

# Environmental

As an important part of our unwavering commitment to act as a steward for the environment, we seek to minimize stc's direct environmental impacts as well as any indirect impacts associated with the use of our products and services. We continue to support our customers in reducing their own environmental impacts and we are taking the necessary steps to ensure that we achieve our ultimate goal of reaching netzero emissions by 2050.



# Environmental performance and climate

We aspire to be a global leader in environmental stewardship, not only for the telecom industry, but for all tech-based companies worldwide. This includes embracing sustainable technologies, preserving natural resources, and developing programs to reduce our carbon footprint and increase positive ecological impacts.



In 2023, we focused on more of a circular economy approach for helping to preserve biodiversity and actively transition towards a low-carbon economy, as part of our ultimate goal to reach net-zero by 2050.

stc's Environmental policy statement affirms our commitment to mindful stewardship of the environment and establishes our compliance with all relevant laws and regulations that apply to our wide range of business operations. We aim to fulfill environmental commitments to the community and our customers by lowering pollution emanating from our operations, eliminating contamination throughout our value chain, removing unsightly visual impacts on the landscape, and reducing unnecessary noise levels that may disturb normal daily life.

## Energy and climate change

stc has committed to reach net-zero emissions across the company's entire value chain by 2050. We have incorporated this ultimate goal into our Group-wide climate change mitigation strategy, which is based on the Task Force for Climate-related Financial Disclosures (TCFD) and the Science-Based Targets initiative (SBTi) to ensure that we are accurately measuring our carbon reductions. In 2023, we developed a climate action plan that lays out the roadmap for achieving our near-term targets of reducing our absolute Scope 1 and 2 emissions by 50% and Scope 3 emissions by 46.2% before 2030.

#### Our path to net-zero



## Our climate strategy

stc's climate strategy establishes a clear, ambitious vision and measurable objectives for all Group departments and subsidiaries to consider as part of implementing all business practices going forward. We recognize the unique opportunity that our reputation, in-house technologies, and market position provide to enable wider sustainable leadership within the ICT sector. Our ambition is not only to drive climate action through operational optimization and improved efficiencies, but also to influence, support, and collaborate with customers, communities, and companies within our value chain to create a more holistic climate impact.

In 2023, we solidified this climate strategy with a focus on four priority pillars for climate action. Each pillar is supported by science-based targets, KPIs, and Group-wide initiatives, complete with a detailed implementation plan for 2023 – 2030. Our climate action journey will be iterative and we are focused on implementing robust leadership, oversight, and governance, and "Pillar Champions" to ensure we reach our targets and goals.



#### \_\_\_\_ 2022

- Achieved verified submission to the SBTi
   Improved company-wide emissions data management procedure
   Committed to planting 1 million trees

#### 2023

- Validated and approved stc's net-zero and interim science-based 2030 targets by SBTi
   Participated in largest-ever voluntary carbon credit auction
   Participated in Saudi Green Initiative (SGI) Forum during COP28

#### 2030

- Reduce Scope 1 and 2 emissions by 50% and Scope 3 emissions by 46.2% from 2019 baseline in alignment with < 1.5°C UNFCCC scenario

#### 2050

- Achieve net-zero emissions

	Pillars	Objective	Programs	2023 Initiatives
$\bigoplus$	Optimizing stc's performance	Promote continuity & quality of information, ensure carbon reduction commitments are achieved, and provide a foundation for improvement & system analysis	- GHG emissions governance - Manage Scope 1 emissions - Manage Scope 2 emissions	<ul> <li>Improved energy efficiency of data centers</li> <li>Solar pilot project</li> <li>Solar installation in parking areas, buildings, and outlets</li> <li>Improved energy efficiency at tower sites</li> <li>Recycling program for network devices</li> </ul>
6	Developing eco-friendly products and solutions	Reduce the climate impact from materials, products, and services used by stc and across the company's value chain	- Carbon enablement - Sustainable customers - Engaged supply chain	<ul> <li>Implementation of "take back program"</li> <li>Sustainable products and services through stc Cloud, lot squared, Solutions, and Specialized Emergency response products such as Tari"</li> </ul>
$\langle \bullet \rangle$	Managing climate-related risks & financial impacts	Assess & manage climate-related risks in a manner that future-proofs stc Group's operations and ensures alignment with stakeholder expectations	- Climate risk evaluation - Climate resilient assets and services	<ul> <li>Rigorous risk assessments guided by TCFD recommendations</li> <li>Developing Group-wide policies and processes</li> </ul>
	Demonstrating climate leadership	Empower stc's colleagues and supply chain to influence climate action at both the local and global scale	- Internal and external empowerment - Implement circular economy considerations across supply chain	- Recycling program - ESG training program - Internal capacity building - GCC telco alliance and launch of GCC innovation hub

### Governance around climate-related risks

stc's climate action is part of the larger Sustainability Roadmap, headed by the Sustainability General Manager and endorsed by the GCSO. It has been approved by the Sustainability Management Committee, chaired by the GCEO that reports to the board, which meets quarterly to oversee implementation progress and review relevant risks and targets.

