

## ENVIRONMENT

Gilead understands that the environment contributes to the overall health of our employees, the patients we serve and the communities in which we live and work. That's why we are committed to developing new and more sustainable processes and practices to minimize our environmental impact. This commitment is led by those at the most senior levels of our company and sets the direction for our strategic approach to sustainability.



Our campus in Cork, Ireland utilizes energy from nearby wind turbines

Building on our core principles of integrity, inclusion, teamwork, excellence and accountability, Gilead empowers teams at each office location to tailor unique environmental initiatives suited to the individual functions of the site. Crossfunctional communications are encouraged within the organization so that innovative ideas and solutions can be shared across our facilities worldwide.

### SUSTAINABILITY STRATEGY

Gilead's worldwide sustainability strategy aims to reduce the environmental impacts associated with operating our corporate facilities and manufacturing and distributing our products. Our strategy targets environmental impacts including energy and water consumption, raw material use, waste generation, land use, biodiversity, transportation and greenhouse gas emissions.

### **GILEAD SITES**

All new and existing sites at Gilead are encouraged to follow green building practices and/or local green building certifications

where applicable. Example standards include Leadership in Energy and Environmental Design (LEED), Building Research Establishment Environmental Assessment Method (BREEAM) and California Title 24 — CALGreen.

In 2016, Gilead leased new office space in Istanbul in a LEED Platinum-rated building and LEED principles were incorporated into the design and construction of a new campus in La Verne, California.

## MANUFACTURING AND **DISTRIBUTION**

Gilead leverages green teams at its manufacturing sites to develop innovative ways to reduce building and equipment energy use, water consumption and waste generation. These teams are responsible for implementing improvement measures and communicating with management and other sites to share knowledge, achievements and lessons learned.

Following is a summary of 2016 achievements from Gilead's sites around the world.

## FOSTER CITY, CALIFORNIA, UNITED STATES

Gilead's worldwide headquarters, located in Foster City, California, comprises 2.2 million square feet of office, research and development and laboratory space.

In recent years we have built a series of new laboratory buildings on campus, including, in 2016, the demolishment of several buildings to make space for a new development which will house employees from 12 groups in the Research organization. 2016 also saw the opening of a new office building, which houses many of our general and administrative departments.

We have made these improvements to our campus with sustainability in mind — as well as being positive environments for our employees and helping to foster and drive innovation.

### **Biodiversity**

The site is in an environmentally sensitive area adjacent to the San Francisco Bay watershed, a natural wetland home to some rare and endemic plant and animal species. The wetland marsh functions to absorb storm and tidal surges, filter bay water through natural tidal movements and provide natural habitat.

To mitigate environmental impacts and to promote biodiversity on the site, Gilead designed bioswales with native plant species to collect, treat, retain and infiltrate stormwater onsite instead of releasing it into the bay.

### **Sustainable Building Practices**

Consistent with Gilead's portfolio-wide green building design and construction standards, the Foster City campus employs a comprehensive set of measures intended to reduce environmental impact and increase employee productivity. For example, to comply with California's CALGreen sustainable building code, the Foster City campus uses LED lighting and smart controls to turn lighting on and off based on occupant activity. Similarly, the heating and cooling equipment serving the campus meets high efficiency requirements to reduce energy use.

## **Energy Efficiency and Greenhouse Gas Emissions**

In 2016, Gilead tracked greenhouse gas (GHG) emissions in Foster City. The GHG emission inventory includes Scope 1 and 2 emission sources from purchased electricity and natural gas measured in metric tons of CO<sub>2</sub> equivalent (MT CO<sub>2</sub>e) to account for emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O.



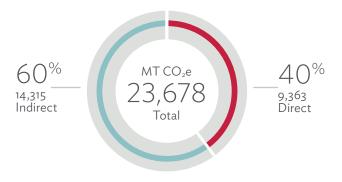
Additional Scope 1 and 2 emission sources will be added in the future as Gilead's data collection process expands.

As Gilead continues to grow in headcount and building footprint, both absolute GHG emissions and GHG intensities will be monitored to track changes over time. In 2016, the GHG emissions intensity for Foster City was 0.01006 MT CO<sub>2</sub>e per square foot. As new buildings are brought online, the goal is to maintain or improve upon current GHG intensity levels.

## Other Significant Air Emissions from Foster City

In 2016, Gilead quantified emissions of nitrous oxides (NOx) and sulphur oxides (SOx) resulting from the combustion of natural gas and use of purchased electricity.

# 2016 GHG Emissions Summary for Foster City



Scope 1 emission factors sourced from the U.S. EPA's Final Rule for Mandatory Reporting of Greenhouse Gases. Scope 2 emission factors sourced from eGRID2014.

GWP coefficients sourced from the IPCC Fifth Assessment Report (AR5).

#### 2016 Criteria Pollutant Metrics in Metric Tons

Pollutant	Natural Gas	Electricity
NOx	7.79	5.01
SOx	0.05	Trace

Criteria pollutant coefficients sourced from U.S. EPA AP-42: Compilation of Air Emission Factors and eGRID2014.

### **Energy Use**

In 2016, the Foster City campus consumed a total of 55.2 GWh of electricity and 176,293 MMBtu of natural gas.

## 2016 Foster City Campus Energy Use



## 2016 Foster City Energy Use Metrics

Benchmark (Energy Use Intensity)	kBtu/ft²
Electricity	80
Gas	75
Total	155

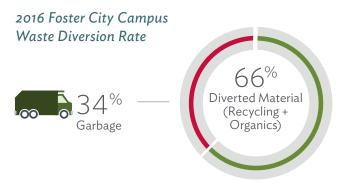
#### Water Use

In 2016, the Foster City campus used a total of 80,226,333 gallons of municipal water. Water conservation is emphasized through use of low-flow interior water fixtures, efficient landscape irrigation systems and drought-tolerant plant species.

