Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

MTN Group is a leading emerging markets operator, connecting retail consumers in 22 countries where we have telecoms licenses as well as enterprise solutions to corporate Small to Medium and public sector customers in 25 countries across Africa, Middle East and Southern Europe. Our offerings range from voice, data and digital services which include enterprise solutions, cloud services, machine-to-machine technology, mobile money, as well as numerous other mobile services (including mHealth, mEducation and mInsurance). MTN is listed on the JSE Limited in South Africa under the share code “MTN”. On the 31st of December 2015, wehad over 232 million subscribers across its operations in Afghanistan, Benin, Botswana, Cameroon, Cyprus, Ghana, Guinea-Bissau, Guinea Republic, Iran, Ivory Coast, Liberia, Nigeria, Republic of Congo (Congo-Brazzaville), Rwanda, South Africa, Sudan, South Sudan, Swaziland, , Uganda, Yemen and Zambia.

CC0.2

Reporting Year
Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Thu 01 Jan 2015 - Thu 31 Dec 2015

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
Afghanistan
Benin
Cameroon
Cyprus
Ghana
Guinea-Bissau
Guinea
Iran, Islamic Republic of
Kenya
Liberia
Namibia
Nigeria
Congo, Democratic Republic of the
Rwanda
South Africa
South Sudan
Sudan
Swaziland
Uganda

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

ZAR (R)

CC0.6

Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.
If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.
If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

Responsibility sits with Group Board, which has delegated responsibility to the Social and Ethics committee, a function of the Group Board. The Group President and CEO have delegated executive responsibility to Mr. Paul Norman, MTN Group Executive: Human Resources and Corporate Affairs, to whom Group Sustainability reports through the Corporate Affairs function.
Ms. Zakhiya Rehman is the Group Sustainability Manager and is responsible for all climate change and sustainability initiatives and issues at MTN. The Group Sustainability function focuses on building the foundations for a more sustainable business and implements environmental or social core business projects at both Group and operational level in partnership with business functions. Please refer to https://www.mtn.com/Sustainability for more information

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

No

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	All operating countries	1 to 3 years	Group Business Risk Management (BRM) is responsible for the identification and overall reporting and management of the 23 Principal Risks which impact the MTN Group. BRM reports regularly back to the Board via four board committees, notably the Group Executive Audit, Risk management and Compliance, and Social and Ethics Committees, as appropriate to different components of enterprise risk management and auditing. Of the 23 material (Principal) risks at Group level, climate change is explicitly considered as part of Principal risk 21. This is the potential threat to continuity of operations as a result of political, environmental and macro-economic events.

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

The Group's Business Risk Management Framework and processes govern identification and management of MTN's principal risks. Assessment of country- and asset-level risks are the responsibility of business risk managers in each MTN operation, who consider 23 principal "top down" risks – of which climate and environmental risks are incorporated in Principal Risks 21 and 22. Risks are prioritised based on a quantified probability and impact assessment, and response strategies developed based on the nature and materiality of the risk. This is reported to the local operations' executive, audit and risk compliance committees as appropriate.

Environmental, physical, financial and regulatory risk identification and mitigation processes are identified, managed or co-ordinated in conjunction with the risk owners by some of the 24 trained Energy and Carbon champions and 34 active energy and carbon champrions. Our energy and carbon champions are mostly

positioned in technical functions, and are supported by finance, facilities, business risk management and corporate services team members. This approach enables each country's operation to actively manage physical, financial and regulatory risks and impacts in a customised manner, within local operating and environmental contexts.

Consolidation and reporting of each country's activities and results is undertaken via quarterly energy and carbon reporting processes by the Group sustainability unit, and via monthly/ quarterly overall risk and legal reports to their Group Business Risk Management and Group Legal functions. Group level environmental risks are incorporated in sustainability, and energy and carbon reports, which are ultimately presented on a quarterly-annual basis to the various executives and to the Group Social and Ethics Committee, and more frequently if required in terms of risk quantification results to Group Risk Management, Compliance and Corporate Governance Committee within overall risk reports.

CC2.1c

How do you prioritize the risks and opportunities identified?

The Group's risk management process is set out on page 58 of the MTN Group Integrated Report for the year ended 31 December 2015, available at https://www.mtn.com
To determine the sustainability risks and opportunities issues most material to MTN's sustainability each year, we take the following sources into account:
- Feedback from internal and external stakeholders that review the annual sustainability report.
- Engagement with external stakeholders on sustainability@mtn.co.za
- Feedback from and engagement with the JSE SRI, the CDP, and MTN's investors, shareholders and research organisations that consult us or assess our responsible business performance
- Information from third-party questionnaires and assessments of our publicly reported performance by university organisations and other third parties not commissioned by MTN, and
- Our own internal review and research processes including industry, peer and global developments, and our risk and audit management processes.
Issues identified through this process are weighted during an internal materiality review.
Top risks identified relate to physical environmental changes due to climate change (which may include intensity and frequency of weather related events and temperatures), regulatory developments relating to future caps or taxes especially in South Africa and possibly in Cyprus, Cameroon and Guinea Conakry and financial and supply risks due to increasing energy insecurity and prices. We also monitor the risk and impact of extreme weather events on our infrastructure and business continuity.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

Climate change management issues are partially integrated into MTN's business strategy, through the following elements.
• Integrated risk identification and management processes, and assurance processes
• The Group's Eco-Responsibility focus area which supports the Group's strategic pillar of "creating stakeholder value"
• The Group's drive to manage the carbon impact of energy use (see https://www.mtn.com/ Sustainability/Documents/Reducing_Greenhouse_Gases_2014.pdf
• Quarterly oversight of the Group Executive and Social and Ethics Committees

Climate change management is not yet integrated in terms of Group-level emission reduction targets, but all MTN countries of operation drive energy efficiency programmes and activities aimed at reducing energy consumption.

Progress towards full integration will require that some climate change risks such as business continuity and broad environmental trends -already listed in the Group's risk universe- are extensively understood, managed, and reported by all operations consistently as part of enterprise risk management. The Group also needs to continue focus and accelerate innovation and rollout of ICT solutions that enable other industry sectors to manage their environmental impact or air, water, energy and other natural resources through cloud computing and dematerialisation, more cost-effectively and efficiently, although efforts in this respect have started.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price of carbon?

Yes

CC2.2d

Please provide details and examples of how your company uses an internal price of carbon

MTN South Africa's internal pricing of carbon in energy investment cases takes into account various regulated and anticipated regulated penalties and incentives available nationally, including carbon taxes, peak and off-peak energy rates applicable to energy consumption, and certain incentives available within the income tax act, amongst others.

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Trade associations
Other

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
GSMA	Consistent	GMSA's Green Power for Mobile initiative, under the "Mobile for Development" program is described at http://www.gsma.com/mobilefordevelopment/programmes/green-power-for-mobile. We support GSMA's position that our industry has a role to fulfil in managing greenhouse gas emissions, but we also believe that governments should encourage mobile machine-to-machine (M2M) communications in sectors where the potential to reduce emissions is greater. Research has identified the potential for the mobile industry to reduce the GHG emissions in other sectors — including transportation, buildings and electrical utilities — by at least four to five times its own carbon footprint. The savings principally come from smart grid and smart meter applications, and smart transportation and logistics. GSMA's full position with respect to global emission reductions is available at http://mph.gsma.com/publicpolicy/wp-content/uploads/2014/10/Mobile_Policy_Handbook_2016_EN.pdf On an interim and annual basis, MTN contributes research information to GSMA Mobile Energy Efficiency (which enables network operators to evaluate the relative energy efficiency of networks) and Green Tracker program.	GSMA Board. The GSMA represents the interests of mobile operators worldwide. Spanning more than 220 countries, the GSMA unites nearly 800 of the world's mobile operators with more than 230 companies in the broader mobile ecosystem, including handset makers, software companies, equipment providers and Internet companies, as well as organisations in industry sectors such as financial services, healthcare, media, transport and utilities. The GSMA also produces industry-leading events such as the Mobile World Congress, Mobile World Congress Shanghai and Mobile 360 Series conference.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

CC2.3e

Please provide details of the other engagement activities that you undertake

MTN is an active member of the National Business Initiative (NBI) which is a voluntary group of leading national and multi-national companies. As a collective group of NBI members we are working together towards sustainable growth and development in South Africa through partnerships, practical programmes and policy engagement. MTN supports the NBI in advocating for the collective role of business in support of the private sector's role in managing climate change (including most recently through the Public Sector Energy Efficiency (PSEE) initiative) and other broader sustainability issues. MTN engages during face-to-face discussions, workshops and training events and other opportunities where business shares experiences, learns and pushes each other to achieve more with regard to the collective climate change challenge. The key issues on which we engage with policy makers through the NBI include:

- South Africa carbon tax: MTN acknowledges the need to transition to low carbon climate resilient economies but realises that this transition will result in costs, especially in the short term. These costs need to be carefully managed through the design and implementation of policies and instruments such as a carbon tax. This needs to be done through careful consultation with stakeholders and based on the best available information. The lack of regulatory clarity, without consideration of possible duplications in tax regimes and energy management drives nationally, as well as lack of commitment on how carbon taxes will be used to improve the national state of energy security, efficiency, and transition to a low-carbon economy is a matter of concern.

- Cap and trade: The development of national, sector and sub-sector Desired Emission Reduction Outcomes and the subsequent allocation of company level carbon budgets in South Africa needs to implemented over an appropriate time period and to an appropriate extent. MTN acknowledges the need to transition to a low carbon economy and supports government measures to create an enabling environment that balances climate change mitigation (which has short term costs) against other national developmental objectives.
In addition, MTN Group reports its environmental and climate performance through the United Nations Global Compact and the United Nations Global Reporting Initiative. We engage with different business platforms, host educational visits to our innovative energy sites, and showcase best practices.