We have developed several internal regulations and policies designed to position stc Group to achieve climate change targets, including:

- Environmental Policy
- <u>Sustainability Policy</u>
- <u>Sustainability Supply Chain Policy</u>
- <u>Supplier Code of Conduct</u>

The environmental policy and sustainable supply chain policies are in the process of final top management approval to be launched and published soon.

#### **Climate risks and opportunities**

In 2023, we analyzed climate-related risks in accordance with the TCFD, covering short-, medium, and long-term physical and transition-related risks. This comprehensive scenario assessment has allowed us to pinpoint the significant climate change risks and opportunities for stc's Group-wide business operations. From this, we developed three distinct scenarios that cover the breadth of our climate risk assessment. These scenarios roughly correspond to public domain scenarios from IPCC, IEA, and NGFS, as indicated below:

- Scenario 1 Business as usual: Assumes that GHG emissions will continue to increase at their current rate due to limited actions and insufficient mitigation efforts. This would lead to a world that is significantly warmer and more prone to climate-related physical risks and impacts.
- Scenario 2 Delayed transition (2º scenario): Assumes global annual emissions do not decrease until 2030. Strong policies are then required to limit warming to below 2°C.
- Scenario 3 Net-zero carbon transition (1.5° scenario): Most ambitious scenario that limits global warming to 1.5 °C through stringent climate policies and innovation, reaching net-zero by 2050.

Our approach to analyzing climate-related risks and opportunities, taking into account the risk management practices of stc Group, involves identifying causes for potential risks, assessing financial materiality, and prioritizing risks based on perceived impacts. This includes identifying various ways in which climate change could physically impact stc's organizational operations, informed by client data and desktop research, and assessing the likelihood and severity of each relevant impact based on the corresponding financial materiality. After assessing all these factors, risks are prioritized according to their expected likelihood, velocity and impact, and then addressed as a part of our mitigation plan to help reduce exposure to these risks and to mitigate the physical and economic impacts of climate change to the best of our ability.

#### Case study: Network optimization and sustainability

Virtual Drive Testing (VDT) is an innovative solution revolutionizing the testing process for network optimization. By leveraging simulation software and virtual environments, VDT eliminates the need for physical prototypes, significantly reducing environmental impact.

The benefits of VDT are manifold. Notably, it leads to substantial reductions in energy consumption, carbon emissions, and resource utilization. Moreover, it streamlines development processes, expediting network optimization and enhancing operational efficiency.

Adopting VDT also positions companies as sustainability leaders, resonating with consumers and stakeholders alike. Financially, it translates into significant cost savings through decreased energy consumption and accelerated product development cycles.

Currently, the solution has been rolled out in urban centers and is set for nationwide coverage in the near future.

- 186,385kwh power savings
- 467,991km distance savings
- 71% CO2 Emission Reductions

# **Climate risks**

Category	Nature	Risk	Description	Assets
Physical	Acute	Extreme weather	Severe storms, hurricanes, or flooding impacts the infrastructure and disrupts services	•
Physical	Acute	Changes in temp. & precipitation patterns	Changes in temperature and precipitation patterns impact telecommunication towers	(((q))))
Physical	Chronic	Water scarcity and quality	Inefficient cooling systems and data centers leading to increased energy consumption and reduced cooling efficiency.	
Physical	Chronic	Rising sea levels and storm surges	Damage from rising sea levels on coastal areas infrastructure leading to service disruptions and costly repairs.	( <u>((</u> 9)))
Transitional	Policy & regulation	Policy and regulatory changes related to climate change	Increase of electricity price due to requirements for emission reductions, renewable energy adoption and energy efficiency standards.	
Transitional	Policy & regulation	Liability risks associated with the transition to a low-carbon economy	Requirements for minimum energy performance of buildings to ensure transition to Net Zero	
Transitional	Technology	Technological innovation and disruption	Market moves away from reliance on fossil fuels for logistics and emergence of less carbon intensive practices	<b>F</b>



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# **Climate risks**

Category	Nature	Risk	Description	Assets
Transitional	Market	Shifts in consumer preferences and behavior towards sustainable products and services	Consumers adopt more sustainable behavior and switches to lower carbon products and services	
Transitional	Policy & regulation	GHG Emission cost	Introduction of carbon pricing in Saudi on direct emissions to incentivize emissions reductions	
Transitional	Policy & regulation	GHG Emission cost	Introduction of carbon tax in suppliers' country resulting on a higher cost of operations for supplier companies	, je
Transitional	Market	Supply chain disruption and increasing material costs	Extreme weather events disrupt supply chain and procurement of materials	
Transitional	Technology	Renewable Energy Adoption	Late adoption of renewable energy leads to higher energy cost for business activities	
Assets	• • • • • • • • • • • • • • • • • • •	e cables	(((()))) Towers	Buildings
	\$		SS	SSS
Time horizon	<2 year Short	rs	2-5 years Medium	5-10 years Medium-Long term

In response to the assessed climate risks, we have developed strategic mitigation plans to enhance our resilience and sustainability across various fronts including climate resilience, disaster preparedness, resource efficiency, sustainable supply chain, collaboration and innovation, and emissions reduction. All this includes advocacy for policies and incentives to support low-carbon initiatives, incorporating renewable energy sources and waste reduction measures, ethical sourcing practices and shared transportation, investment in advanced network technologies, implementation of disaster recovery plans and regular maintenance and early damage detection.

