

Keysight's Response to Climate Change

Strategy for net zero greenhouse gas emissions

Keysight's Commitment to Addressing Climate Change

Keysight recognizes that climate change presents significant economic, social, and environmental challenges and is committed to doing its part to help mitigate the worst impacts of the climate crisis. Accordingly, the company's climate change strategy is aligned with the Paris Agreement preferred goal to limit global warming to 1.5 degrees Celsius, which is aligned with our values and stakeholder expectations.

Our climate-related goals and achievements provide certainty about the company's strategic direction in environmentally sustainable operations. We set ambitious greenhouse gas (GHG) emissions reduction, energy reduction, and renewable electricity targets to prepare the company for a low-carbon future. In 2021, Keysight announced a target to achieve net zero emissions in company operations by end of fiscal year 2040. Keysight takes climate change seriously, and we are committed to being part of the solution.

For more information about our environmental initiatives, please refer also to [Keysight's Environmental, Health & Safety Commitment](#).

Net Zero Target

Keysight aims to achieve net zero emissions in company operations (scope 1 and scope 2) by the end of fiscal year 2040, a decade ahead of the Paris Agreement's timeline. We will accomplish this through innovative energy efficiency, conservation and decarbonization in our operations, investment in renewable energy, and selective purchase of certified offsets to neutralize any residual emissions. In particular, our renewable electricity approach will consider a mix of on-site renewable energy installations, procurement of green energy from utility providers, and virtual or physical power purchase agreements in solar and/or wind energy. As a global company, we will implement our net zero initiatives worldwide.

To ensure progress and accountability towards our net zero goal, Keysight has committed to the following interim measures:

- By the end of fiscal year 2030 – the company commits to 55% renewable electricity and 10% absolute energy reduction through efficiency and conservation initiatives (fiscal year 2019 baseline)
- By the end of fiscal year 2040 – the company commits to 100% renewable electricity and 20% absolute energy reduction through efficiency and conservation initiatives (fiscal year 2019 baseline)

Science-Based Targets

To align our efforts with best practices, Keysight is committed to the Science Based Targets initiative (SBTi) to develop approved science-based targets (SBTs). Keysight is working with the SBTi to develop an approved scope 1 and 2 emission reduction target and a scope 3 engagement target across the most relevant categories. Setting SBTs will allow Keysight to provide a common platform for reporting, meet customer expectations, bolster business continuity and resilience, and help customers and suppliers meet their own sustainability goals. In early 2023, Keysight submitted targets for validation to the SBTi.

Keysight set our near-term scope 1 and 2 emissions reduction target in 2022, which is aligned with the SBTi requirements. Keysight Technologies commits to reduce absolute scope 1 and 2 GHG emissions 42% by 2030 from a 2021 base year. The company will publish our Scope 3 value chain engagement target when it is validated by the SBTi.

Keysight’s near- and long-term energy and emissions targets are presented in the table below, which support the company’s strategy for net zero emissions in company operations (Scopes 1 and 2).

Keysight’s Environmental Sustainability Targets		
	Near-Term	Long-Term
Scopes 1 + 2	Net Zero GHG Emissions in Company Operations by end FY 2040	
	42% reduction in emissions by FY30 (FY21 Baseline) <i>*Submitted to SBTi, review pending</i>	Long-term science-based targets TBD
Scope 3	Value chain engagement target to be confirmed <i>*Submitted to SBTi, review pending</i>	
Energy & Electricity	10% energy reduction by FY30 (FY19 baseline)	20% energy reduction by end FY40 (FY19 baseline)
	55% renewable electricity by FY30	100% renewable electricity by end FY40

Approach to Climate Change

Keysight's approach to addressing climate change incorporates several strategies:

- **Policies/Regulatory/Compliance** – Keysight implements a strong governance structure with documented processes to ensure the company meets all local laws and requirements as it relates to environmental topics, including climate change. This ensures Keysight operations support global regulatory and legal environmental requirements. Keysight's environmental policies include: [ISO 14001:2015](#); [Environmental, Health, and Safety \(EHS\)](#); and [General Specification for the Environment \(GSE\)](#).
- **Programs** – Many Keysight environmental programs and policies exceed regulatory compliance and legal requirements and enable continuous improvement in natural resource conservation, which in turn reduces the negative effects of global climate change. Keysight has environmental programs in energy conservation, renewable energy procurement, alternative transportation, building amenities, and site landscaping.
- **Supply Chain Management** – Through supply chain management, we ensure that our global suppliers adhere to the same strict environmental standards as Keysight. Suppliers are expected to comply with the following codes and requirements:
[Supplier Code of Conduct](#); [Human Rights and Labor Policy](#); [GSE Policy](#); [Product Material Environmental Specifications](#); [OEM Waste Electronic and Electrical Equipment \(WEEE\)](#); and [European Union Restriction of Hazardous Substances \(RoHS\)](#).
- **Partnerships** – We build strong partnerships to support environmental efforts that limit climate change impact. This includes partnering with customers, as their supplier, to help them meet their own corporate environmental goals. In addition, Keysight is an Affiliate Member of the Responsible Business Alliance (RBA) and is committed to making progress toward RBA Code of Conduct compliance while encouraging our first-tier suppliers to do the same.
- **Risk Management** – Climate change risks are reviewed bi-annually, or more frequently on a case-by-case basis, by Keysight's Global Sustainability and Environmental, Health, and Safety team. The company's Board of Directors has ultimate responsibility for overseeing risk management governance with a focus on Keysight's most significant risks. The Board is assisted in meeting this responsibility by its committees. One of these committees is the Audit & Finance (A&F) Committee, which has the responsibility for oversight of the company's evaluation, assessment, and mitigation of risks to Keysight business, including risks associated with compliance with laws, regulations, and ethical standards of business conduct and climate change.

Management Through PDCA

Social responsibility is one of the enabling values within the [Keysight Leadership Model \(KLM\)](#), and Keysight's efforts to combat climate change are an integral part of our Corporate Social Responsibility (CSR) program. Therefore, Keysight's climate change efforts are managed through the [CSR Management System](#) with a defined scope and Plan>Do>Check>Act approach.

Plan – Enabling continuous improvement

As part of our annual planning and commitment to continuous improvement, Keysight considers results and actions from the previous year and any identified gaps or changes to the company's risk profile as it relates to climate change to determine necessary target efforts or changes to our key impact goals for the upcoming year.

Do – Implement to plan

Keysight implements to the approved annual plan, while utilizing our environmental policies, to help mitigate the impacts of climate change. The company uses the ISO 14001:2015 environmental management system to monitor and reduce environmental impacts from GHG emissions, and uses the environmental standards set by GSE to create policies for our workforce and supply chain. Not only do we comply with these strict environmental standards, but we require our suppliers to comply with them as well.

In addition, Keysight regularly conducts energy and decarbonization audits of our operations and implements projects designed to reduce energy and improve efficiency. Examples of conservation-related projects, which are identified during annual planning, include LED lighting retrofits and automation, solar film, ventilation system optimization, and hot water optimization.

Check – Validate and report results of climate change response

In this stage, we focus on validating actions and reporting results through various ways, including:

- **Quarterly program reporting** – Climate change initiatives and actions are tracked on a quarterly basis using a key performance indicator dashboard to ensure progress to targets.
- **Function-specific audits** – Detailed tracking on climate change efforts is completed by function. Any missed targets or non-compliance corrective actions are escalated to functional management or CSR Governance Team as needed.
- **Stakeholder engagement tracking** – Regular stakeholder engagement ensures results and actions are communicated and trends are provided to appropriate functional teams should any issues related to climate change arise.
- **External reporting** – We voluntarily report our environmental results, practices, and annual GHG emission calculations through Keysight's annual **Corporate Social Responsibility Report**. This report includes data disclosures aligned to the General Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) frameworks. Keysight also publishes a Taskforce on Climate-related Financial Disclosures (TCFD) report. Additionally, we implement internal audits against supporting policies and procedures, participate in multiple external surveys (such as RBA's self-assessment questionnaires and Ecovadis CSR assessment), and make data available to rating organizations including the S&P Global Corporate Sustainability Assessment (CSA), CDP, Morgan Stanley Capital International (MSCI), Sustainalytics, and various local green energy surveys. Keysight reports on scope 1 and scope 2 emissions in our defined operating boundary, which includes sites worldwide. We collect activity data and calculate scope 1 and scope 2 emissions using the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and the following methodologies:
 - **Scope 1:** 2012 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting. Annex 5 Process GWP Factors. Table 5a.; US EPA. EPA Centre for Climate Leadership. Emission Factors for Greenhouse Gas Inventories; GHG Protocol. Global Warming Potential Values.
 - **Scope 2:** EPA's eGrid emission factors for the United States; UNFCCC Submission National Inventory Report: Greenhouse Gas Sources and Sinks in Canada; National Greenhouse and Energy Reporting (Measurement) Determination 2008 for Australia; UK Government conversion factors for Company reporting; International Energy Agency emission factors for all other geographies.

