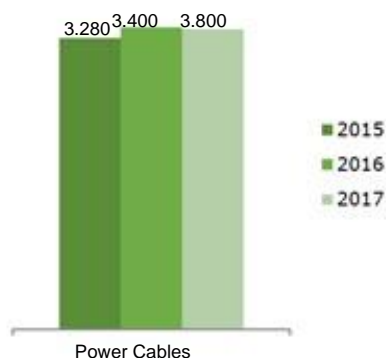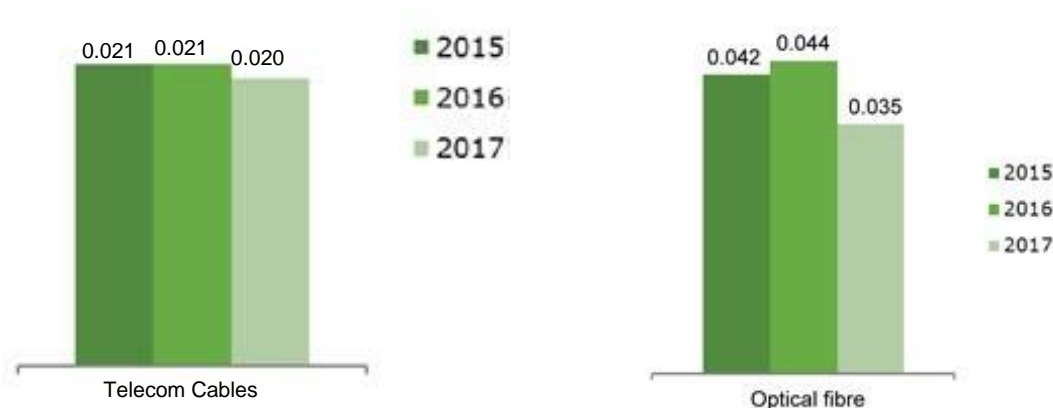## ENERGY CONSUMPTION PER TONNE OF PRODUCT (GJ/t)

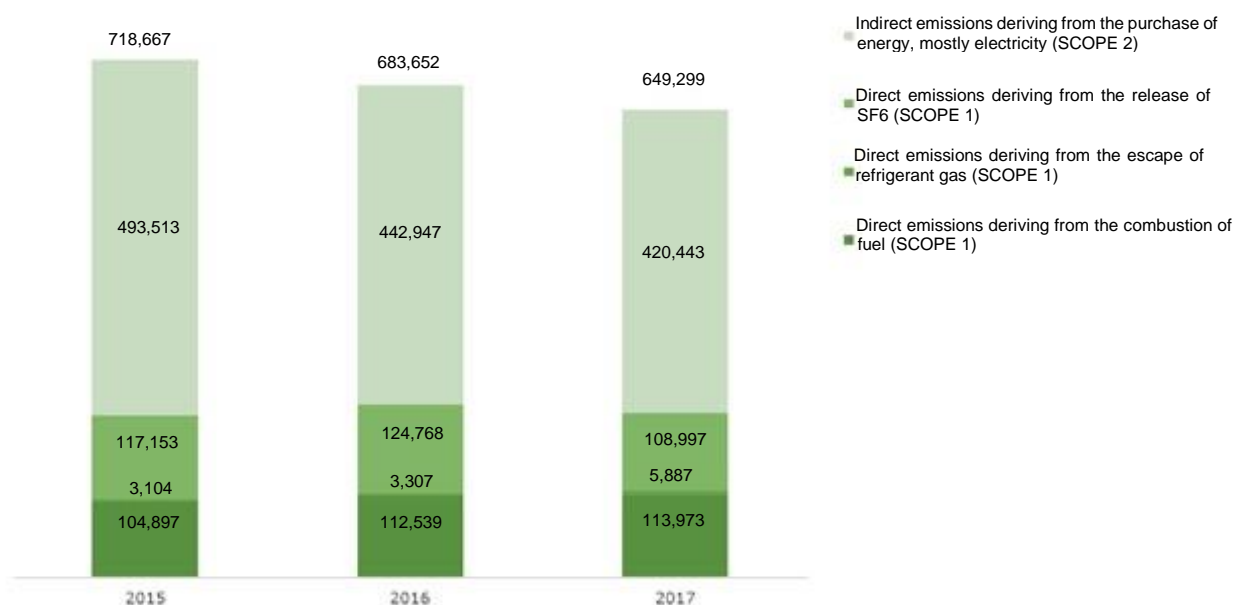## ENERGY CONSUMPTION PER Km OF PRODUCT (GJ/Km)