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

All MTN's direct and indirect activities that influence policy on climate change are coordinated and managed by the Group's Sustainability Manager (who reports to the Executive of Corporate Affairs and Human Resources , and through these functions, a Group Board function to the Group Social and Ethics Committee.
The Group's Sustainability function takes the responsibility of coordinating engagement activities around climate change across business units and geographies to ensure that we have a common approach that is consistent with MTN's sustainability (including climate change) strategy. Networks and Technology and Facilities teams in all operations are increasingly aware of the need for integration of energy, climate and other environmental matters in business planning and

implementation. The Group's Base Station and Networks Toolkit also sets out more environmental matters for consideration in network infrastructure implementation. In some MTN countries, Leadership in Energy and Environmental Design and/ or ISO14001 certification is in place or being worked towards Energy costs, consumption, risks and carbon intensity in terms of the Carbon Disclosure Project are monitored by many of the 34trained energy and carbon champions across our operations. Each MTN operation maintains their own energy management strategy or practice, in line with the business performance and operational efficiency management requirements. This approach enables each operation to actively manage and monitor its energy use mix, costs, configuration of efficiency and reduction solutions, and other requirements within local operating and environmental contexts. Our energy and carbon champions are mostly positioned in technical functions, and are supported by finance, facilities, business risk management and corporate services team members.
The following scope exclusions are noted; For the MTN Group sustainability report for 2015, Mascom Botswana has been excluded on the basis of indirect ownership holding and for Carbon Disclosure Project report exclusions included Mascom Botswana (excluded on the basis of indirect ownership holding), MTN Yemen and MTN Syria (excluded due to energy and greenhouse gas data collection challenges associated with network management in the context of the broader macropolitical situation) and MTN Group head office facilities in UAE, Dubai.

Quarterly reports were submitted by 21 MTN operations whereas operations excluded include Botswana (excluded on the basis of indirect ownership holding), Yemen and Syria (excluded due to energy and greenhouse gas data collection challenges associated with network management in the context of the broader macropolitical situation) and Dubai (excluded due to MTN Group head office facilities). . We also actively engage with our tower management partners in Ghana, Uganda, Cameroon, Côte d'Ivoire, Nigeria, Rwanda and Zambia in order to ensure that the tower management is aligned with our practices. Energy consumption and efficiency reports from our operations and tower management companies are consolidated for analysis by the Group, and performance is presented in sustainability reports to the executive and Group social and ethics committee, which oversees the Group's sustainability performance. Operations receive detailed feedback of performance results in order to implement required improvements and review opportunities on projects undertaken by other operations.
The Group's Social and Ethics statement, available at www.mtn.com/sustainability, incorporates statements with respect to our environmental responsibilities, and sets this out in terms of responsible business commitments and activities by our business partners and suppliers.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

No

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

Our networks and non-network technical facilities energy use contributes a total amount of 97.1% to MTN's greenhouse gas (GHG) profile on a country-by-country basis, and is the largest energy cost component for the company. Our reasons of not having targets are as follows:
i) There is a positive correlation between our 'actual consumption' and 'cost' targets and our emissions reductions. This has been the most appropriate internal lever in addressing this issue, ensuring improved sustainability-business integration by working with and enhancing existing KPIs wherever possible. This approach also works well with our internal practices of GHG emissions and has helped us to drive operational work towards further reductions. Emissions per Subscriber are used as proxy to measure our efficiency, however it has not adopted as a formal target.
ii) Three aspects of the business will change MTN's GHG profile (the net and cumulative impacts of these have not been assessed. We expect to see the following changes in our emissions over the next 5 years:
a) GHG Emissions reductions: Our reliance on energy to power network, data centre, switch and remote hub operations is the largest contributor to the Group's GHG emissions. We therefore actively focus on improving electricity and diesel use efficiency, and we continually invest in alternative and less carbon-intensive forms of energy to power our operations, improving our resilience and ultimately reducing our impact on the environment. As a result of energy efficient and alternative energy investments implemented since 2011. In 2015 we achieved total GHG emissions savings of 7 947tCO2e. More details can be accessed on our website at https://www.mtn.com/Sustainability/Ecoresponsibility/Pages/Energy-and- climate.aspx;
https://www.mtn.com/Sustainability/Documents/Reducing_Greenhouse_Gases_2014.pdf and
https://www.mtn.com/Sustainability/MoreOnSustainability/Pages/CaseStudies.aspx
b) Transfer of GHG emissions from Scope 1 & 2 to Scope 3: the impact of MTN's BTS outsourcing strategy will result in the transfer of some emissions from Scope 1 (and to a smaller extent Scope 2) to Scope 3, changing the emissions profile of the company as has been seen with Cameroon, Cote d'Ivoire, Ghana, Nigeria, Rwanda, Uganda and Zambia.
c) Increase in GHG emissions: The Company's growth in enterprise service offerings and increased investment in 3G and 4G services will require ongoing investments in data centre infrastructure, which is expected to result in relatively small increases in the Group's GHG emissions profile. Despite the fact that these new technologies and facilities are planned for optimal and efficient energy consumption during construction and operation, increases will occur as a result of increased investments in infrastructure.

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Company-wide	According to industry projections on the 'Internet of Things' (IoT), it is expected that by 2020, 30 billion devices or connected things will be in use and interacting with the environment and providing actionable data or services. This development is one of the key opportunities shaping how MTN conducts business and contributes societal value. We are actively working on bundling our connectivity services with solutions that can reduce some of the daily problems faced in our African and Middle Eastern territories. As a result we launched our IoT platform in 2015. This enables us to offer services to a wide range of industries, connecting an otherwise fragmented population of devices and systems through an open platform that enables networked devices to exchange information and perform actions, responding intelligently to their environments without human intervention. MTN's Machine2Machine (M2M) solutions include enterprise mobility management platforms, fleet and private vehicle management and	Low carbon product	Evaluating the carbon reducing impacts of ICT			

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
	asset tracking, fuel and utilities management, and security solutions, among others. The global economy is being forced to transition to new consumption models, given increasing resource constraints and negative environmental impacts. As an ICT operator, we are aware of the role we can fulfil in assisting our customers to reduce the number of physical materials they use in their homes and businesses, and to mitigate the negative environmental impacts associated with manufacturing, use and disposal of products. MTN is particularly concerned about resources such as water, energy, food, biodiversity and wildlife, among others. We operate in emerging markets where the need to adapt to changing environmental conditions, coupled with the lowest levels of financial and other resources, is becoming increasingly evident. We are, therefore, well placed to offer products that support resilience in the face of these challenges, while representing commercial opportunities for us. Our smart energy meters monitor electricity consumption via a remote application infrastructure, providing insight into how, when and where energy is used, allowing effective management of this scarce and generally greenhouse gas (GHG) intensive resource.https://www.mtn.com/Sustainability /sustainableEconomicValue/Pages/TransformingEnterprises					

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	0
To be implemented*	4	3532
Implementation commenced*	5	4415
Implemented*	9	7947
Not to be implemented	0	0

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Processes	Savings reported have resulted from solutions which include data centres, switches, remote hubs buildings and BTS sites, as	3999	Scope 1 Scope 2 (location-based)	Voluntary	20782585	317146299	1-3 years	6-10 years	The GHG reductions from these projects are included in the total annual reductions from projects implemented in

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	part of the overall CAPEX investment programme, network modernisation and capacity upgrade, and energy cost and utilisation reduction. Initiatives relate to optimisation and improved energy efficiency of processes at data centres and BTS sites, waste heat reduction and installation of clean energy generating facilities. Specifically in 2015, we improved the efficiency of 450 of our sites, we now operate 329 solar and solar-hybrid sites (an increase of 60% compared to 2014).								2015 of 7 947 t CO2e. The investment required is included in CAPEX and other initiatives: not available separately for this report.
Low carbon energy installation	Alternative energy investments in MTN Group networks in 2015 include investment into solar energy at 96 new sites. This includes the development of 16 solar sites in Iran and the expansion of 80 solar hybrid sites in South Sudan	3948.2	Scope 1	Voluntary	19275217	280305915	1-3 years	6-10 years	The GHG reductions from these projects are included in the total annual reductions from projects implemented in 2015 of 7 947t CO2e. The investment required is included in CAPEX and other initiatives: not available separately for this report.