Act – Accountability and adjustment

Climate change actions are included in the purview of Keysight's CSR governance team structure, with the company's Chief Administrative Officer and Chief of Staff having direct oversight of climate initiatives that are managed by Keysight's Global Director of Sustainability and Environmental, Health and Safety (EHS). The Global Director of Sustainability & EHS also leads Keysight's Environmental Health and Safety Management System (EHSMS) team. Where climate change matters may have significance for Keysight, they are reviewed by the EHSMS team and communicated worldwide.

This structure ensures accountability within functional teams and Keysight's executive staff to complete initiatives and meet measures.

With regular reporting reviews to Keysight's executive team as part of our CSR management system, climate change mitigation activities are discussed and immediately adjusted if warranted or reviewed in depth during a future session to ensure continuous improvement efforts in support of climate change action.

Evaluating our progress

Keysight consistently reviews climate change initiatives, risks, and opportunities. We set short-, medium- and long-term targets and track related key impact goals quarterly. Our plans and actions to mitigate climate change are broad and on-going. We strive for continuous improvement.

Keysight's Energy & Emissions Data

Global energy

Energy source	FY 2019 (Baseline)	FY 2020	FY 2021	FY 2022
	MWh	MWh	MWh	MWh
Electricity (non-renewable)	166,954	165,428	170,466	166,365
Electricity (renewable)	1,595	1,522	1,477	4,563
Natural gas	47,192	49,042	49,843	45,483
Fleet vehicle fuel	24,151	18,894	17,606	15,183
Diesel fuel	336	254	283	691
Propane	178	238	188	223
Total energy	240,406	235,378	239,863	232,508
<i>Intensity figure (Total energy / revenue)</i>	<i>0.000056</i>	<i>0.000056</i>	<i>0.000049</i>	<i>0.000043</i>
<i>Intensity figure (Total energy / square feet)</i>	<i>0.041375</i>	<i>0.039154</i>	<i>0.040706</i>	<i>0.039936</i>

Energy notes:

- Keysight's renewable electricity was generated from two onsite solar arrays at our largest sites:
 - **Santa Rosa, California** - One-megawatt (MW) peak solar array at our corporate headquarters. Keysight retains the renewable energy certificates (RECs) from the onsite electricity generation.
 - **Penang, Malaysia** - In May 2022, Keysight completed an installation of a 5.8 MW peak rooftop solar array at our largest manufacturing site, in Penang, Malaysia. This is the largest solar power generation system for Keysight globally and the largest industry rooftop photovoltaic (PV) system in Penang. Keysight retains the I-RECs from the onsite electricity generation.
- Due to some data unavailability and delays, a small percentage of provided emissions and energy data are estimated using an accrual method. Keysight will update our emissions and energy inventory as data becomes available, and any cumulative changes that total more than +/- 5% will be updated in future reporting cycles.

Global emissions, by scope

Greenhouse gas scope	FY 2019	FY 2020	FY 2021 (Scopes 1 + 2 Baseline)	FY 2022
Scope 1 tCO ₂ e	15,052	14,258	14,757	12,403
Scope 2 tCO ₂ e Location-based	75,429	74,128	73,557	74,027*
Scope 2 tCO ₂ e Market-based	81,659	81,033	81,902	80,282*
Scope 3 tCO ₂ e (By category on next page)	109,942	79,280	2,713,624	3,254,047
Scope 1 + 2 tCO₂e Market-based	96,711	95,291	96,659	92,685*
<i>Intensity figure (Scopes 1 + 2 / revenue)</i>	<i>0.000022</i>	<i>0.000023</i>	<i>0.000020</i>	<i>0.000017</i>
<i>Intensity figure (Scopes 1, 2 + 3 / revenue)</i>	<i>0.000048</i>	<i>0.000041</i>	<i>0.000569</i>	<i>0.000618</i>

Apex Companies, LLC conducted an independent verification of Keysight's Scope 1 and Scope 2 location-based and market-based GHG emissions for fiscal years 2019, 2020, 2021, and 2022 as well as all twelve (12) relevant categories of Keysight's Scope 3 GHG emissions for fiscal years 2021 and 2022. Please refer to the attached relevant Verification Opinion Declaration(s) below.