Financial	Ti	me horizo	n				
impact	Short	Medium	Long				
\$\$							
\$\$\$\$\$							
\$\$\$							
\$\$\$\$							
Ş							
Logistics/ supply chain	Ĺ	inance	đ	Channels	Data centers		
\$\$\$\$	\$	3888					
>10 long term						_	

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# **Metrics and targets**

stc has committed to a net-zero target by 2050, which encompasses Scope 1, 2, and 3 emissions. Our near-term emission reduction targets have been validated by the SBTi.

stc Group has also committed to planting 1 million trees to help support nature-based carbon sequestration and increase local wildlife habitat. This is just one of many initiatives that the Group has launched to advance progress towards its environmental commitments.

#### Long-term targets and commitments

Overview of stc Group's long-term public commitments and validated targets



Near-term goals by 2030 set in line with Science Based Targets

# Reducing environmental impacts of

### products and services

Digitization is a critical component of transitioning to a greener and more sustainable economy and society. With that in mind, stc's products and services are aimed at enabling customers, as well as other sectors, to move towards decarbonisation and a more sustainable world. We have developed crucial energy-transition services based on connectivity, the Internet of Things (IoT), cloud computing, big data, and 5G, all of which not only provide operational and cost-saving benefits, but also environmental benefits. At present, we are currently working on capturing and quantifying the sustainability benefits of these products and services. For further details, refer to the Digital innovation and experience section.

In 2023, stc adopted energy-efficient solutions in collaboration with one of our major partners, to further progress in reducing our carbon emissions and achieving our net-zero target. These solutions include, among others, space- and energy-efficient high-performance baseband processing and new SoC-based baseband plug-in cards that deliver nearly 10x more cells compared to previous generations, saving more than 800 MWh of energy and reducing  $CO_2$  emissions by more than 570 tons annually.

# Case study: Energy efficiency using Artificial Intelligence (AI)

In the telecommunications sector, significant strides have been made towards environmental sustainability through the deployment of innovative power-saving features for 4G and 5G networks. By utilizing advanced technologies AI/ML Powered Energy Saving Management (ESM), stc have successfully reduced power consumption, leading to environmental benefits without compromising the network performance. The impact of these initiatives has been remarkable, resulting in substantial energy conservation and cost reduction across 4G and 5G infrastructure.

Moreover, the implementation of these advanced power-saving features demonstrates a commitment to technological innovation and environmental responsibility within the telecommunications industry. By embracing sustainable practices and leveraging the latest advancements in network optimization, operators are driving positive change towards a greener future while meeting the increasing demands for connectivity.

- 36M kwh Power saved
- 13% reduction in energy consumption across 4G and 5G networks

## Trade-in program

stc's trade-in program allows customers to trade in or recycle their electronic devices to reduce clutter, protect the environment, and earn stc account credit. These devices are then cleaned-up, repackaged, and re-sold to other customers at an affordable price.

Initially, there were challenges reaching trade-in targets that prompted a comprehensive reassessment of consumer behavior, which identified key factors such as data privacy concerns, service request simplicity, and the appeal of additional discounts as significant players. Addressing these concerns head-on, we revamped our customer journey on the mystc application, introduced user-friendly features with extra discounts, and obtained data wipe certification to enhance data privacy.

As a result, we adjusted our target numbers and by the end of 2023 we collected, refurbished, and recycled 44,000 devices through this program.

## **Energy consumption**

Shifting towards more sustainable operations will require businesses around the world to rethink their entire production processes and value chains. At stc, we take an active role in managing energy consumption by promoting the use of digital solutions for our own business activities, as well as for those of our customers.

stc Group utilizes big data analytics to deliver actionable insights and an alert system for energy consumption and optimization, which can be found in stc Campus and other specified sites. This new solution, implemented in 2023, avoids manual input for calculating energy consumption and automates results to save effort and ensure greater accuracy.