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Low carbon energy installation	In 2010 MTN South Africa launched a Gas-Waste Heat Capture-Cooling (tri-generation) plant at the 14th Avenue Test Switch and Data Centre. The plant includes a 2 MW methane gas (natural gas) generator that uses the waste heat generated to chill water for cooling purposes enabling electrical/ thermal fuel efficiency by supplying combined primary energy, heat and cooling. Construction began in 2015 with 1.7MW(e) gas generator and 2.5MW(t) absorption chiller at Newlands as well as a 1MW(e) gas generator and 720kW (t) absorption chiller at Doornfontein. The plants are in construction phase but the gas generators are running. Emission savings will be reported in the 2017 CDP response.		Scope 1 Scope 2 (location-based)		17700000	59000000	1-3 years	3-5 years	The capital costs of the Doornfontein site is R16m and the Newlands site is R43m. Together with the R22m this amounts to a total capital cost of R81m invested in tri-generation plants at MTN South Africa. . The maximum total savings associated with all three sites once fully operational is estimated at 57 816 tCO2e per year.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Lower return on investment (ROI) specification	As part of business case development, MTN determines the breakeven point and return on investment period. This applies to all projects, including energy and carbon reduction projects, which must meet internal return on investment criteria.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
In voluntary communications	Complete	Text Field MTN Group Sustainability		https://www.mtn.com/Sustainability/Documents/MTN_Group_2015_CDP_Report.pdf

Publication	Status	Page/Section reference	Attach the document	Comment
		Report 2015 – Group President and CEO statement (Page 2 - 3); Environmental Management (Page 16 – 17)Energy and Climate (Page 13 – 15); Annual Sustainability Value Add Statements (Page 24 – 26)		
In voluntary communications	Complete	MTN Group UN GRI 5 Report for year ending 31 December 2015. (Complete Report)		http://www.mtn.com/sustainability https://www.mtn.com/Sustainability/Documents/MTN_Group_UN_GRI_Report_2015.pdf
In voluntary communications	Complete	MTN Group UN Global Communication of Progress Report for year ending 31 December 2015.(Complete Report)		http://www.mtn.com/sustainability https://www.mtn.com/Sustainability/Documents/MTN_Group_UN_Global_Compact_Report_2015.pdf

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation
Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Carbon taxes	The South African National Treasury first introduced the possibility of a carbon tax in a	Increased operational cost	1 to 3 years	Direct	Virtually certain	Medium-high	MTN could potentially expect a tax rate of around R 48 per tCO2e for Scope 1 emissions which would result in a	MTN is reducing the impact of a potential Carbon Tax by optimising energy efficiency at its technical and non-technical sites and looking to implement alternative energy at these sites as well. The carbon tax only poses a direct threat to MTN South Africa; however it may become a reality in other countries. Solar, wind, gas and fuel cell energy is used at 28 off-grid sites in South Africa and tri-generation power is used at the head office (14th Avenue) as well as at the Doornfontein and Newlands sites). . Other	MTN South Africa has undertaken energy efficiency optimisation across 7,200 BTS sites, and

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	discussion document in 2010. The design was then proposed in 2013 followed by the publication of a Draft Bill late in 2015 which announced the expected start date as 2017. Although the Finance Minister has confirmed, during the 2015 Budget Speech, that South Africa's carbon tax legislation will come into effect in 2016,						potential maximum liability of R1.3 million (based on MTN South Africa's 2015 Scope 1 emissions). It is expected that Scope 1 emissions associated with gas trigeneration plants at 14th Avenue, Doornfontein and Newlands, and diesel consumptions associated with diesel generators (which exceed 10MW capacity) will be	energy reduction initiatives in South Africa include the use of heat wheel technology; investment in battery cabinets with active cooling, sodium metal chloride batteries and free cooling in BTS sites as well as temperature setting adjustment; and in 2014 the operationalisation of a concentrated solar power plant with a peak cooling capacity of 330 kW. These measures aim to reduce GHG emissions, increase energy security, and reduce financial costs associated with future carbon tax risks. The Group Sustainability Manager also engages in policy dialogue and advocacy to ensure that carbon budgets and the design of the tax captures the operational realities of the sector and company. MTN Cyprus is also monitoring possible Carbon Tax regulatory developments nationally, and has in 2015 replaced air-conditioning units with a free cooling system which has contributed to 5% energy reduction and over 4 tCO2e emissions reductions	implemented 28 off-grid sites. In addition, MTN SA invested in a gas-powered tri generation plant in 2010, and began construction at two additional sites in 2015, and with international co-funding, implemented a CSP plant for data centre cooling in 2014. . The capital costs of the

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	during the 2016 Budget Speech the Finance Minister indicated in the notes of the Budget Review that the Draft Bill will be revised based on comments received in late 2015. Implementation of the tax has been delayed for two years; however the National Treasury has not indicated that the tax will not be implemented. This risk currently						taxed, requiring that emissions be reported in line with Department of Environmental Affairs' reporting requirements. It is understood that any tax passed on through the liquid fuel cost would be considered in calculating how much tax to pay based on generation capacity in order to prevent double taxation. A carbon tax on		Doornfontein and Newlands Trigeneration sites R59m. Together with the R22m for the 14th Avenue plant in 2010 this amounts to a total capital cost of R81m invested in tri-generation plants at MTN South Africa. The maximum total savings associated with all three sites once fully operationa

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	only affects MTN South Africa; however MTN Cyprus and MTN Zambia also report increasing legislative activity with respect to carbon taxes in those countries. While MTN South Africa is one of the largest operations in the MTN Group, the financial impact of this tax is estimated at less than 0.5% of MTN's overall energy						electricity (Scope 2 emissions) will be passed on to MTN South Africa. However National Treasury has indicated that adjustments will be made to ensure a net zero impact on the electricity tariff although it is not clear how this will be done.		l is estimated at 57 816 tCO2e per year.

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	costs, at prevailing figures. The original design included a tax rate initially levied at R120 per tonne of CO2e, expected to increase by 10% annually. The tax is expected to relate to a company's direct emissions. The electricity sector will also be taxed which presents a risk of pass-through costs to consumers, and there is								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	still uncertainty whether the tax process will generate sufficient revenue to subsidise electricity prices to negate this, as per National Treasury's intention. Free allowances include: a basic 60% of annual Scope 1 emissions, up to 10% fugitive emissions allowance, up to 5% for participating in the carbon budget process, up								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	to 5% reduction based on a company's carbon efficiency performance against its peers, a 10% trade exposure allowance, and the potential to purchase 5% - 10% offsets depending on the sector. Mechanisms around offsets are still to be determined in line with existing and evolving tax regimes.The Carbon Tax Bill still needs to be passed and therefore								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	uncertainty remains regarding the timing of this risk especially with implementation dates being constantly postponed, however MTN is not expected to pay any carbon tax before 2018.								
Cap and trade schemes	Carbon pricing uncertainty in the international carbon market is regarded as a regulatory climate change risk to MTN, but also poses potential	Reduction in capital availability	1 to 3 years	Direct	Likely	Medium	Under ZAR 1 million per annum.	The Group does not foresee further participation in cap-and-trade schemes in the short term. This position is regularly reviewed and may be amended as required. There exists regulatory uncertainty at this stage. MTN Group continues to focus on efforts to reduce emissions where possible (as described in CC3.3).	CAPEX for tri-generation test switch and data centre for MTN South Africa: R22m in 2010.

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	financial opportunity as the majority of countries in which we operate are classified as emerging countries, and some also hold Least Developed Country status. In 2011 MTN South Africa sold 15,284 CERs from the first tri-generation plant EDF Energy. Generation of CDM credits in MTN is not a priority given the current status of								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	international pricing, and the value of MTN's saved or avoided emissions in mitigating our carbon taxes liability or leveraging other national tax benefits.								
Cap and trade schemes	The South African Government's National Climate Change Response Policy (NCCRP), published in October 2011, defines a benchmark range, the 'Peak, Plateau and	Increased operational cost	1 to 3 years	Direct	Likely	Medium	Although there has been an indication of a 5% Carbon Tax allowance should a company participate in the carbon budgets process, MTN has not been approached	MTN continues to reduce the impact of a potential Carbon Tax and carbon budgets by optimising energy efficiency at its technical and non-technical sites and looking to implement alternative energy at these sites as well. The Carbon Tax only poses a direct threat to MTN South Africa; however it may become a reality in other countries. Solar, wind, gas and fuel cell energy is used at 28 off-grid sites in South Africa and tri-generation power is used at the head office (14th Avenue) as well as at the Doornfontein and Newlands sites). Other energy reduction initiatives in South Africa include the use of heat wheel technology; investment in battery cabinets with active cooling, sodium metal chloride batteries and free cooling in BTS sites as well as temperature setting adjustment. These measures aim to reduce GHG emissions, increase energy	MTN South Africa has undertaken energy efficiency optimisation across 7,200 BTS sites, and implemented 28 off-grid sites. In addition, MTN SA invested in

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Decline' (PPD) trajectory, for national Greenhouse Gas (GHG) emissions. This policy also outlines Desired Emissions Reduction Outcomes (DEROs) for the long (2050), medium (2030) and short (2020) terms. Long term DEROs, expressed as a range, will be aspirational, while short term DEROs will be more realistic and						by DEA to submit any carbon budgets. We have not been identified as one of the priority emitters in South Africa and are therefore unlikely to be significantly affected financially by developments in this regards, more especially within the first phase of implementation.	security, and reduce financial costs associated with future carbon tax risks. The Group Sustainability Manager also engages in policy dialogue and advocacy to ensure that carbon budgets and the design of the tax captures the operational realities of the sector and company. MTN Cyprus is also monitoring possible carbon tax regulatory developments nationally, and all MTN countries of operation continue to invest extensively in energy efficiency.	a gas-powered tri generation plant in 2010, and began construction at two additional sites in 2015, and with international co-funding, implemented a CSP plant for data centre cooling in 2014. . The capital costs of the Doornfontein and Newlands Trigeneration sites R59m. Together

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	based on currently available technology. DEROs will be absolute GHG reductions at the sector and sub-sector level. Furthermore, other developments within the GHG mitigation regulatory environment include carbon budgets which will form one mechanism to achieve the DEROs. The carbon budget at a company level represents a cap or								with the R22m for the 14th Avenue plant in 2010 this amounts to a total capital cost of R81m invested in tri-generation plants at MTN South Africa. The maximum total savings associated with all three sites once fully operational is estimated at 57 816 tCO2e per year.