[GHG Verification Statement Scopes 1, 2 & 3 FY22](#)

[GHG Verification Statement Scope 3 FY21](#)

[GHG Verification Statement Scope 1 + 2 FY19, FY20 and FY21](#)

Scope 1 + 2 GHG emissions notes:

- Gases included in the calculation of gross direct (Scope 1) GHG emissions are CO₂, CH₄ and N₂O.
- Scope 1 GHG emissions were calculated from utility data, facilities, and the business, using current emission factors for each data source, including natural gas, stationary fuels (diesel & propane), fleet vehicle fuel, and refrigerants.
- Scope 2 GHG emissions are calculated from utility data, using location- and market-based electricity emission factors for all sites within the company's operational control.
- Due to some data unavailability and delays, a small percentage of provided emissions and energy data are estimated using an accrual method. Keysight will update our emissions and energy inventory as data becomes available, and any cumulative changes that total more than +/- 5% will be updated in future reporting cycles.
- *FY 2022 Scope 2 data were inadvertently overstated by less than 1.5% in the company's 2022 CSR Report and accompanying disclosures. Location-based emissions were since adjusted from 75,123 to 74,027 tCO₂e. Market-based emissions were since adjusted from 81,391 to 80,282 tCO₂e.

Scope 3 emissions, by category

Scope 3 category	FY 2019	FY 2020	FY 2021 (Baseline)	FY 2022
Purchased goods and services tCO ₂ e	n/a	n/a	117,000	122,000
Capital goods tCO ₂ e	n/a	n/a	16,300	85,000
Fuel- and energy-related activities tCO ₂ e	n/a	n/a	20,100	19,400
Upstream transportation and distribution tCO ₂ e	65,063	61,008	41,900	31,900
Waste generated in operations tCO ₂ e	205	143	1,790	859
Business travel tCO ₂ e	19,107	5,572	1,990	11,500
Employee commuting tCO ₂ e	18,425	5,527	12,800	12,800
Upstream leased assets tCO ₂ e	n/a	n/a	3,270	2,610
Downstream transportation and distribution tCO ₂ e	n/a	n/a	1,300	986
Processing of sold products tCO ₂ e	n/a	n/a	n/a	n/a
Use of sold products tCO ₂ e	n/a	n/a	2,490,000	2,960,000
End-of-life treatment of sold products tCO ₂ e	n/a	n/a	34	92
Downstream leased assets tCO ₂ e	7,142	7,029	7,140	6,900
Franchises tCO ₂ e	n/a	n/a	n/a	n/a
Investments tCO ₂ e	n/a	n/a	n/a	n/a

Scope 3 GHG emissions notes:

- As part of the company's commitment to the Science-Based Targets initiative (SBTi), Keysight reviewed and recalculated all relevant Scope 3 emissions. Through our recalculation efforts, the company has increased the number of relevant categories of Scope 3 emissions we report from five to twelve categories. Additionally, we have aligned our calculation methodologies with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting.
- Keysight has selected fiscal year 2021 as our baseline for Scope 3 emissions. Therefore, the company's Scope 3 emissions for fiscal year 2021 were recalculated using the new methodologies, calculations, and assumptions. Fiscal year 2021 data have been updated.

Additional Resources

- [Keysight Corporate Social Responsibility Web site](#)
- [Keysight News, Awards, and Recognition](#)
- [Keysight Net Zero Emissions in Operations Editorial Backgrounder](#)
- [Keysight Commits to Net Zero Emissions by End of 2040](#)
- [Keysight Commits to Science Based Target Initiative](#)
- [Keysight Solutions for Environmental Sustainability](#)
- [Keysight's Environmental, Health & Safety Commitment](#)



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