



# GHG Telecommunications Network Services (TNS) Factsheet

## How do I use this methodology? Ask for support!

Please note that the factsheet below is part of the GHG Protocol ICT Sector Guidance, which contains six chapters. The first chapter is an introduction to the general principles of life cycle accounting and reporting in the ICT sector; the following five chapters are divided into five separate factsheets, for better readability – and are available on the map of methodologies of the project. Although no specific factsheet was developed for the introduction chapter, relevant content is included in the factsheet below on Telecommunications Network Services (TNS).

	<b>GHG Protocol ICT Sector Guidance - Telecommunications Network Services (TNS)</b>	
Name of Initiative/Methodology	ICT Sector Guidance built on the GHG Protocol Product Life Cycle Accounting and Reporting Standard - Chapter 2: Guide for assessing GHG emissions of Telecommunications Network Services	
Link to the latest published version	GHG Protocol ICT Sector Guidance (07/2017): Final version <a href="http://www.ghgprotocol.org/sites/default/files/ghgp/GHGP-ICTSG%20-%20ALL%20Chapters.pdf">www.ghgprotocol.org/sites/default/files/ghgp/GHGP-ICTSG%20-%20ALL%20Chapters.pdf</a>	
Developed by	Carbon Trust, Global e-Sustainability Initiative (GeSI)	
History and Status	<ul style="list-style-type: none"> <li>• Work started in 2011, issued as drafts in two rounds of public consultation</li> <li>• Published in July 2017</li> </ul>	
Involved companies / parties	<ul style="list-style-type: none"> <li>• <b>Steering Committee:</b> Alcatel Lucent, BT, Carbon Trust, CDP, Cisco, Deutsche Telekom, European Commission, Ericsson, Fujitsu, Gartner, GeSI, HP, ITU, Massachusetts Institute of Technology, World Business Council for Sustainable Development, World Resources Institute, WSP</li> </ul>	
Scope	<input checked="" type="checkbox"/> <b>Organisation env. accounting</b> <input checked="" type="checkbox"/> Scope 1 <input checked="" type="checkbox"/> Scope 2 <input checked="" type="checkbox"/> Scope 3	<input checked="" type="checkbox"/> <b>Product env. assessment</b> <input checked="" type="checkbox"/> Life cycle approach <input checked="" type="checkbox"/> Use phase only
	<input checked="" type="checkbox"/> GWP <input checked="" type="checkbox"/> Energy (focus on secondary energy)	<input checked="" type="checkbox"/> Other environmental impacts <input checked="" type="checkbox"/> KPIs
System(s) covered by the methodology	Telecommunications Network Services. The services comprise ICT goods, including: <ul style="list-style-type: none"> <li>• Service provider equipment (e.g. routers, mobile transmitters, servers)</li> <li>• Support equipment such as cabling and racking</li> <li>• Customer premise equipment (CPE) such as telephones, computers and videoconferencing systems as well as equipment deployed on the customer's premises</li> <li>• Operational (people-related) activities associated with telecoms network services such as installation, maintenance and customer service</li> </ul>	
Goals	<ul style="list-style-type: none"> <li>• Providing supporting data for identification of a life cycle stage, subassembly or process that have significant GHG emissions (hotspot)</li> <li>• Assessing the GHG emissions of a TNS, e.g. in order to reduce the associated emissions (for an existing network) or to estimate potential future emissions (for a planned network)</li> <li>• Prioritising GHG emissions reduction efforts across the product life cycle (from a service provider or user perspective)</li> </ul>	
Generic features	<ul style="list-style-type: none"> <li>• All stages other than the use stage may be grouped together (embodied emissions)</li> <li>• Critical review by a first or third party is required</li> <li>• Offsets, avoided and delayed emissions are not to be included in the inventory results</li> <li>• Functional unit: <ul style="list-style-type: none"> <li>◦ For all final products, the unit of analysis is defined as a functional unit</li> <li>◦ For intermediate products where the eventual function is unknown, the unit of analysis is defined as the reference flow</li> </ul> </li> <li>• Cradle-to-gate and gate-to-gate inventory results should be reported separately (if not limited by confidentiality)</li> <li>• Companies shall disclose and justify any exclusions of attributable processes in the inventory report</li> <li>• Companies shall collect primary data for all processes under their ownership / control</li> <li>• Companies shall assess the data quality of activity data, emission factors, and/or direct emissions data</li> </ul>	
ICT-specific features	<ul style="list-style-type: none"> <li>• The scope and the function of the service being assessed shall be clearly described, focusing on the quantitative and qualitative aspects of the function</li> <li>• Examples of functional units are provided: <ul style="list-style-type: none"> <li>◦ One minute of use (e.g. phone call)</li> <li>◦ One megabyte of data transferred</li> <li>◦ Service contract life (e.g. three years)</li> <li>◦ Annual usage (i.e. one year)</li> </ul> </li> <li>• TNS are subdivided into 3 elements, that can be individually assessed: <ul style="list-style-type: none"> <li>◦ Customer Domain: all ICT equipment and support equipment (e.g. cabling) that is part of the TNS; associated cooling and uninterruptable power supply equipment; end-user equipment involved in the service provided</li> <li>◦ Service Platform: all ICT equipment and support equipment used by the TNS provider in delivering the service; ancillary support equipment (e.g. heating, air conditioning); uninterruptable power supply equipment</li> <li>◦ Operational Activities: any people (labour) activities and non-ICT support equipment that are directly engaged and dedicated to the assessed TNS. Embodied emissions may be excluded if the impact is of low significance</li> </ul> </li> <li>• Provision of calculation methods for the use stage (e.g. definition of required energy data), as well as typical values</li> <li>• Allocation is important in the assessment of TNS since many equipment is shared among multiple services (e.g. various end-users using the same routers). Refer to [ETSI 103 199] for allocation guidance specific to ICT</li> </ul>	
Examples of implementation / experience feedback	None identified - to be filled later	
Interaction with other methodologies	<ul style="list-style-type: none"> <li>• [IEC TR 62725] Analysis of quantification methodologies of greenhouse gas emissions for electrical and electronic products and systems</li> <li>• [ISO/TS 14067] Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification and communication</li> <li>• [ISO 14040] Environmental management - Life cycle assessment - Principles and framework</li> <li>• [ISO 14044] Environmental management - Life cycle assessment - Requirements and guidelines</li> <li>• [GHG Protocol Product Standard] Product Life Cycle Accounting and Reporting Standard</li> <li>• [ETSI TS 103 199] Life Cycle Assessment (LCA) of ICT equipment, networks and services; General methodology and common requirements</li> <li>• [ETSI ES 203 199/ITU-T L.1410] Methodology for environmental life cycle assessments of information and communication technology goods, networks and services</li> <li>• [PAS 2050] Specification for the assessment of the life cycle greenhouse gas emissions of goods and services</li> </ul>	



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