EMISSIONS

Greenhouse gas emissions, measured in tonnes of CO_2 equivalent, have been calculated using the methodologies indicated in "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition, 2004)" considering, for the Scope 1 emissions (direct greenhouse gas emissions)[41], the consumption of fuels, the release of overflow refrigerant gases and the release of SF6 and, for the Scope 2 emissions (indirect emissions of greenhouse gases), the consumption of purchased energy (mainly electricity[42]).

Emissions totalled 649,299 tCO_2eq in 2017, down by 5% with respect to 2016. The figure is down thanks to the improvement actions carried out with the aim of recovering SF6, which otherwise would be dispersed in the environment (see Chapter "Main initiatives to lower environmental impact"), and following the adoption of emission factors updated with regard to electricity.

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[41] Source of Scope 1 emission factors: GHG protocol
[42] Main sources of Scope 2 emissions factors: for 2015 and 2016 Defra 2012, for 2017 Terna 2014 and GHG protocol

CO$_2$ EMISSIONS, ANALYSED BETWEEN SCOPE 1 AND SCOPE 2 (tCO$_2$eq)

Indirect emissions deriving from the purchase of energy, mostly electricity (SCOPE 2)

Direct emissions deriving from the release of SF6 (SCOPE 1)

Direct emissions deriving from the escape of refrigerant gas (SCOPE 1)

Direct emissions deriving from the combustion of fuel (SCOPE 1)

2015
- 718,667
- 493,513
- 117,153
- 3,104
- 104,897

2016
- 683,652
- 442,947
- 124,768
- 3,307
- 112,539

2017
- 649,299
- 420,443
- 108,997
- 5,887
- 113,973

GREENHOUSE GAS EMISSIONS AFTER THE PURCHASE OF ORIGIN GUARANTEE CERTIFICATES

The Prysmian Group represents a multinational and diversified reality; for this reason, two main methods for accounting for emissions in Scope 2 are used: the Location-based method and the Market-based method. Both methods, described below, are recognised and required by the GHG Protocol and are necessary for the reporting of Scope 2 emissions in the "CDP's Climate Change program" starting in 2016.
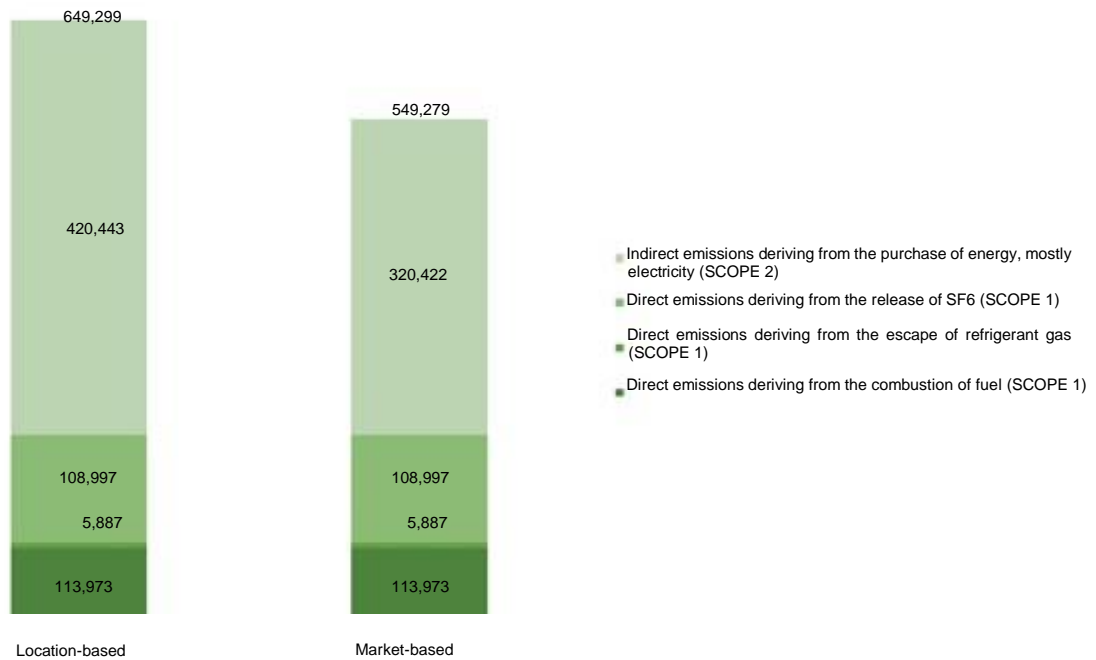
Location-based method
This is a method for quantifying Scope 2 CO$_2$ emissions based on average emission factors for energy generation by well-defined geographical boundaries, including local, sub-national or national boundaries.