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	limit on what a company can emit over a specific time period. Should a company be requested to submit carbon budgets, a Pollution Prevention Plans (PPPs) will also be requested t. All the above measures are championed under the Department of Environmental Affairs (DEA). However, since MTN has not								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	been identified as a priority emitter, these regulatory changes do not present a direct material risk on us.								
Fuel/energy taxes and regulations	Volatile and rising energy costs are a material concern. The risks MTN experiences include increasing grid power, gas and diesel costs. Some of these costs are due to national energy landscapes, while other	Increased operational cost	1 to 3 years	Direct	Virtually certain	Medium	The Group has not quantified the financial impact of this, due to the significant variances in this risk element across its 22 countries of operation. However, an overall Group and detailed country operating cost	Investments in energy efficiency and alternative energy sources are being driven strategically and operationally to mitigate risks like energy security, costs and environmental impact. The Group's CAPEX investment in modernisation and infrastructure and energy cost efficiency drive as described previously are the key methods by which this risk is being mitigated. Between 2011 and 2014, we implemented energy efficiency solutions at approximately 9 989 network sites, as well as at data centres, switches, hubs and office buildings. In 2015, an additional 450 sites were improved. We now operate 329 solar and solar-hybrid sites (2014: 205). MTN also operates a handful of wind, gas and other 'green-powered' sites.	In 2015, the Group invested R29 billion in CAPEX alone, and similarly has been extensively investing in infrastructure CAPEX programs since 2009. Specifically, over R800k was invested in

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	costs are due to evolving international energy demand-supply dynamics. These impact MTN operations in various ways e.g. in Nigeria, fuel subsidies were removed in 2011 and the recent low oil prices are and will have a significant impact on growth in the country; in Iran the Energy Subsidies Elimination program has been						reduction target has been set, and energy cost reduction is a key element of this target.		the solar BTS site project in Iran, and R25k invested in the free cooling project in Cyprus.

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	active for the past 4 years; in Ghana, electricity tariffs increased in 2014 and have continued to increase in 2015; and in Cyprus, peak hour power usage pricing was introduced. Given the importance of energy and the contribution of energy costs to the overall operating cost of the Group, improving energy use and efficiency is								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	a key component of the Company's overall cost-efficiency drive.								
Emission reporting obligations	The evolving climate change regulatory environment in South Africa (notably carbon taxes and carbon budgets) will require systems for collecting accurate GHG emissions data. The South African National Climate Change	Increased operational cost	1 to 3 years	Direct	Virtually certain	Low	Uncertain but not expected to be material	The risk is managed through the following measures: •The Group Sustainability Manager engages with policy makers and business sector organisations to ensure that all operations are aware of the latest requirements. •We have been reporting on GHG emissions and activities to mitigate emissions since 2010, and use this as an internal mechanism to identify risks and improve business practices. • We continue to respond publicly to the CDP request for information, on an annual basis, and hold direct investor discussions in this respect. •We continue to monitor and improve our sustainable and responsible business practices as indicated at https://www.mtn.com/Sustainability/Ecoresponsibility/Pages/Energy-and-climate.aspx - see energy and climate risks and mitigation Section	Uncertain

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Response Policy provides for the mandatory reporting of emissions data. On 5 June 2015 the DEA gazetted the draft National Greenhouse Gas Emission Reporting Regulations. This requires data providers to register on the National Atmospheric Emissions Inventory System (NAEIS). Data providers are then required to submit total								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	greenhouse gas emissions arising from a defined list of activities. Only direct (Scope 1) emissions will need to be reported). The following uncertainties exist: - The threshold for determining different “data providers” (currently only applicable to energy generation where combined capacity exceeds 10MW) -								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Boundary approach and other GHG accounting methodology elements - Timing (it is expected that reporting will need to be done in March 2018 based on 2017 data). MTN South Africa has gas powered generation capacity of 8.1MW which together with diesel generator capacity would put the OpCo well above the 10MW capacity threshold.								

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Therefore this will place a compliance burden on MTN South Africa coupled with related additional costs for reporting and verification while non-compliance could be met with penalties.								

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	All MTN countries of operation are included in this section. The risk is an increased mean surface temperature. The risk and associated financial costs will be greater for BTS sites, switches and data centres than for other infrastructure due to the required optimal operating temperatures of the equipment used at these sites. Operating countries in the Middle East are especially at risk to this change in surface temperature. However, other countries will be affected: MTN Nigeria has identified risks relating to poor performance of	Increased operational cost	>6 years	Direct	Very likely	Low-medium	Uncertain	A number of MTN operations have implemented measures to improve the energy efficiency of cooling at their operations. Measures include the deployment of outdoor BTS sites, use of free cooling, and investment in more energy efficient air-conditioning units, and technical equipment that has already been designed to be as energy-efficient as possible. This will help to reduce energy consumption for cooling and associated costs. In addition, a number of MTN operations are designing BTS	MTN Namibia invested NAD $15 000 in two new energy efficient AC units for their Head Office, helping to generate annual electricity savings of 13 800 kWh in 2014. Costs associated with the deployment of extractor fans in 2014 in MTN Nigeria are N189 505 per site .

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	voice and data equipment as a result of high temperatures. By 2100, temperature could have risen by up to 5 degrees Celsius, adding increased cost to management of BTS sites. The increased costs are particularly around increasing energy costs for cooling.							sites such that they are able to withstand higher temperatures. For example, MTN Nigeria has invested in extractor fans at Indoor BTS sites in order to help manage the direct impact of high temperatures on equipment.	
Other physical climate drivers	All MTN countries of operation are included in this section. The risk is an increased incidence of lightning strikes and high winds during storms as a result of increased storm intensity linked to climate change. The risk and associated financial costs	Reduction/disruption in production capacity	Up to 1 year	Direct	Very likely	Medium-high	An increase in events coupled with rising repair prices and/ or insurance costs could have a financial impact on MTN.	All operations maintain technical and disaster recovery plans. The Group's crisis management toolkit, updated in 2015, sets out the basic principles and frameworks to deal with abnormal or unstable situations which will include the	Costs associated with creating a database of infrastructure have yet to be fully realised as the process is still in its infancy. Costs associated with managing how sites are built and the technology and materials used form part of

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	will be greater for BTS sites, switches and data centres than for other infrastructure.							risk of extreme weather events with the potential to disrupt critical technical and other infrastructure. MTN manages existing weather related risks by ensuring that sites are developed in a manner which reduces the risk e.g. raising the level of the site or key equipment and ensuring adequate drainage to reduce the risk of flooding. For example, in Nigeria, at risk sites are designed with flood water risks in mind, ensuring sites are backfilled and suitably located. In Cyprus, sites are designed to withstand higher wind load levels	CAPEX costs that cannot be isolated.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								in response to increasing and higher intensity wind gusts, and in Cote d'Ivoire provisions are in place to increase the resilience of sites to storms (for example, major cables are buried underground and fire extinguishers are installed). These actions do not necessarily give rise to significant costs if done in the planning stages.	
Change in precipitation extremes and droughts	All MTN countries of operation are included in this section. The risk is of increased precipitation and/or increased precipitation intensity and flooding as are result of climate change. The risk and associated	Increased operational cost	Up to 1 year	Direct	Virtually certain	Medium	An increase in events coupled with rising repair prices and/ or insurance costs could have a financial impact on MTN.	Operating equipment, such as generators, have been raised above the flood level in some MTN countries/ regions most at risk. In addition, future site planning has adopted the lessons learned about defending	These costs have not been quantified.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	financial costs will be greater for BTS sites than for other infrastructure. The floods brought about by the rainy season in certain areas threaten access to power. In all countries in which MTN operates the power grid is unstable/ insufficient/ unreliable and backup generators are necessary for between 10%-70% of the time. Increased flooding due to increasing precipitation intensity has the potential to reduce accessibility to sites, requiring diesel and infrastructure maintenance. Specific examples of							against floods. During 2014 and 2015 Swaziland undertook a project to install 8 hours of back-up power for 40 BTS sites to improve site availability when grid power is not available, and budget is set aside each year to pave access roads to remote sites to help ensure that the sites are accessible during / following severe weather events. In Zambia, equipment has been procured to help extract flood water from buildings.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	previous impacts include extensive flooding that affected MTN Nigeria's operations in FY12. In Iran, severe storms have resulted in grid power supply failures, with diesel generators being used to provide back-up power. Zambia has also reported increased flooding as a result of heavy rainfall which has resulted in more power failures and increased fuel consumption and costs associated with the use of back-up generators. In the past year, climatologists have recorded the worst El Nino cycle, negatively affecting many								

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	African countries. In 2015/2016 El Nino has resulted in heavy rainfalls coupled with extreme droughts in the different regions of Africa.								
Other physical climate drivers	Increased precipitation, storms and flooding may affect the power supply. Power outages and subsequent revenue losses would result.	Reduction/disruption in production capacity	Up to 1 year	Direct	More likely than not	Medium-high	Uncertain	We actively focus on improving the efficiencies we extract from the use of energy, and we invest in alternative and less carbon-intensive forms of energy to power our operations, improve our resilience and ultimately reduce our impact on the environment and the communities in which we operate. For example, hybrid battery-diesel, gas, wind, and solar power	Since 2011, MTN has spent approximately R0.35 billion in renewable energy installations.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								systems are being rolled out at various locations. Energy security is maintained for all operations through primary or back-up diesel power. These investments mitigate unstable power supply at network sites. Across MTN's operations globally, there are now 329 solar and solar-hybrid sites, in addition to over 600 diesel hybrid BTS sites.	

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Investor pressure and perceived or real inadequate environmental and climate change performance poses a reputational risk to MTN. The number and scope of regulatory requirements impacting MTN's operations are increasing, and while the operations are currently operating in accordance with these voluntary and regulatory standards, stakeholder and client expectations are constantly evolving and generally becoming more rigorous. As a result, in addition to compliance costs, MTN may be exposed to increased insurance costs and unforeseen	Reduced stock price (market valuation)	1 to 3 years	Direct	Likely	Low	MTN could face reputational risks with Socially Responsible Investors (SRI) Index of the JSE if performance and policy commitments fall short of expectations for a leading and diverse company, creating a negative impression with stakeholders and investors. In addition, MTN could experience losses in sales should consumers believe that we are not acting in an environmentally responsible manner. The potential financial impacts of this risk are difficult to quantify	We have retained our listing on the JSE's SRI index and are committed to understanding and reporting on its sustainability performance and GHG emissions and responding to the CDP survey annually. To date, MTN has participated in and met the requirements of the JSE SRI for the past 10 years. In order to manage overall sustainability performance MTN regularly engages with stakeholders and produces an annual integrated sustainability report. An example of a mitigation strategy implemented by our OpCos comes from MTN Cote d'Ivoire, who are communicating their investments in telecommunications infrastructure that is less energy intensive (e.g. fibre optics and the use of wireless technologies).	The costs of such mitigation measures are difficult to quantify.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	environmental expenses. The perceived failure to act in a socially responsible manner could impact MTN's score on the Environmental component of JSE Socially Responsible Index (SRI).								