In 2023, stc Group recorded a 7.5% decrease in direct energy due to decrease in petrol and diesel consumption. However, total energy consumption increased by 10% due to increase in indirect energy. This is due to group expansion and we are implementing plans put in place to reduce overall energy consumption but the positive impact will evident in the short-term.

		stc KSA	L	stc Group			
Energy consumption	2021	2022	2023	2021	2022	2023	
Direct energy consumption (GJ)	174,469	174,804	147,441	2,921,054	2,695,610	2,493,936	
Indirect energy consumption (GJ)	2,512,948	2,422,730	1,676,021	7,147,052	7,369,983	7,392,976	
Total energy consumption (GJ)	2,687,417	2,597,534	1,823,462	10,068,106	10,065,593	9,861,160	
Energy intensity (GJ/Petabytes)	150.89	127.51	74.77	516.59	454.86	373.79	

	\$	stc KSA		stc Group			
Fuel consumption (Liters)	2021	2022	2023	2021	2022	2023	
Petrol consumption	4,770,225.46	4,451,958.62	4,168,143.98	5,120,629	5,290,426	4,312,517	
Diesel consumption	47,504.99	121,952.40	128,032.15	53,576,357	65,115,487	63,751,211	

	:	stc KSA		stc Group		
Energy Consumption by infrastructure	2021	2022	2023	2021	2022	2023
Electricity consumption from buildings (Kwh)	178,486,972	156,320,065	150,741,872	187,355,515	175,056,537	175,754,391
Data centers (kWh)	133,262,839	158,495,409	-	148,845,463	173,018,293	177,195,828
Base stations (kWh)	0	0	0	1,261,026,846	1,339,164,480	1,384,024,909
Exchanges (kWh)	386,291,420	358,163,064	314,819,483	388,064,444	359,978,096	316,629,310
Total electricity consumption (kWh)	698,041,231	672,978,538	465,561,355.00	1,985,292,268	2,047,217,406	2,053,604,437.89

\* Base stations for stc KSA are not applicable as its under TAWAL \*\* As of 2023, data pertaining to our data centers in stc KSA are considered under the Group, following the establishment of Centre3

## Solar energy site at stc buildings

Solar energy is one of the fastest growing renewable energy sources. As photovoltaic (PV) technology advances and production costs decrease, we are incorporating more solar energy throughout our HQ premises. In 2023, we had seven installed operational solar powered sites at our headquarters in Riyadh, generating 180 kWh of output and a total capacity of 3.5 MW.

Across stc Group, TAWAL has seen a 66% increase in solar powered sites in 2023 for an additional 1,335.77 MWh of renewable energy.

		stc KSA	l	stc Group			
Renewable energy	2021	2022	2023	2021	2022	2023	
Number of solar powered sites	2	7	7	77	78	128	

\* stc Group figures restated due to change in scope, reflecting an expanded inclusion of companies from last year as stated in the scope and boundaries of the report.

#### Energy optimization for data centers

Our data center operations embody a sustainability approach, integrating operations, policy, efficiency, and technological achievements into the design and procurement processes to ensure operational sustainability and policy alignment.

Historically, prior to 2019, the average stc PUE stood at 2.0. However, with the introduction of standards mandating that all new facilities, i.e., those constructed after 2018, must achieve an average annual PUE of 1.5 (or less) at 100% IT load utilization. Where we've successfully met and exceeded these benchmarks, during testing an commissioning, carried out throughout the year of 2023, we've realized PUEs ranging from 1.4 to 1.6, aligning with the NEIDC target average PUE set at 1.5 at full load. Our approach includes smart system monitoring, optimized cooling, effective PUE management, and TCOS certification, ensuring sustainable operation of our data centers.

#### Our strategies focus on minimizing environmental impact while maintaining operational efficiency. Key measures include:

- **Optimization of Mechanical Equipment:** By adopting a primary chilled water network with Variable Frequency Drives (VFDs), we eliminate the need for a secondary network and piping, significantly reducing power consumption.
- Energy Efficiency Mandates: We impose strict energy efficiency criteria on all power and cooling systems, ensuring ongoing monitoring and optimal use of equipment to conserve energy.
- **Designing for Efficiency:** Our data centers aim for a Power Usage Effectiveness (PUE) of 1.5, indicating a highly efficient use of energy in our Electrical and Mechanical (E&M) solutions and minimizing the power footprint.
- **Maximizing Power and Cooling Efficiency:** By segregating hot and cold aisles, we enhance the effectiveness of our cooling systems. This setup maximizes the use of cool air for our equipment racks and improves the efficiency of our cooling infrastructure.
- Local Sourcing of Materials: We prioritize the use of locally produced materials, significantly reducing transportation needs and, consequently, lowering carbon emissions associated with our data center construction and maintenance.