Market-based method
This is a method to quantify the CO$_2$ emissions of Scope 2 based on the CO$_2$ emissions by the energy suppliers from which the reporter (company that compiles the report) purchases, through a contract, an electricity package. Markets differ on the contracts available for the purchase of energy or on the claim of specific attributes, but may include: guarantee certificates of energy origin and direct contracts with suppliers (RECs, GOs, I-REC, etc.); supplier-specific emission factors; default emission factors that represent uncontrolled or unclaimed energy and emissions (defined as "residual mix"); regional or sub-national medium or national emission factors.

Also in 2017, the Prysmian Group purchased of Origin Guarantee certificates from some European suppliers, increasing the share of the electricity consumed by the Group from renewable sources and reducing the corresponding CO$_2$ emissions according to the Market-based calculation method. This initiative contributed to the decrease in CO2 emissions generated by the Group by 7.2% compared to 2016.
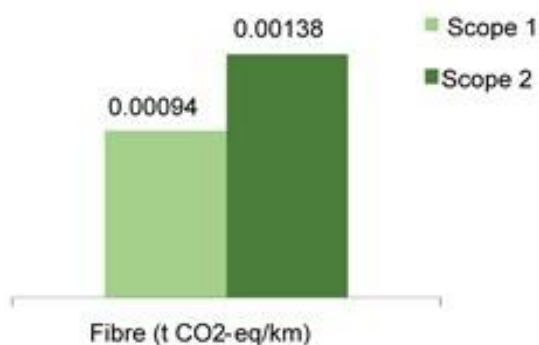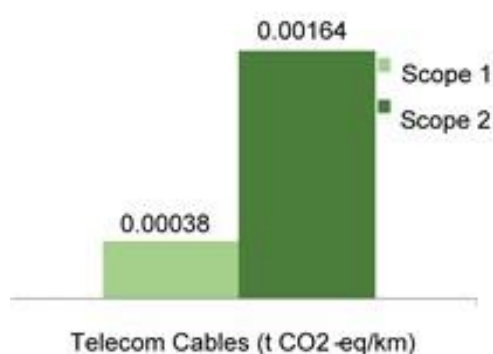
649,299

420,443

549,279

320,422

108,997

5,887

108,997

5,887

113,973

113,973

■ Indirect emissions deriving from the purchase of energy, mostly electricity (SCOPE 2)

■ Direct emissions deriving from the release of SF6 (SCOPE 1)

■ Direct emissions deriving from the escape of refrigerant gas (SCOPE 1)