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters
Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
International agreements	MTN has operations across Africa, the Middle East, and southern	Reduced capital costs	Unknown	Direct	Likely	Medium	CDM projects generated 15 292 saleable	The annual carbon footprint enables us to determine the consumption	The capital costs of the Doornfontein and

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Europe, a number of which are in Least Developed Countries (LDCs). There has been an indication from climate change negotiations that carbon credits from LDC countries will still be in demand and as such represents a potential opportunity for MTN. Moreover there has been progress with regard to securing finance for non-Annex 1 (developing) countries. Although not a LDC, South Africa's 2-megawatt (MW), methane-driven tri-generation power plant at the 14th Avenue Head Office is the first of its kind on the African continent and resulted in a new methodology approved by the United Nations						certified emission reduction (CER) credits. The credits were sold in May 2012, on a forward-sale basis over 5 years starting 2013, at 94% of the spot price. Other cost reductions associated with international regulations are likely to accrue in the future.	patterns of various sites (including the tri-generation facility) and to identify cost and GHG emission reduction opportunities. It also helps us identify the effectiveness of projects that fall under the scope of CDM or related mechanisms. Benin has identified the opportunity for MTN to partner with the private sector in industrial waste, green energy and other projects that can be classified as CDM projects. This will be done in collaboration with the Climate Technology Centre and Network (CTCN).	Newlands Trigeneration sites was R59m. Together with the R22m for the 14th Avenue plant in 2010 this amounts to a total capital cost of R81m invested in tri-generation plants at MTN South Africa. The maximum total savings associated with all three sites once fully operational is estimated at 57 816 tCO2e per year.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM) Executive Board. The success of this project has led to the construction, in 2015, of two additional plants at the Doornfontein and Newlands sites). MTN is considering ways of benefiting from similar opportunities in other non-Annex 1 countries.								
Other regulatory drivers	There are a number of tax incentives, research and development incentives and government grants in the area of energy and climate change which MTN could take advantage of. These are mainly available in South Africa, but other	Increase in capital availability	Up to 1 year	Direct	About as likely as not	Low	MTN is currently saving approximately 18 000 MWh of electricity per year in South Africa from energy efficiency and low carbon energy initiatives. A	As energy consumption and the management thereof is so important, tax incentives, research and development incentives and government grants will be looked into in order to aid the occurrence of energy efficiency measures at MTN	The cost associated with Monitoring & Verification can be substantial. However, we have not undertaken detailed costing assessment for this activity.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	MTN countries of operation review if similar regulatory incentives are available locally as well. South African incentives being explored by MTN include: Income Tax Act, Section 12.k: Carbon credits generated by Clean Development Mechanism projects will be exempt from normal tax. Section 12.l: An income tax allowance is available for energy efficiency savings. The 12l tax rebate is an incentive for increased energy efficiency, available in the form of an allowance/deduction allowed from taxable income on the basis of demonstrable energy efficiency savings created through the						portion of this saving is therefore available for an income tax allowance in terms of Section12lL of the Income Tax Act. MTN is currently in the process of applying for a rebate and this could result in a potential saving for MTN annually, excluding the cost required for measurement and verification	South African and then look at opportunities to scale up to other MTN countries of operation. MTN South Africa is in the process of securing benefits for energy efficiency investments under Section 12L of the Income Tax Act. MTN proactively engages with regulators in the different operating countries which puts the company in a position to take advantage of any regulatory opportunities that may develop. For example, in Sudan, MTN is the only company within the telecommunications sector that is part of the Supreme Committee for Environmental Affairs.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	implementation of energy efficiency measures. The tax incentive is available for savings in all energy forms and not only electricity. The rebate is equivalent to 95 cents per kilowatt hour or kilowatt hour equivalent of energy saved. In addition, because MTN South Africa earns carbon credits from the CDM project there is the potential for tax related savings. MTN South Africa participated in the Private Sector Energy Efficiency (PSEE) programme, and has reviewed its energy policy identifying further opportunities for energy efficiency investments, and assessing the financial penalties and incentives								

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	available from local regulatory authorities for energy efficiency investments.In addition, there are growing pressures within other regions to comply with environmental legislation in order to continue to be the leading telecommunications company in the region.								
Fuel/energy taxes and regulations	Regulations are affecting the cost of energy for customers. Demand for ICT solutions offered by MTN that enable clients to reduce their energy consumption/GHG emissions is likely to increase. This could include contributions to smart systems (smart grids, smart transport, smart logistics etc.) or	Increased demand for existing products/services	Unknown	Indirect (Client)	Virtually certain	Low	Unknown (and isolating the increase in demand associated with climate change regulation-related drivers is not feasible).	It is expected that by 2020 'Internet of Things' (IoT) will grow to 30 billion devices or connected things. This development is one of the key opportunities shaping how MTN conducts business and contributes societal value. As a result we launched our IoT platform in 2015. This enables us to offer services to a wide range of industries,	Not available (isolating the component of the investment in innovative products that relate specifically to climate change drivers is not feasible).

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	'smart working' (working remotely).							connecting an otherwise fragmented population of devices and systems through an open platform that enables networked devices to exchange information and perform actions, responding intelligently to their environments without human intervention. MTN's Machine2Machine (M2M) solutions include enterprise mobility management platforms, fleet and private vehicle management and asset tracking, fuel and utilities management, and security solutions, among others. As an ICT operator, we are aware of the role we can fulfil in assisting our customers to reduce the	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								number of physical materials they use in their homes and businesses, and to mitigate the negative environmental impacts associated with manufacturing, use and disposal of products. MTN is particularly concerned about resources such as water, energy, food, biodiversity and wildlife, among others. Our smart energy meters monitor electricity consumption via a remote application infrastructure, providing insight into how, when and where energy is used, allowing effective management of this scarce and generally greenhouse gas (GHG) intensive resource	

CC6.1b

Please describe the inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other physical climate opportunities	MTN has the opportunity to develop innovative products using mobile wireless systems, sensors etc. that can provide customers with access to information that could contribute towards greater resilience in the face of changing climatic conditions. These could include up-to-date information on weather and access to the latest planting/growing/harvesting information for farmers; early warning systems for communities; group communication platforms in times of disasters, etc.	New products/business services	Unknown	Indirect (Client)	About as likely as not	Unknown	This opportunity is yet to prove material. The Group is not seeing material demand for products at this stage and has therefore not estimated financial implications.	MTN is developing new products and forming partnerships which will add value specifically to address the requirement for climate-centric ICT solutions. For example in 2015 we have introduced a device that enables vehicle location tracking, speed regulation and vehicle shut-down via mobile handsets in Nigeria. Following the	None

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								launch of a 4G network in some geographical areas in Iran, we also launched mobile broadband and mobile-based services, including our M2M service for e-Government services and our platform for smart services and industries, such as Smart City, Smart Industries, mHealth, Smart Homes, Smart Cars and Transportation Systems.	

CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behaviour	Closing the digital divide provides an indirect opportunity associated with efforts to grow economies, reduce poverty and inequality and provide communities with access to services and opportunities in a way that would contribute to more climate resilient	Increased demand for existing products/services	3 to 6 years	Direct	Likely	Medium-high	Not Available	Through the MTN Mobile Money our customers are able to perform local and international money transfers, make utility payments, pay for bus and public transport services, settle taxes due to revenue collection authorities, save money in their interest-bearing mobile wallets, purchase airtime, buy micro-insurance, pay school fees and television service subscriptions, purchase solar-powered energy, make bank deposits, pay for fuel, donate meals to feed children and more. MTN Mobile Money is available in 16 countries across Africa. To ensure affordability, we offer MTN-branded smartphones at a cost lower than the average cost of a smartphone (less than US$35) in Uganda. In 2015, we were able to offer free internet-enabled MTN Shyne phones when customers purchased ReadyPay Solar Power. This phone is embedded with 100MB worth of data, and has other useful features such as a torch and an FM frequency radio. Our partnership with Google and Infinix Mobility allows us to provide devices through the Android One initiative in Nigeria. These devices are loaded with useful information such as local maps and listings of local small businesses and places of interest. We hope this initiative can also support the growth of local entrepreneurs.	Costs are considered as business development costs and are therefore difficult to estimate.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	societies. For example more people have access to mobile technology than to electricity and to water globally. Our products can help educate, inform, change habits, and improve access to opportunities.								
Other drivers	Electronic and electrical waste (e-waste) results in	Wider social benefits	>6 years	Indirect (Supply chain)	Virtually certain	Medium	Not Available	MTN has partnered with GIZ for the past four years to develop e-waste solutions in South Africa, and to improve knowledge of proper environmental and regulatory compliance and access to e-waste for recycling to small and medium e-waste handlers in the country. In 2015, 562 tonnes of e-waste (up from 326 tonnes in 2014) was handed	Between 2011 and 2014 , R4,6million was jointly

