

# Keysight's Response to Climate Change

## Keysight's Commitment to Address Climate Change

Keysight recognizes that climate change is an economic, social, and environmental challenge and is committed to help minimize the impact of climate change by conducting business in an ethical, environmentally sustainable and socially responsible manner. Through our corporate social responsibility (CSR) program and supporting efforts, the company is able to not only promote the sustainability of our planet, but also help deliver to business commitments by attracting and retain the best employees, and meeting the expectations of key stakeholders including investors, customers, suppliers, government, and non-governmental organizations.

To exemplify this commitment, Keysight has a goal to achieve 10% energy conservation and 15% water conservation by end of fiscal year 2020, using our fiscal year 2015 as a baseline. As of the end of our fiscal year 2017, Keysight has already recognized 4.69% energy conservation and 12.44% and water conservation, which in turn has resulted in about \$850,000 in cost avoidance for the company.

## Keysight's Approach to Climate Change

Keysight's approach to climate change spans several perspectives:

- **Policies/Regulatory/Compliance** – The company 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**; **Environmental, Occupational Health & 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 diminish global climate change. Keysight has environmental programs in alternative transportation, building amenities, and site landscaping. Please see more details of each program in the appendix of this document.
- **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 Environmental and Social Responsibility (ESR) 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.

## Management Through PDCA

Keysight's efforts to combat climate change are an integral part of our CSR program, which is one of the enabling values within the **Keysight Leadership Model** (KLM). As such, they are managed through the program's Plan>Do>Check>Act method.

### *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 target efforts or changes to our key impact goals for the upcoming year.

### Climate Change Risk Management Approach

Climate change risks are reviewed bi-annually, or more frequently on a case-by-case basis, by Keysight's environmental, health and safety (EHS) management team or committees appointed by the board for our site facilities.

Regarding risk impact, Keysight does not have any one customer whose orders represent more than 5% of total revenue. Therefore, there is no risk of material impact from a single customer due to a climate change event. In addition, Keysight's supply chain is diversified across global locations, again minimizing the risk of natural disasters impacting Keysight business.

### *Do – Implement to Plan*

Keysight implements to the approved annual plan, while utilizing our environmental policies, as a way to mitigate climate change. The company uses the ISO 14001:2015 environmental management system to monitor and reduce environmental impacts from GHG emissions, and use 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. Please see the Policies/Regulation/Compliance and Supply Chain Management sections above.

In addition, Keysight implements a number of projects to conserve natural resources and improve efficiency. Example projects, which are identified during annual planning, have ranged from upgrading lighting systems and replacing existing bulbs with lower wattage bulbs to more involved and investment intensive initiatives such as upgrading infrastructure equipment. Additional examples of Keysight's climate change related programs are described in the appendix of this document.

### *Check – Validate and Report Results of Climate Change Response*

In this stage, we focus on validating actions and reporting results. We do this in myriad ways:

- **Quarterly Program Reporting** – Any climate change initiatives and actions are tracked on a quarterly basis using a key performance indicator dashboard to ensure progress to target.
- **Function-Specific Audits** – Detailed climate change effort tracking is rolled up 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 team should any climate change related topics arise.

**External Reporting** – We voluntarily report our environmental results, practices, and annual GHG emission calculations through Keysight's annual **Corporate Social Responsibility 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 RobecoSAM, Carbon Disclosure Project (CDP), Morgan Stanley Capital International (MSCI) and various local green energy surveys. As it relates to calculating emissions, Keysight does so from core manufacturing sites in the United States, Germany, China, India, Japan, and Malaysia that account for 74% of total Keysight area. We collect activity data and calculate Scope 1 and Scope 2 emissions using the following methodologies: Defra Voluntary Reporting Guidelines, Energy Information Administration 1605B, IPCC Guidelines for National Greenhouse Gas Inventories 2006, and US EPA Mandatory Greenhouse Gas Reporting Rule.

### *Act – Accountability and Adjustment*

While climate change actions are addressed under Keysight's CSR governance team management structure, direct oversight of climate change initiatives are managed by Keysight's Vice President of Workplace Solutions who also leads the company's EHS team. Where climate change matters may have significance for Keysight, they are reviewed by our EHS team and communicated worldwide. This 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 reviews climate change initiatives, risks, and opportunities, and sets targets, including tracks related key impact goals, quarterly. In addition, to ensure Keysight will achieve its energy, water, and GHG emission reduction goals, an external audit was conducted in 2017 with our EHSMS team proactively working to implement changes where necessary.

Our plans and actions to mitigate climate change are broad and on-going. To see additional Keysight actions related to climate change, please refer to the appendix of this document.

## Appendix – Keysight’s Climate Change Response Strategies, Programs and Projects

Below are some examples of Keysight’s efforts to combat climate change.

### Alternative Transportation

#### Mass Transportation

Keysight employees are encouraged, and many have opted, to use public mass transportation to commute to work where it is available. Santa Rosa, CA (USA) employees who use the Smart Train are able to use Uber from the closest train stop to the Keysight office at the company’s expense.