■ Direct emissions deriving from the combustion of fuel (SCOPE 1)

Location-based   Market-based

SCOPE 2 CO2 EMISSIONS Location-based and Market-based in 2017 (tCO2eq)

EMISSIONS (tCO2eq)	2017					2016	2015
Environment	Power Cables	Telecom Cables	Accessories	Optical fibre	Group	Group	Group
Emissions Scope 1	**97,117**	**14,473**	**80,342**	**36,925**	**228,857**	**240,615**	**225,154**
Direct emissions deriving from the combustion of fuel	62,417	12,228	2,569	36,759	113,973	112,539	104,897
Direct emissions deriving from the escape of refrigerant gas	3,359	2,245	117	166	5,887	3,308	3,104
Direct emissions deriving from the release of SF6	31,340	-	77,657	-	108,997	124,768	117,153
Emissions Scope 2 Location-based	**304,534**	55,984	**5,917**	**54,008**	**420,443**	**442,947**	**493,513**
Emissions Scope 2 Market-based	**226,739**	51,896	**4,488**	**37,300**	**320,422**	**351,278**	**-**
Indirect emissions deriving from the purchase of energy, mostly electricity	304,534	55,984	5,917	54,008	420,443	442,947	493,513
Total Location-based	**401,651**	**70,456**	**86,259**	**90,933**	**649,299**	**683,562**	**718,667**
Total Market-based	**323,856**	**66,368**	**84,830**	**74,225**	**549,279**	**591,893**	**-**

SCOPE 1 AND SCOPE 2 CO2 EMISSIONS PER TONNE OF PRODUCT (tCO2eq/t)

0.24612

0.08028

Power Cables (t CO2-eq/t)
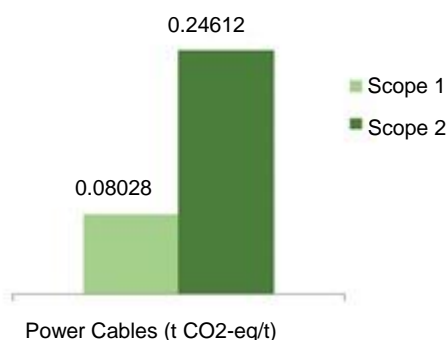
SCOPE 1 AND SCOPE 2 CO$_2$ EMISSIONS PER Km OF PRODUCT (tCO$_2$eq/km)

0.00164

0.00038

Telecom Cables (t CO2-eq/km)

0.00138

0.00094

Fibre (t CO2-eq/km)

Product lines	Direct emissions deriving from the combustion of fuel	Direct emissions deriving from the escape of refrigerant gas	Direct emissions deriving from the release of SF6	Emissions Scope 1	Scope 2 - Indirect emissions deriving from the purchase of energy, mostly electricity	Emissions Scope 2	Total
Power Cables (t CO$_2$-eq/t)	0.05160	0.00278	0.02591	**0.08029**	0.24612	**0.24612**	**0.32640**
Telecom Cables (t CO$_2$-eq/km)	0.00032	0.00006	-	**0.00038**	0.00146	**0.00146**	**0.00202**
Fibre (t CO$_2$-eq/km)	0.00094	0.000004	-	**0.00094**	0.00138	**0.00138**	**0.00232**

WASTE

The principal types of waste generated by productive activities have been split into specific categories, classifying their level of danger (hazardous waste and non-hazardous waste) according to the related classification system, regardless of the waste's country of origin and disposal. An exception is made for certain types of waste (such as laboratory chemicals), whose allocation among the categories depends on local regulatory requirements.

Overall, the total quantities of waste disposed of increase by about 6%, to which the categories optical fibre and accessories contribute, while - if compared to the product - the plants of the major product categories - "Power Cables" and "Telecom Cables" - are largely stable. It should be noted that the part of waste classified as hazardous sees an opposite trend, marking a reduction of around 1.2%.

WASTE DISPOSED OF BY TYPE (Kg)