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	significant amounts of wasted materials if not re-used or recycled. Reuse of materials reduces the energy input to make future products reducing the overall energy intensities of electronic life cycles.							over. This included cellular and network e-waste (predominantly air-conditioning units, batteries and mixed-waste packages) and IT equipment at the end of useful life. Sixteen permanent jobs were also created. The e-waste project has also been implemented in Cote d'Ivoire and Benin, in partnership with Ericsson Ecology Management (ECOM 20) program where more than 40 tonnes of e-waste has been recycled. As a result of the success achieved from this initiative, the programme will in the near future be implemented in other regions of our operations.	invested by MTN South Africa and GIZ
Reputation	MTN recognises the reputational benefits that arise from proactively	Investment opportunities	3 to 6 years	Indirect (Client)	Likely	Low-medium	Not Available	MTN Group has invested extensively in energy efficiency and alternative energy solutions across its operations. Our energy efficient and alternative energy investments over time since 2011 resulted in a reduction and avoidance of 36 981 tCO2e in 2015. MTN is also proactive in engaging with its stakeholders on sustainability issues and performance, for example through its annual Sustainability Report, dedicated pages on its website, and through its CDP response. Various MTN operations are engaging with stakeholders on climate	Not quantifiable

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	managing and mitigating climate change impacts and demonstrating good corporate citizenship. By proactively managing our climate change impacts, and communicating this to stakeholders, MTN has an opportunity to improve the brand's image							change issues; for example, MTN Sudan is a member of the Supreme Committee for Environmental Affairs, MTN Cameroon has been proactive in conducting environmental audits to ensure compliance with local regulations.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	with regulators, customers, and the wider public.								
Other drivers	MTN Group has recognised various potential energy efficiency and management opportunities that could be implemented across MTN operations in the future. The main drivers for implementing these measures	Reduced operational costs	1 to 3 years	Direct	Very likely	High	Not Available	MTN Group continues to implement various strategies to achieve cost savings from opportunities in energy efficiency enhancement and energy management. These are extensively described at https://www.mtn.com/Sustainability/Documents/Reducing_Greenhouse_Gases_2014.pdf and include, for example: our tower sharing and BTS outsourcing strategy; public-private and independent power producer partnerships for investment in alternative energy; the use of virtualisation, consolidation and other solutions; technologies to reduce energy costs; implementing ISO14001 and Leadership in Energy and Environmental Design standards in one large building; and many more. See https://www.mtn.com/Sustainability/Ecoresponsibility/Pages/Energy-and-climate.aspx for more information.	Not Available

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	are cost savings, energy efficiency, and energy security for business continuity and customer service provision.								

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Tue 01 Jan 2013 - Tue 31 Dec 2013	769471
Scope 2 (location-based)	Tue 01 Jan 2013 - Tue 31 Dec 2013	636184
Scope 2 (market-based)		

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Defra Voluntary Reporting Guidelines
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 100 year)

Gas	Reference
HFCs	IPCC Second Assessment Report (SAR - 100 year)
PFCs	IPCC Second Assessment Report (SAR - 100 year)
CO2	IPCC Second Assessment Report (SAR - 100 year)
Other: R22	Other: GHG Protocol
Other: R502	Other: GHG Protocol
Other: Fire Suppression Equipment	Other: Business Commentary

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Motor gasoline	69.3	Other: kg/CO2/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Motor gasoline	0.033	Other: kg CH4/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Motor gasoline	0.003	Other: kg N20/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Diesel/Gas oil	20.20	Other: kg C/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Diesel/Gas oil	0.003	Other: Tonnes CH4/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Diesel/Gas oil	0.0006	Other: Tonnes N20/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Diesel/Gas oil	43	Other: MJ/kg	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Liquefied petroleum gas (LPG)	47.30	Other: MJ/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006

Fuel/Material/Energy	Emission Factor	Unit	Reference
Liquefied petroleum gas (LPG)	17.20	Other: C/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Liquefied petroleum gas (LPG)	0.001	Other: kg CH4/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Liquefied petroleum gas (LPG)	0.0001	Other: kg N20/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Natural gas	48	Other: MJ/kg	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Natural gas	15.30	Other: C/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Natural gas	0.001	Other: kg CH4/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Natural gas	0.0001	Other: kg N20/GJ	IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Electricity	746.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	720.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	200.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	437.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	230.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	732.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	215.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	527.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	527.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	578.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	294.00	Other: gram CO2/kWh	IEA Statistics 2012

Fuel/Material/Energy	Emission Factor	Unit	Reference
Electricity	527.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	237.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	433.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	527.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	1003.00	Other: gram CO2/kWh	Eskom - Statistical Table 5: http://www.eskom.co.za/IR2015/Documents/Eskom_fact_sheets_2015.pdf
Electricity	527.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	204.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	340.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	527.00	Other: gram CO2/kWh	IEA Statistics 2012
Electricity	3.00	Other: gram CO2/kWh	IEA Statistics 2012

Further Information

Page: CC8. Emissions Data - (1 Jan 2015 - 31 Dec 2015)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Financial control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

645428

CC8.3

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

Don't know

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
651233		

CC8.4

Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Scope 1, 2 and 3 emissions from the following operating countries are not included: MTN Syria, Mascom Botswana; MTN Ethiopia; MTN Dubai Head Office; MTN Yemen	Emissions are not relevant	Emissions are relevant but not yet calculated	Emissions are not evaluated	MTN Syria and MTN Yemen (challenges associated with network management in the context of the broader macro-political situation) • MTN Group Head in UAE, Dubai (MTN does not offer ICT services directly in the UAE) • Mascom Botswana and MTN Ethiopia have been excluded on the basis of indirect ownership holding and recent acquisitions, respectively.

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 5% but less than or equal to 10%	Data Gaps Assumptions Metering/ Measurement Constraints Other: Constraints by the largest	The uncertainty will continue to decrease as the carbon footprint data collection process becomes more institutionalised. The increased training and awareness will ensure that more MTN operations report each year. Overall the uncertainty has decreased compared to 2014. In 2015, PwC undertook assurance readiness assessments and reviews on data reported by specified OPCO's to Group. This process informed

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
		operating units and non-reporting of less material operating units	recommendations to improve data collection and reporting processes. These recommendations have informed a refined approach in 2016 with the intention of further improving the Group carbon footprint. Further management reviews will be conducted at a selection of OpCos in 2016. MTN aims to recommence external assurance processes in 2017.
Scope 2 (location-based)	More than 5% but less than or equal to 10%	Data Gaps Assumptions Metering/ Measurement Constraints Other: Constraints by the largest operating units and non-reporting of less material operating units	The uncertainty will decrease as the carbon footprint data collection process becomes more institutionalised. The increased training and awareness will ensure that more MTN operations report each year. Overall the uncertainty has decreased compared to 2014. In 2015, PwC undertook assurance readiness assessments and reviews on data reported by specified OPCO's to Group. This process informed recommendations to improve data collection and reporting processes. These recommendations have informed a refined approach in 2016 with the intention of further improving the Group carbon footprint. Further management reviews will be conducted at a selection of OpCos in 2016. MTN aims to recommence external assurance processes in 2017,
Scope 2 (market-based)	More than 5% but less than or equal to 10%	Other: MTN has not assessed the full potential for purchasing lower carbon electricity in the different countries in which we operate	Our energy management strategy has been evolving alongside our changing infrastructure investment and management strategy. As a result, the outsourcing of our networks has reduced the materiality of some of our Scope 1 and 2 emissions, and has increased the materiality of our Scope 3 emissions. These changes also inform our efforts on the types of facilities (network, non-network technical, buildings, etc.) we manage and how we reduce energy consumption and GHG emissions.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

No third party verification or assurance

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

No third party verification or assurance

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
Afghanistan	59859
Benin	9177
Cameroon	2920
Congo, Democratic Republic of the	14866
Cote d Ivoire	2461
Cyprus	1557
Ghana	7598
Guinea-Bissau	3835
Guinea	17654
Iran, Islamic Republic of	4038
Kenya	154
Liberia	12264
Namibia	1
Nigeria	416597
Rwanda	2385
South Africa	26648

Country/Region	Scope 1 metric tonnes CO2e
South Sudan	12956
Sudan	41825
Swaziland	461
Uganda	4813
Zambia	3359

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Mobile combustion	30112
Stationary combustion(Diesel)	586681
Stationary combustion(LPG)	58
Stationary combustion(natural gas)	15506
Refrigerant Use	13071

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Afghanistan	13664	0	18316	0
Benin	10557	0	14662	0
Cameroon	3032	0	15158	0
Congo, Democratic Republic of the	1230	0	5348	0
Cote d Ivoire	6582	0	15063	0
Cyprus	7916	0	10815	0
Guinea-Bissau	113	0	214	0
Guinea	2435	0	4619	0
Iran, Islamic Republic of	145309	0	251399	0
Kenya	196	0	665	0
Liberia	0	0	0	0
Namibia	20	0	85	0
Nigeria	34092	0	76935	0
Rwanda	3142	0	5962	0

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
South Africa	396382	0	395196	0
South Sudan	52	0	99	0
Sudan	7096	0	34784	0
Swaziland	5672	0	16684	0
Uganda	8583	0	16287	0
Zambia	25	0	8283	0
Ghana	5135	0	23885	0

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By facility

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
BTS Sites	465760	0
Offices (Head Regional & Technical) & warehouses	44149	0
Data Call and Service Centres and Switches	141324	0

CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

Further Information

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	Energy purchased and consumed (MWh)
Heat	0
Steam	0
Cooling	0

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Diesel/Gas oil	2260948
Motor gasoline	43374
Liquefied petroleum gas (LPG)	256

Fuels	MWh
Natural gas	76704

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
914459	892355	21919	15024	15024	As a result of continued investment in alternative energy projects, MTN produced 21 919 MWh electricity in 2015 across its operations. Total electricity produced includes both renewable electricity production (15 024 MWh, predominately from solar power), as well as low-carbon electricity production from the trigeneration plant in South Africa.