As a result of these considerations, we are anticipating a 25%-30% improvement in PUE for new data centers in comparison to previous years after populating the new data centers.

	stc KSA		s	stc Bahrain			stc Kuwait		
Data Centers	2021	2022	2023	2021	2022	2023	2021	2022	2023
Number of exchanges	224	223	223	2	2	2	24	24	24
Number of data centers owned by stc*	9	9	17	2	2	2	2	2	2
Power usage effectiveness (average PUE) of old data centers	2.05	2.24	2.27	1.81	2.10	1.80	2	2	2
Power usage effectiveness (average PUE) of new data centers**	-	1.91	2.12	-	-	-	-	-	-

\* Data centers by stc Kuwait are rented not owned \*\* no new data centers for stc Bahrain and stc Kuwait

PUE values are associated with the IT Load utilization. All new facilities i.e. after 2018, have a PUE of 1.5 (or less) at full (100%) IT load. However, with low IT Load consumption it is normal for the PUE to be higher. Noting that in 2023, new sites have become operational, and their IT load utilization is low.

## New Era Infrastructure Cloud-Native Data Center Program

We are committed to building new data centers across each of the countries that we operate within. Our goal is to have these facilities incorporate enhanced energy efficiency and sustainability throughout the entire lifecycle of new critical infrastructure.

In Saudi Arabia, we completed Phase 3 construction on three next-generation cloudenabled data centers to add to the three already in service, for a total of six operational data centers in total during 2023. These new data centers incorporated sustainability features in all aspects of construction and development, from design and procurement to materials and construction. Some of the technologies that we implemented achieve the following:

- Better power utilization efficiency (PUE)
- Energy conservation opportunities and Greater server efficiency
- Right-sizing chiller plant optimization and thermal management
- Air flow management and humidity control

- Improved power chain and supplies, Improved lighting, and on-site generation, highly efficient UPS, and highly efficient "low water consumption" cooling systems.

Our three new data centers received uptime certification for design, testing, and commissioning TIER-III standards and TCOS (Gold).

In early 2024, we plan to commence the contracting to begin construction on Phase 4, which is planned to have a total IT capacity of 20.4 MW. We have also conducted studies to prepare for building new state-of-the-art data center in Bahrain which is planned to be fully run on solar power. In 2024-2025, we plan to construct three new data centers in addition to expanding the existing sites with a total capacity of 34.8+ MW for both new sites and expanded older sites.

Through implementing energy efficiency technologies, we anticipate energy cost reduction between 25-30% and emissions reductions between 15-20% once the entire project is concluded.

## Energy efficiency at tower sites

stc towers in Saudi Arabia are managed by TAWAL, the region's first and largest telecom tower company. TAWAL provides leading integrated ICT infrastructure in the KSA for 16,131 telecom towers, representing almost 45% of the total towers in Saudi Arabia. TAWAL also operates internationally in 4 other countries with an additional 5,070 towers. This is a key piece of our overall sustainability strategy as it boosts infrastructure sharing capabilities, which in turn enables customers to maximize operational efficiencies and minimize expenses. It also helps reduce the collective environmental impact of stc Group, including all subsidiaries, as well as customers and community members.

TAWAL enables partners to attain operational excellence and accrue higher profits by enhancing tower sharing. This results from reduced capital expenses needed for network rollouts and lowered operating expenses for managing infrastructure at multiple sites. Tower sharing also provides additional benefits for congested urban areas, including more efficient infrastructure usage and eliminating excessive network redundancies, as well as reducing visual pollution that usually results from dense equipment installations.

Promoting energy efficiency is one of TAWAL's strategic pillars with a focus on reducing energy consumption by promoting efficient energy solutions for more than 21,201 active towers in KSA and 5 other countries worldwide. As the largest tower company in Saudi Arabia, almost 99% of the company's energy consumption happens on TAWAL sites, particularly at base stations. On-site energy consumption is optimized in several ways, most notably by utilizing air-cooling instead of air conditioners and implementing larger battery backups for hybrid energy solutions. Automatic lighting solutions are also used to reduce energy consumption across TAWAL's headquarters. In 2023, a total of 115 tower sites in KSA and other countries were running on renewable energy as a primary energy source, and 1,002 sites utilized a hybrid approach. Furthermore, over 200 sites were connected to the power grid over the past year. In Bahrain, 13 additional towers were constructed to improve network connection and internet services.

Since 2021, TAWAL has successfully maintained ISO 14001:2015 Standard for Environmental Management Systems certification, and in 2023 we successfully introduced and implemented several innovative and sustainable solutions across tower sites. These included 5G sleep mode and power consumption optimization, new scalable smart pole solutions to enhance adoption of IoT solutions, a new early warning system with IoT sensing capabilities to enhance tower safety, and "drone as a service" capabilities for site inspections and protective maintenance activities.

	KSA		E	Bahrain		Kuwait		Other international locations		ional 3			
Base stations	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	
Number of base stations	15,524	16,106	16,131	709	1,105	1,007	2,392	2,332	2,492	-	-	5,070	
Number of base stations powered by renewable energy	69	69	66	0	0	0	0	0	0	-	-	49	
Number of base stations powered by diesel	1,268	1,045	785	62	75	60	478	502	506	-	-	26	
Number of base stations powered by other types of energy	981	1,051	1,211	647	1,030	947	0	0	0	-	-	-	

## **Renewable Energy Pilot Project**

Our renewable energy pilot project aims to install solar photovoltaic (PV) systems within existing infrastructure found throughout KSA, including parking structures, warehouses, sales outlets, and other physical assets in the built environment.