#### Van and Carpools

Keysight partners with Agilent Technologies to transport hundreds of employees to work using vans in Manesar, India.

#### Employee Cycling

Many Keysight sites offer bike racks and lockers for employees. The Colorado Springs, CO (USA) site has additional interior bike storage. Keysight also sponsors an annual “Bike to Work” day.

#### On-Site Facilities and Services

Keysight offers facilities which encourage lower emission travel-to-work options such as electronic vehicle (EV) recharging infrastructure at the Santa Rosa site and on-site showers at many site locations for employees who bike, walk, or run to work. The Santa Rosa site offers parking under a 3-acre solar panel unit which powers 10% of the site’s electricity and charges 35 EV stations.

All Keysight employees use online and cloud-based collaboration tools which has reduced the need for employees to travel and conduct communication between global team members. As of 2017, Keysight air travel has been reduced by 20% since baseline year 2015.

#### Flexible Work Arrangements

Keysight provides flexible work hours for employees as viable. Not only does this allow employees to work from home and eliminate the need to drive to work, but it also provides flexible work options for employees to commute during non-peak times, minimizing CO2 output from waiting in traffic.

## Site Building Amenities

### LED and BAS Sensor Lighting

Keysight has completed installations of in-track, building automation systems (BAS) sensor LED lighting systems in four of its owned sites: Santa Rosa; Colorado Springs; Penang, Malaysia; and Hachioji, Japan. Partial installations of the same lighting systems have been made at the Beijing and Chengdu sites in China. The lighting system adjusts light output according to natural light levels and human presence. These installations have significantly reduced GHG emission levels.

### Energy Reduction Installations and Upgrades

The Santa Rosa site have targeted to have Bloom Energy installed by the end of calendar year 2018. This installation uses natural gas to power electricity non-stop at significantly reduced carbon emission levels. In addition, the company's Boeblingen, Germany site cleaned up their wide area network (WAN) and data center which significantly reduced the site's energy consumption. This involved thorough cleaning to ensure the most efficient operation of the data center equipment as any dust or contamination results in higher energy consumption.

### Water Fixtures

Keysight's Beijing and Chengdu sites have turned off outside fountains and water fixtures to increase water conservation.

### HVAC

The Chengdu site installed variable frequency drive (VFD) for heating, ventilation, and air conditioning (HVAC) pumps which monitors and controls water supply and increases energy efficiency fed into the HVAC pipes.

### Recycling Center

The Santa Rosa site has a recycling center on property, which processes trash and material from the site. Keysight employs Becoming Independent (individuals with disabilities) to sort and separate items before the recycling items are baled for shipment to off-site recycling facilities.

### Garden Plots

Keysight offers employee gardens (with a waiting list and lottery to select new gardeners) at the Santa Rosa site.

## Office Layout

Keysight utilizes smart layouts for employee cubicle and work spaces. Through this initiative, we accommodate more collaborative employee work spaces while not increasing our physical footprint with new buildings.

## Behavioral Changes

The Penang site implemented an initiative to switch off their air handling unit (AHU) one hour earlier each day. This action alone has significantly reduced the site's GHG emission levels and increased energy conservation while not impacting employee comfort.

In addition, Keysight routinely communicates ongoing environmental impact learnings through global employee news articles. For example, such articles regularly remind employees to turn off and unplug electronic equipment and computers for long weekends and holiday breaks.

## Solar Shading

The Boeblingen, Germany site has solar window shades which automatically adjust throughout the day according to natural light and weather conditions. For example, the outside blinds will open when the weather is windy to avoid damage. These blinds aid the building's interior climate control as they shade the building from excessive heat and reduce usage of the HVAC system.

## Landscaping

### Native Grass

The Colorado Springs site has removed Kentucky Bluegrass from the property disc golf field and replaced it with native grass. The Colorado native grass installation on four acres of the site's landscape requires 50-60% less water, is more resilient to the natural arid landscape, and requires less energy since it needs little mowing and pest control maintenance.

### Goat and Sheep Herds

The Santa Rosa site uses goat and sheep herds to maintain the natural landscape each summer. At a minimum, the herd is used to regulate the fire breaks surrounding the site property. Herds eat invasive plant species, grass, weeds, and trees thereby sustainably maintaining the landscape to levels which reduce fire risk and increase health of the soil. Using goat and sheep herds is less disruptive to the natural habitat and increases water and energy conservation for the site's landscape maintenance.

## Recycled Water and Water Treatment

Keysight strives to reuse water in a safe, environmental stable manner. Keysight's Santa Rosa site reclaims 40% of total water and reuses it in facility related operations and landscaping. Water used for site landscaping is recycled, non-potable water.

Both the Colorado Springs and Santa Rosa sites treat wastewater prior to discharge into municipal water supply. No other Keysight sites produce sufficient wastewater to warrant an on-site treatment facility.

## Additional Resources

- [Keysight CSR Website](#)
- [Keysight CSR Resources](#)
- [Keysight News, Awards, and Recognition](#)

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