Further Information

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Decreased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	0.57	Decrease	In 2015, Scope 1 and 2 emissions from MTN South Sudan were included in the inventory for the first time while MTN Yemen's emissions were excluded. Scope 1 and 2 emissions from MTN South Sudan in 2015 totaled 13 008 tCO2e, representing 1% of MTN's 2014 Scope 1 + 2 emissions, while MTN Yemen's Scope 1 and 2 emissions totaled 53 923 tCO2e, representing 4% of MTN's 2015 Scope 1+2 emissions (and a net decrease in emissions overall).
Divestment	11.02	Decrease	As a result of the outsourcing of BTS sites to TowerCos in Nigeria for the first time in 2015, in addition to continued outsourcing of BTS sites to TowerCos in Ghana, Uganda, Cameroon, Cote d'Ivoire, Rwanda and Zambia, a total 152 958 tCO2e shifted from MTN's Scope 1 + 2 emissions to Scope 3 emissions. This represents 11.02% of MTN's 2014 Scope 1 + 2 emissions.
Acquisitions	0	No change	
Mergers	0	No change	
Change in output	7.92	Increase	In 2015, MTN's total, Scope 1 and 2 emissions decreased by 91 616 tCO2e. The change in emissions as a result of emission reduction initiatives, the change in boundary, and divestment of BTS sites is -201 820 tCO2e. The remaining + 110 204 tCO2e (to bring the overall change in emissions in 2014 up to the total -91 616 tCO2e) is attributed to the expansion of the network and increased installations of 3G, 4G and LTE technologies. This 110 204 tCO2e represents 7.94% of MTN's 2014 Scope 1 + 2 emissions.

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Change in methodology	0	No change	
Change in boundary	2.95	Increase	In 2015, Scope 1 and 2 emissions from MTN South Sudan were included in the inventory for the first time while MTN Yemen's emissions were excluded. Scope 1 and 2 emissions from MTN South Sudan in 2015 totaled 13 008 tCO2e, representing 1% of MTN's 2014 Scope 1 + 2 emissions, while MTN Yemen's Scope 1 and 2 emissions totaled 53 923 tCO2e, representing 4% of MTN's 2015 Scope 1+2 emissions (and a net decrease in emissions overall).
Change in physical operating conditions	0	No change	
Unidentified	0	No change	
Other	0	No change	

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.000007	metric tonnes CO2e	147063000000	Location-based	26.4	Decrease	In 2015, Scope 1 + 2 emissions decreased (for the reasons described above) whilst total revenue increased compared to 2014. This has resulted in a 26.4% decrease in emissions per unit revenue. Emissions intensity (emissions unit total revenue) would have been greater were it not for the emission reduction activities successfully implemented across the Group.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.0072	metric tonnes CO2e	Other: GHG intensity per subscriber		Location-based	4	Increase	Scope 1 and 2 emissions have decreased (-6.60%), and our subscriber numbers have increased by 4.1% compared to the previous year.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance

Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	290656	As we continue to implement our strategy to outsource our base station or network sites to tower management companies, as a lessee of these sites, our ability to control efforts to improve energy efficiency and reduce GHG emissions is limited. Between 2010 and 2014, sites in Ghana, Uganda, Cameroon, Ivory Coast, Zambia and Rwanda were outsourced. In 2015,	100.00%	Our energy management strategy has been evolving alongside our changing infrastructure investment and management strategy. As a result, the outsourcing of our networks has reduced the materiality of some of our Scope 1 emissions, and has increased the materiality of our Scope 3 emissions. These changes also inform our efforts on the types of facilities

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			MTN Nigeria's sites were also outsourced. Together these represent approximately 32% of our sites. We continue to account for energy consumption at these sites, as costs are passed onto MTN either directly or as part of a consolidated site usage fee. As we report GHG emissions according to the operational control boundary, outsourcing results in a shift in the classification of emissions from Scope 1 (direct) to Scope 3 (indirect) emissions. Given our reliance on these outsourced sites, we will regard these Scope 3 emissions as material over the medium to long term (while Scope 1 emissions will decline materially). However, we are unable to get data in sufficient detail from our business partners to undertake assurance on this material contributor to our energy costs and emissions. We maintain constructive and ongoing discussions with our tower management partners about their efforts to reduce relative energy consumption, improve efficiencies and invest in alternative energy solutions.		(network, non-network technical, buildings, etc.) we manage, how we reduce energy consumption and GHG emissions, and which facilities we select for internal and external assurance.
Capital goods	Not relevant, explanation provided				This category, in accordance with WRI/GHG Protocol guidance, has been excluded due to lack of available data and the insignificance in size of emissions relative to the other categories.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, not yet calculated				
Upstream transportation and distribution	Relevant, not yet calculated				
Waste generated in operations	Relevant, not yet calculated				
Business travel	Relevant, calculated	2570	Business travel includes both flights (local and international) for business purposes as well as kilometres travelled in hire cars. The methodology followed to estimate the emissions involved multiplying activity data for mode of transport (e.g. distance travelled) by an applicable emission factor for that mode of transport (e.g. t CO2/km). Flights were categorised as being either long- (> 1600km) or short-(<1600 km) haul flights. DEFRA default factors were used for all emission factors (0.11 for short haul, and 0.12 kg CO2/km for long haul). Hire cars were categorised according to fuel type as well as by the engine capacity of the car. Petrol vehicles were categorised as either small (<1.4 litres), medium (>1.4 litres) or large (>2.0 litres).	100.00%	MTN obtains all business travel data from a contracted Travel Agent.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Employee commuting	Relevant, not yet calculated				
Upstream leased assets	Relevant, not yet calculated				
Downstream transportation and distribution	Relevant, not yet calculated				
Processing of sold products	Relevant, not yet calculated				
Use of sold products	Relevant, not yet calculated				
End of life treatment of sold products	Relevant, not yet calculated				
Downstream leased assets	Relevant, not yet calculated				
Franchises	Relevant, not yet calculated				
Investments	Relevant, not yet calculated				

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Other (upstream)	Not evaluated				
Other (downstream)	Not evaluated				

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

No third party verification or assurance

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Purchased goods & services	Divestment	111	Increase	The outsourcing some of our BTS sites to TowerCos in Nigeria. In 2015 we continued to outsource BTS sites in Cameroon, Cote d'Ivoire, Ghana, Rwanda, Uganda and Zambia, resulted in an additional 152 958 tCO2 Scope 3 emissions in 2015. This has resulted in a 111% increase in Scope 3 emissions from purchased goods and services.
Business travel	Other: There has been a reduction in car rentals as well as air travel	54	Increase	The main driver for the reduction in business travel was the implementation of a drive to reduce business travel across the group by encouraging the use of virtual communication such as videoconferencing.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success

Following the sale of MTN's BTS towers in Cameroon, Cote d'Ivoire, Ghana, Nigeria, Rwanda Uganda and Zambia some of our reported Scope 1 and Scope 2 emissions are now classified as Scope 3. We are neither the majority shareholder nor maintain operational control of these assets.
These emissions are material and are therefore prioritised in the Group's management of Scope 3 emissions.
We engage directly with infrastructure owners/asset managers, requiring them to provide information on energy costs and consumption of the assets we lease or use, energy reduction initiatives or activities and climate change risks and mitigation efforts. We also provide training and include these businesses in our efforts to gather better data and improve the management of climate related risks and opportunities with respect to the towers being managed by these businesses.
We engage with customers through the review of our annual sustainability report, communications with media organisations, ESG and SRI investors and analysts, information from third-party questionnaires and assessments of our publicly reported performance by university organisations and other third parties not commissioned by MTN and our own internal review and research processes including industry, peer and global developments, and our risk and audit management processes.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend (direct and indirect)	Comment
2	27.72%	The total energy costs from our outsourced BTS operations in Cote d'Ivoire, Cameroon, Ghana, Nigeria, Rwanda, Uganda and Zambia was 1.3 billion ZAR in 2015. This represents 27.72% of MTN's total energy spend.

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Identifying GHG sources to prioritize for reduction actions	We will share our experience and expertise gained from successful emission reduction activities in our other MTN operations. We will also monitor the data and information on climate change management as part of the integrated risk management process that we are currently developing, in order to ensure that these material emissions do not pose material risks to the Group.

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Zakhiya Rehman	Text field [maximum 200 characters] Group Sustainability Manager	Environment/Sustainability manager

Further Information

Module: ICT

Page: ICT1. Data center activities

ICT0.1a

Please identify whether "data centers" comprise a significant component of your business within your reporting boundary

Yes

ICT1.1

Please provide a description of the parts of your business that fall under “data centers”

MTN is an ICT operator, offering services in over 25 countries in Africa, Middle East and Southern Europe, including cloud computing services. These services are enabled through data centres. Emissions from data centres include emissions from switches and remote hubs. MTN data centres, switches or remote hubs are locations dedicated to hosting ICT infrastructure for internal or external (customer) use, located at a mixed-use or dedicated facility. Emissions from data centres, including switches and remote hubs, accounted for 16% of our total scope 1 + 2 emissions in 2015- the second highest contributor to the Group’s carbon footprint after BTS sites which account for 75% of our total scope 1 + 2 emissions.

ICT1.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the data centers component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method	Comment
Data centers	61006	141324	224094	Meter or submeter reading	Note that these emissions are for data centres, switches and remote hubs, as per our carbon footprint data collection process.

ICT1.3

What percentage of your ICT population sits in data centers where Power Usage Effectiveness (PUE) is measured on a regular basis?