Initiated in 2021, the project is scheduled to be completed by 2024 and will help pave the way for new energy models to be incorporated within critical infrastructure while also reducing carbon emissions by an estimated 8000 metric tons annually, as well as generating over 14.2 GWh of annual green energy.

This project falls under the framework of the Green Saudi Initiative, where the public and private sectors are encouraged to work together to accelerate the transition towards a green economy in the Kingdom.

Phase 1	Phase 2 and 3							
9 sites	9 sites							
Rooftops, parkings, buildings, data center, warehouse and outlet in Riyadh	Data centers and warehouses in Qassim, Makkah, Jeddah, Madinah, Dammam							
7,643 PV panels	7,804 PV panels							
4,259 total installed (kW)	4,370 total installed (kW)							
29,402 tCO <sub>2</sub> , total emissions reduction	30,167 tCO <sub>2</sub> , total emissions reduction							
Тс	otal							
18 :	sites							
15,447 F	V panels							
8,629 total i	nstalled (kW)							
14,238,708 k	14,238,708 kWh annually							
Approximately 8,088 tCo <sub>2</sub> reduction annually								

5,149,615 trees saved



In 2023, we continued PV solar system installations at technical buildings across seven different sites in Riyadh, with an annual expected production of 1.7 GWh and an estimated annual emissions reduction of over 960 metric tons.

Technical buildings	Total saving during PV solar system lifespan	Annual CO <sub>2</sub> emission reduction	Annual cost Saving
<b>7 across Riyadh</b> including Murabba, Ereja, Shiffa, Azizia, Shobeh, Nadheem and Khaleej	SAR 6,719,281.9	1,206 metric tons	SAR 229,756
Annual PV system production	Total roof top Areas	% of PV system contribution to the total consumption	Annual equivalent tree planting
1.7 GWh	~6,085 m <sup>2</sup>	7%	19,944 trees

## **GHG** emissions

Given that the risks and challenges associated with climate change have become much clearer in recent years, companies around the world, including stc, have given increasing attention to GHG emissions and the risks that they pose as a part of this global issue. However, even as this understanding is gaining traction throughout the world, global energy consumption continues to expand to meet modern-day living demands, GHGs, and the resultant  $CO_2$  emissions that they create, are now reaching levels within the atmosphere that is causing the first ripples of a looming problem, including the frequency and severity of extreme weather events that are already increasing. In 2023 alone, we witnessed storms, fires, and droughts causing damage to infrastructure, and people's lives, which would have been unprecedented only a few short years ago. Climate change can no longer be perceived as a threat on the horizon – it requires urgent attention, at scale, today.

At stc, we are committed to doing our part. We are setting ambitious targets and taking necessary actions to manage and reduce carbon emissions from our own operations and throughout our value chain. This includes an ambitious Group-wide target to achieve net-zero emissions by 2050, guided by SBTi, which was validated in 2023, as well as the UNGC and the GSMA climate policy target.

As one of the first regional telecom operators to validate GHG targets through SBTi, stc has established a comprehensive climate strategy and implementation plan to manage and monitor climate performance, gain competitive advantages, benefit from innovative products, and accelerate climate action in the Gulf and MENA regions.

stc's carbon footprint is calculated based on the international GHG Protocol Corporate Accounting and Reporting Standard, developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). To offset emissions that could not be immediately reduced, we purchased verified, high-quality carbon credits from the Regional Voluntary Carbon Market Company (RVCMC) at the largest-ever voluntary carbon credit auction event held in Nairobi, Kenya. These credits aid in not only offsetting all scopes of emissions produced by stc's Group-wide operations, but they also contribute to other sustainability-related co-benefits, such as community capacity building, biodiversity enhancement, and land-use improvements.

CHC Emissions	stc KSA			st	stc Group		
(tCO <sub>2</sub> e)	2021	2022	2023	2021	2022	2023	
Direct GHG emissions (scope 1)	10,595	10,616	10,013	203,182	187,217	174,870	
Indirect GHG emissions (scope 2)	396,487	378,889	267,232	476,240	1,174,589	1,192,877	
Total GHG emissions	407,082	389,505	277,245	679,422	1,361,806	1,367,747	

stc KSA scope $\frac{3 \text{ Total tCO}_2}{2}$	
Purchased Goods and Services Capital Goods	445,614
Fuel- and Energy-Related Activities (not included in Scope 1 or Scope 2)	248,783
Upstream Transportation and Distribution	83,026
Business Travel	4,111
Employee Commuting	27,264
Downstream Transportation and Distribution	9,209
Use of Sold Products	58,378

## Afforestation and Climate Change

Reforestation has a positive impact on climate change and plays a pivotal role in preserving and restoring biodiversity, which is why stc Group has committed to planting one million trees by 2030. The initiative aims to yield more than 25,000 tons of  $CO_2e$  per year.

