Fransen@pts.se, phone 08-678 55 00

PTS is starting to collect information regarding the environmental impact of communication networks. This follows from the increasing importance placed on energy consumption in the fixed networks and the mobile networks, as well as energy efficiency per gigabyte in both. These indicators are among the most reported and discussed in, among others BEREK and OECD, and PTS assesses that the importance of following energy use and energy efficiency will increase linked to climate change and energy supply. The questions are for network owners and communication operators and concern energy consumption in the fixed network and the mobile network.

Energy consumption in communication networks

The questions refers to network infrastructure used, owned or managed by your company.
The figure below show the network infrastructure used for questions regarding energy consumption.



Energy consumption refers to the period 1 January 2023 to 31 December 2023.

For question 39 - 42:

Include the energy consumption related to lighting, heating and cooling of the network infrastructure specified in each question. Include energy consumption for data centers in Sweden, which are owned by your company and used for processing telecommunication for customers in Sweden.

Do not include energy consumption for units used solely by the end customer. Also do not include properties or shops.

If you have a joint venture for network cooperation: write in the comment which joint venture and if you are reporting for your part of the energy consumption in the joint venture or if the joint venture reports all energy consumption in the joint venture.

Filter question energy: Which communication networks do you own or manage? Choose one of the alternatives.

Fixed broadband networks and mobile networks:	
Only fixed broadband networks:	
Only mobile networks:	
Neither fixed nor mobile networks:	
Comments:	

Question 39: Energy consumption in the fixed network, during 2023.

39a) Specify if the energy consumption in the fixed network (question 39b) refers to only your own company or if it also includes other companies that use your network. Choose one of the alternatives.

If possible, specify only the energy consumption from your own firm, row i).
If not possible, then specify the energy consumption from your own firm as well as that from other firms using your network, row ii).

i) Energy consumption in question 39b only from your own company:	
ii) Energy consumption in question 39b for your own company and other companies using your network:	

39b) State the energy consumption in the fixed network. Answer in only one of the alternatives.

If possible specify the energy consumption in the whole fixed network (all of the green line in the picture), on row i).
 If not possible then specify the energy consumption for the fixed access network (see number 1 in the picture, to the left of the dashed orange line in the green part of the picture), on row ii).
 Answer in only one of the alternatives.

	MWh
i) Energy consumption in the whole fixed network (green line):	
ii) Energy consumption in the fixed access network (see number 1 in the picture, to the left of the dashed orange line in the green part of the picture). The rest of the energy consumption in the fixed network is entered in question 41 together with the mobile network:	
Comments:	

Question 40: Energy consumption in the mobile network, during 2023.

40a) Specify if the energy consumption in the mobile network (question 40b) refers to only your own company or if it also includes other companies that use your network. Choose one of the alternatives.

If possible, specify only the energy consumption from your own firm, on row i).
 If not possible, then specify the energy consumption from your own firm as well as that from other firms using your network, on row ii).

i) Energy consumption in question 40b only from your own company:	
ii) Energy consumption in question 40b for your own company and other companies using your network:	
Comments:	

40b) State the energy consumption in the mobile network. Answer in only one of the alternatives.

If possible specify the energy consumption in the whole mobile network (all of the red line in the picture), on row i).
 If not possible then specify the energy consumption for the mobile radio network (see number 2 in the picture, to the left of the dashed orange line in the red part of the picture), on row ii).
 Answer in only one of the alternatives.

	MWh
i) Energy consumption in the whole mobile network (red line):	
ii) Energy consumption in the mobile radio access network (see number 2 in the picture, to the left of the dashed orange line in the red part of the picture). The rest of the energy consumption in the mobile network is entered in question 41 together with the fixed network:	
Comments:	

40c: Energy consumption per Gigabyte in the mobile network, during 2023.

	MWh/Gbyte
State your energy consumption per Gigabyte in the mobile network according to your own calculations or estimation:	
Comments:	

Question 41: Energy consumption in the network parts not covered by 1 and 2, during 2023.

State the energy consumption that is not included in 1 (fixed access network) or 2 (radio network), see the figure, but is still a part of both the mobile core network and the fixed core network. In other words, this covers all network infrastructure to the right of the dashed orange line, after the fixed access network and the radio network. The infrastructure could be used by either fixed or mobile networks or both.

	MWh
41a) Energy consumption in other network parts, excluding 1 and 2:	

41b) State or estimate the share of the above energy consumption which could be derived to the fixed network and the mobile network respectively:	Percent %
of which is derived from the fixed network:	
of which is derived from the mobile network:	
Total	
<i>Comments:</i>	

Question 42: State the share of your energy consumption which comes from the following energy sources, during 2023.

	Percent %
Renewable sources (solar, wind, water, waves, hydro, bioenergy or geothermal energy):	
Other fossile free sources (nuclear)	
Other energy sources (coal, oil, natural gas or peat)	
Total	
<i>Comments:</i>	