Percentage	Comment
	Unavailable

ICT1.4

Please provide a Power Usage Effectiveness (PUE) value for your data center(s). You can provide this information as (a) an average, (b) a range or (c) by individual data center - please tick the data you wish to provide (tick all that apply)

ICT1.4a

Please provide your average PUE across your data centers

Number of data centers	Average PUE	% change from previous year	Direction of change	Comment

ICT1.4b

Please provide the range of PUE values across your data centers

Number of data centers	PUE Minimum Value	% change of PUE Minimum Value from previous year	PUE Maximum Value	% change of PUE Maximum Value from previous year	Direction of change	Comment

ICT1.4c

Please provide your PUE values of all your data centers

Data center reference	PUE value	% change from previous year	Direction of change	Comment

ICT1.5

Please provide details of how you have calculated your PUE value

ICT1.6

Do you use any alternative intensity metrics to assess the energy or emissions performance of your data center(s)?

No

ICT1.6a

Please provide details on the alternative intensity metrics you use to assess the energy or the emissions performance of your data center(s)

ICT1.7

Please identify the measures you are planning or have undertaken in the reporting year to increase the energy efficiency of your data center(s)

Status in reporting year	Energy efficiency measure	Comment
Implemented	Cooling Efficiencies	In 2015, Cyprus replaced air-conditioning units with a free-cooling system which has reduced energy consumption by 5% at its data centres. Numerous other OpCos have invested in energy efficiency projects at data centres. Notably, MTN South Africa's free cooling project, implemented in 2014, results in annual electricity savings of 2 628 MWh (and associated emissions savings of 2 636 tCO2e).

ICT1.8

Do you participate in any other data center efficiency schemes or have buildings that are sustainably certified or rated?

Yes

ICT1.8a

Please provide details on the data center efficiency schemes you participate in or the buildings that are sustainably certified or rated

Scheme name	Level/certification (or equivalent) achieved in the reporting year	Percentage of your overall facilities to which the scheme applies
LEED	LEED Scheme and a Silver level for MTN SA main premises	
Other: ISO 14001 EMS	MTN SA and Cyprus are ISO 14001 certified	

ICT1.9

Do you measure the utilization rate of your data center(s)?

No

ICT1.9a

What methodology do you use to calculate the utilization rate of your data center(s)?

ICT1.10

Do you provide carbon emissions data to your clients regarding the data center services they procure?

Yes

ICT1.10a

How do you provide carbon emissions data to your clients regarding the data center services they procure?

Most clients do not request this information, but for tenders or sales processes, information on MTN's energy/ climate/ sustainability efforts is shared. This information is also available in our annual Sustainability Report (http://www.mtn.com/Sustainability/Documents/MTN_Group_Sustainabilty_Report_2015.pdf)

ICT1.11

Please describe any efforts you have made to incorporate renewable energy into the electricity supply to your data center(s) or to re-use waste heat

In 2010 MTN South Africa launched a Gas-Waste Heat Capture-Cooling (tri-generation) plant at the 14th Avenue Test Switch and Data Centre. The plant includes a 2 MW methane gas (natural gas) generator that uses the waste heat generated to chill water for cooling purposes enabling electrical/ thermal fuel efficiency by supplying combined primary energy, heat and cooling. Construction began in 2015 on a 3 by 1.7MW (e) gas generator and 2.5MW (t) absorption chiller at Newlands as well as a 1MW (e) gas generator and 720kW (t) absorption chiller at Doornfontein. The plants are in construction phase but the gas generators are running. Emission savings will be reported in the 2017 CDP response. South Africa implemented a solar CSP plant for data centre cooling in 2014, In addition, solar hybrid sites have been implemented in Iran and South Sudan in 2015 and these generate approximately 52 370 GJ of energy. The extent to which the solar energy is used at data centres versus network sites in Iran and Sudan cannot be determined at this point. In the past four years we implemented energy efficiency solutions at approximately 9 989 network sites, as well as at data centres, switches, hubs and office buildings. In 2015, an additional 450 sites were improved. We now operate 329 solar and solar-hybrid sites MTN also operates a handful of wind, gas and other "green-powered" sites.

Further Information

Page: ICT2. Provision of network/connectivity services

ICT0.1b

Please identify whether "provision of network/connectivity services" comprises a significant component of your business within your reporting boundary

Yes

ICT2.1

Please provide a description of the parts of your business that fall under "provision of network/connectivity services"

MTN is an ICT operator, offering services in over 25 countries in Africa, Middle East and Southern Europe including cloud computing services. These services are enabled through network and connectivity including a network submarine and terrestrial cables, satellite, wireless and all other forms of network connectivity.

ICT2.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the provision of network/connectivity services component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method	Comment
Provision of network/connectivity services					

ICT2.3

Please describe your gross combined Scope 1 and 2 emissions or electricity use for the provision of network/connectivity services component of your business as an intensity metric

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change	Comment
0.0072	metric tonnes CO2e	Subscriber	4	Increase	The decline is due to the decreased Scope 1 and 2 emissions (-91 616 tCO2e) in 2015 compared to 2014. As we report GHG emissions according to the operational control boundary, outsourcing results in a shift in the classification of emissions from Scope 1 (direct) to Scope 3 (indirect) emissions. Given our reliance on these outsourced sites, we will regard these Scope 3 emissions as material over the medium to long term (while Scope 1 emissions will decline materially). However, we are unable to get data in sufficient detail from our business partners to undertake assurance on this material contributor to our energy costs and emissions. We maintain constructive and ongoing discussions with our tower management partners about their	A location-based Scope 2 figure has been used in our total Scope 1 & 2 total emissions, as used to generate the intensity metric.

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change	Comment
					efforts to reduce relative energy consumption, improve efficiencies and invest in alternative energy solutions	

ICT2.4

Please explain how you calculated the intensity figures given in response to Question ICT2.3

The intensity metric was calculated in accordance with the Greenhouse Gas Protocol. The numerator is the sum of Scope 1 and 2 emissions within our boundary and this data is obtained from our different operations. The denominator is the number of subscribers as determined by the activity on the network. Both the numerator and denominator are not estimations. It is important to note that Scope 1 and 2 emissions exclude emissions from outsourced sites with the exception of Nigeria where some sites are still under MTN's control.

ICT2.5

Do you provide carbon emissions data to your clients regarding the network/connectivity services they procure?

No

ICT2.5a

How do you provide carbon emissions data to your clients regarding the network/connectivity services they procure?

Further Information

Page: ICT3. Manufacture or assembly of hardware/components

ICT0.1c

Please identify whether "manufacture or assembly of hardware/components" comprises a significant part of your business within your reporting boundary

No

ICT3.1

Please provide a description of the parts of your business that fall under "manufacture or assembly of hardware/components"

ICT3.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the manufacture or assembly of hardware/components part of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method	Comment

ICT3.3

Please identify the percentage of your products meeting recognized energy efficiency standards/specifications by sales weighted volume (full product range)

Product type	Standard (sleep mode)	Percentage of products meeting the standard by sales volume (sleep mode)	Standard (standby mode)	Percentage of products meeting the standard by sales volume (standby mode)	Standard (in use mode)	Percentage of products meeting the standard by sales volume (in use mode)	Comment

ICT3.4

Of the new products released in the reporting year, please identify the percentage (as a percentage of all new products in that product type category) that meet recognized energy efficiency standards/specifications

Product type	Standard (sleep mode)	Percentage of new products meeting the standard (sleep mode)	Standard (standby mode)	Percentage of new products meeting the standard (standby mode)	Standard (in use mode)	Percentage of new products meeting the standard (in use mode)	Comment

ICT3.5

Please describe the efforts your organization has made to improve the energy efficiency of your products

ICT3.6

Please describe the GHG emissions abatement measures you have employed specifically in your ICT manufacturing operations

ICT3.7

Do you provide carbon emissions data to your clients regarding the hardware/component products they procure?

ICT3.7a

How do you provide carbon emissions data to your clients regarding the hardware/component products they procure?

Further Information

Page: ICT4. Manufacture of software

ICT0.1d

Please identify whether "manufacture of software" comprises a significant component of your business within your reporting boundary

No

ICT4.1

Please provide a description of the parts of your business that fall under "manufacture of software"

ICT4.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the software manufacture component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method	Comment

ICT4.3

Please describe your gross combined Scope 1 and 2 emissions for the software manufacture component of your business in metric tonnes CO2e per unit of production

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change	Comment

ICT4.4

What percentage of your software sales (by volume) is in an electronic format?

ICT4.5

Do you provide carbon emissions data to your clients regarding the software products they procure?

ICT4.5a

How do you provide carbon emissions data to your clients regarding the software products they procure?

Further Information

Page: ICT5. Business services (office based activities)

ICT0.1e

Please identify whether "business services (office based activities)" comprise a significant component of your business within your reporting boundary

No

ICT5.1

Please provide a description of the parts of your business that fall under "business services (office based activities)"

ICT5.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the business services (office based activities) component of your business

Business activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method	Comment

ICT5.3

Please describe your gross combined Scope 1 and 2 emissions for the business services (office based activities) component of your business in metric tonnes per square meter

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change	Comment

ICT5.4

Please describe your electricity use for the provision of business services (office based activities) component of your business in MWh per square meter

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change	Comment

Further Information

Page: ICT6. Other activities

ICT0.1f

Please identify whether "other activities" comprise a significant component of your business within your reporting boundary

No

ICT6.1

Please provide a description of the parts of your business that fall under "other"

ICT6.2

Please provide your absolute Scope 1 and 2 emissions and electricity consumption for the identified other activity component of your business

Activity	Scope 1 emissions (metric tonnes CO2e)	Scope 2 emissions (metric tonnes CO2e)	Annual electricity consumption (MWh)	Electricity data collection method	Comment

ICT6.3

Please describe your gross combined Scope 1 and 2 emissions for your defined additional activity using an appropriate activity based intensity metric

Activity	Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change	Comment

ICT6.4

If appropriate, please describe your electricity use for your defined additional activity using an appropriate activity based intensity metric

Activity	Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change	Comment

Further Information

CDP