Through this commitment, we aspire to help increase forest cover and provide a more usable habitat for local wildlife, enhancing environmental conservation and addressing climate change at the same time.

In 2023, stc Bahrain, along with select partners, planted 35,000 trees across 50 sites and governorates, with an aim to plant 50,000 more trees in the next phase. stc Bahrain's campaign "Trees for Life" was recognized at the International CSR Excellence Awards.

At stc, we also continuously seek to minimize the impact on the local environment from our ongoing operations, including any negative impacts on protected areas or endangered species. Prior to commencing any of our initiatives, it is stc's policy to conduct site assessments and surveys to identify areas of critical ecological concern and determine applicable best management practices as per local laws and regulations.

### Quality control improvement model

Our Technology and Quality Assurance system is based on the ISO 50001 standard for quality assurance activities regarding energy management of stc's technologies, as well as ISO 27001 and ISO 14001 specifications for quality assurance regarding environmental management of all stc technologies.

TQA overlooks all technologies within stc Group, which means that these certifications help ensure company-wide energy management is conducted appropriately and affectively.

This includes optimizing lighting and cooling in buildings, as well as assessing energy efficiency policies within major facilities that support stc services, such as exchanges and data centers. Our TQA department is essential for evaluating stc's company-wide resource management activities, facility efficiencies, and environmental practices that support efficiency improvements and positive environmental impacts, such as recycling and monitoring waste.



# Collaboration to address sustainability challenges

We are working with peer companies in the ICT and telecom sectors to advance sustainability in the greater Gulf and MENA regions, with a specific focus on climate action and sharing knowledge.

In 2023, we continued to lead the GCC ESG Telecom Alliance. This pivotal collaboration among seven leading telecom companies in the Gulf region remains the first of its kind in the industry, and featured 120 attendees across all knowledge sessions during the past year.

Furthermore, at COP28, which took place in 2023, the Alliance announced a collaborative intention to establish an innovation hub by 2024, to tackle climate change and enhance the availability of affordable and dependable energy sources. Through this proposed Sustainability Innovation Hub, the GCC ESG Telecom Alliance aims to bridge the gap between technology, telecom innovation, and climate action for a low-carbon economy. It will bring together cutting-edge technologies, visionary experts, and collaborative efforts to tackle one of the most critical challenges the telecom industry faces today.

Equipped with state-of-the-art facilities for prototyping, testing, and validating innovative power solutions using GCC telecom networks, the Hub will accelerate the development cycle and ensure the effective implementation of new technologies within the broader ICT industry. Recognizing the importance of skilled professionals in driving innovation, the Hub will also offer training programs and workshops to enhance the competencies of individuals involved in designing, installing, and maintaining power solutions within the telecom and ICT sectors.

To learn more about the Alliance, visit: https://www.stc.com.sa/content/dam/groupsites/en/pdf/GCCexecutive\_report.pdf



## Water management

Water is a scarce and valuable resource, especially in the greater MENA region, and stc is particularly committed to increasing the efficiency of water use throughout all business operations. Overall, our consumption principally comes in the form of sanitation and air-conditioning usage, as well as tankers for backup use.

In 2023, several subsidiaries relocated to stc's headquarters and many construction projects took place that involved renovation of entire buildings. This surge in demand underscores the need for sustainable water management strategies to ensure resource efficiency and environmental responsibility. In a concerted effort to proactively address water management issues, plans to construct a water treatment plant on stc's main campus have been announced. This proposed facility will repurpose water for irrigation and essential sanitary activities such as flushing toilets. The project will consist of a gray water collection network with manholes and lift stations, flow-through water tanks, a pump room, a flow-through water network with a pumping station to supply flow water, and will have a capacity of treating 250 cubic meters per day. It is planned to be completed by by the end of 2025.

Wator	stc KSA			S	stc Group		
consumption	2021	2022	2023	2021	2022	2023	
Total water consumption (m³)	297,087	430,603	403,864	925,095	819,478	714,626	



## Waste management

As an integral part of our commitment to environmental responsibility, waste management is a crucial component of our sustainability strategy. Our operations fundamentally involve extensive use of electronic equipment, underscoring the importance of appropriate waste management practices.

One of the most impactful initiatives that we have implemented is a recycling program across all stc buildings and sites, which empowers individuals to actively contribute to waste reduction. This, along with other smaller initiatives, resulted in a 6% reduction in waste generated in Saudi Arabia and 3% across stc Group in 2023.

	stc KSA			stc Group			
Total waste	2021	2022	2023	2021	2022	2023	
Total waste generated in HQ (t)	350	750	700	5,250	6,550	6,337	

As we look toward the future, we seek to go beyond mere waste reduction and find ways to actively contribute to a more circular economy. This has already begun with stc's takeback program for better end-of-life product management and network-related electronic component recycling program. Additionally, we have internal systems in place to properly manage and optimize purchasing decisions for all materials, such as furniture and carpets. In 2023, we also focused on embracing eSIM technology to shift away from physical SIM cards, resulting in more than 1.2 million eSIM cards being issued and saving more than 4,800 kilograms of plastic.

For any telecom or ICT company, managing e-waste and network waste is critical. stc responsibly disposes of network equipment and e-waste through a trusted third-party partner

in accordance with the regulations of the National Center for Environmental Compliance (NCEC). Efficient tracking also allows us to assess the life cycle of these assets, implement responsible disposal practices and explore opportunities for recycling.

In 2023, our network through TAWAL recorded 1,141 metric tons of waste generated from both network and operational maintenance waste, of which 71% was recycled. Additionally, TAWAL recorded a 96% drop in hazardous material disposed due to TAWAL's battery replacement strategy and shifting from lead acid to Lithium.

Networkwate	Tawal (KSA only)		Networkwaste	Tawal (KSA only)		
generated	2022	2023	diverted from disposal	2022	2023	
Hazardous material such as Lead acid batteries, lithium (t)	500	413	Hazardous material such as Lead acid batteries, lithium (t)	299	405	
Electrical materials such as Air-conditioner and Alternators (t)	231	160	Electrical materials such as Air-conditioner and Alternators (t)	220	156	
Metals such as towers, shelters and other lights metals (t)	191	42	Metals such as towers, shelters and other lights metals (t)	191	251	
Electro-mechanics including generators & e-waste (t)	62	246	Electro-mechanics including generators & e-waste (t)	58	210.8	

Networkwaste	Tawal (KSA only)			
diverted to disposal	2022	2023		
Hazardous material (t)	195	8		
Non-Recycle items such as Freon Gas, pallets, etc	22	8		

Looking ahead to 2030 and beyond, we plan to construct a waste management plant to minimize environmental impacts and improve resource management at the stc HQ campus in Saudi Arabia. This will include a collection network covering the entire campus, complete with the most advanced equipment and technologies to collect, assemble, segregate, treat, and dispose of up to nearly 18,000 kilograms of waste.



# Circular economy consideration across supply chain

As part of our initiative to standardize warehouse inventory management throughout our operations we have implemented the use of 100% biodegradable bags. By opting for biodegradable materials, we ensure warehouses minimize their environmental footprint and reduce waste generation and take a step forward towards adopting circular economy framework to facilitates the transition from a "take-make-dispose" model to one that prioritizes resource conservation.

In 2023 and through our recycling program across supply chain, we collected 7,131 tons of waste. Of the total, almost 74% was reused, and 16% recycled, and the remaining portion was responsibly disposed of. All our e-waste recycling efforts undergo validation by the National Centre for Waste Management. We consistently receive quarterly validation reports to authenticate our efforts. Across our warehouse and inventory management processes in stc KSA, we have reused and recycled 90% of materials and for those to be disposed we ensure 100% safe disposal.

Another integral component of our circular economy considerations across supply chain is our trade-in program. The trade-in program encourages the return and reuse of mobile devices at the end of their life-cycle rather than disposing of them as waste. Through this program, customers are able to trade-in their used devices for further discounts on new purchases, and we then extend the lifespan of products and reduce overall consumption. As a result, we adjusted our target numbers and by the end of 2023 we collected, refurbished, and recycled 44,000 devices through this program. More than 97% of these devices were refurbished and sold as "renewed devices" to our direct customers through sales channels with 6 months guarantee. The renewed devices become a more affordable option for customers.

## Paperless work environment

We are committed to operating in a paper-less work environment. In 2023, we took our dedication to paperless operations a step further by rolling out a comprehensive paperless office policy. Implementation of the policy is closely monitored through a robust quarterly reporting system, which measures and tracks paper consumption metrics. This initiative has been seamlessly integrated into our Quality index to further underscore the importance and impact of the paperless initiative.



#### [GRI 3-4]

As a result of our ongoing efforts to embrace digital transformation, we have digitized and automated over 77 group-wide processes and services on our internal platform intranet (stc Hub). This strategic initiative has not only streamlined our operations but also significantly reduced costs by 85%.

By transforming manual tasks to digital workflows, we have achieved greater efficiency across the Group.

Matorialo	stc KSA			stc Group		
consumption	2021	2022	2023	2021	2022	2023
Paper consumption (t)	3.04	1.37	1.25**	934	1,005	1,217
restated due to change in scope.						

#### Case study: Go-green initiative

The Go-Green initiative across stc group offices aim to improve our green footprint of applications operations through increasing overall awareness about Green Technology Practices, IT Resource reclamation and Re-use, and energy consumption reduction.

In 2023, and as per the Go-Rapid IT sector strategy to enhance environmental sustainability within operations, stc increased awareness on green technology practices among employees to encourage eco-friendly behavior. We also reclaimed and reused IT resources to extend the life cycle of assets and reduce waste.