## Waste Reduction and Recycling

Through active employee participation and strategic partnerships with leading recycling vendors, Foster City achieved a 66 percent waste diversion rate from landfill in 2016.

The campus waste reduction strategy includes recycling for glass, plastic and metals and composting for organic wastes. Employee cafeterias use fully biodegradable tableware and recycling and composting bins are in well-marked and easily accessible areas throughout the campus.



Gilead partners with industry-leading waste vendors to achieve high diversion rates from local landfills. Based on data provided by these vendors, the Foster City campus generated 2,319 tons of non-hazardous waste material in 2016.

# 2016 Foster City Campus Non-Hazardous Waste Disposal



#### **Transportation**

In 2016, Gilead added an employee shuttle service, with the capacity to remove more than 800 commuters from their cars each day. Serving San Francisco and the East and South Bays, key benefits from the service include reduced traffic burden on local communities and reduced GHG emissions and other air pollutants.

The Foster City campus has a total of 72 electric vehicle (EV) charging stations in two parking garages. Gilead also offers a mobile bicycle maintenance service and showers and changing rooms are provided to encourage bicycle commuting.



## LA VERNE, CALIFORNIA, UNITED STATES

In 2014, Gilead broke ground on a 23-acre campus located in La Verne, California. When complete, the site will expand Gilead's manufacturing and distribution capacity. In 2016, Gilead completed construction of the central utilities plant that will provide heating and cooling to the rest of the campus. Anticipated to be fully operational in late 2017, the La Verne site will initially employ approximately 350 people.

Gilead and the design team elected to participate in Southern California Edison's commercial new construction "Savings By Design" incentive program. The program provides financial incentives for new buildings that demonstrate a minimum 10 percent savings compared to a minimally compliant California Title 24 design.

The central utility plant features heat recovery chillers, ultra-high-efficiency hot water boilers and variable speed drives on nearly all pumps and fans. Condensate water will be collected from the pure steam generator and reused for cooling water to displace potable water sourced from the city. An advanced energy monitoring system will allow for real-time monitoring of natural gas, hot and chilled water, medium- and high-pressure steam, potable water, make-up water and compressed air.

LED lighting is utilized throughout the interior and exterior of the facility and is controlled by state-of-the-art sensors and timers. Natural light will illuminate portions of the buildings through skylights, solar tubes and daylighting-collection design features intended to reduce unnecessary lighting energy.

Two of the buildings have been designed to accommodate future installation of solar photovoltaic systems.

Exterior landscaping will incorporate drought-tolerant plants and low-flow plumbing fixtures with automatic faucets to reduce potable water consumption.

During construction, approximately 600 tons of waste was diverted from landfill, resulting in a 95 percent diversion rate.

A comprehensive recycling program will be put into place when construction is complete to reduce operational waste.

In 2016, Gilead initiated a shuttle service between San Dimas and La Verne to transport employees between sites and reduce the number of cars on the road. Additionally, eight electric vehicle chargers and designated parking spaces will be provided to reduce GHG emissions and other air pollutants further.



Kazuya Koda, Gilead San Dimas

## SAN DIMAS, CALIFORNIA, UNITED STATES

For 20 years, Gilead's San Dimas facility has manufactured, packaged and distributed many of the company's products. The Facilities team at San Dimas continually works to improve operations in all areas, from upgrading lighting fixtures and controls to implementing new rapiddrying ink technology that speeds up product launches and reduces energy consumption.

In 2016, lighting systems in two warehouse buildings were upgraded to more energy efficient LED fixtures, with one also upgrading to motion sensing occupancy controls. The new 200W LED fixtures represent a 37 percent reduction in lighting power from the fixtures they replaced.

To reduce greenhouse gas emissions from product distribution in 2016, Gilead worked with a partnering wholesaler to consolidate individual shipments into a combined shipment for national distribution. This resulted in a reduction of 975 metric tons of CO<sub>2</sub>e emissions in 2016.

Vehicle fuel economy and emission rates sourced from the 2016 Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model (GREET) for long-haul, low sulfur diesel fuel trucks. Global warming potentials (GWP) sourced from the International Panel on Climate Change (IPCC) Fifth Assessment Report (AR5).





## OCEANSIDE, CALIFORNIA, UNITED STATES

In 2016, Gilead completed construction of a new lab, office and warehouse building in Oceanside, expanding development, material management and testing functions for biologics candidates. Building upon rigorous California Title 24 and CALGreen green building requirements, the site employed sustainable design and construction measures that contributed to its LEED Gold certification.

Installed lighting power is 35 percent lower compared to California's Title 24 building code owing to efficient LED fixtures and controls. Approximately 75 percent of the connected lighting load is controlled by occupancy sensors and natural daylight is used to reduce lighting power.

To reduce energy consumed by plug loads, approximately 90 percent of appliances, office equipment and electronics in Oceanside are ENERGY STAR® certified.

Interior water fixtures reduced potable water consumption by 35 percent compared to conventional fixtures.

During construction, 75 percent of the waste generated was diverted from landfill. After the site was occupied, a waste audit was conducted on operational waste, which improved diversion rates by 35 percent.

Improvements were also made to an existing manufacturing building to optimize utility and water performance through replacement of the plant steam generation system and diversion of reverse osmosis reject water. In 2016, Oceanside staff identified that rejected water from the reverse osmosis water system could be reused as make-up water for the cooling tower water system. When fully implemented, the project is estimated to save more than three million gallons of water per year.

High-efficiency boilers were installed in 2016, reducing natural gas consumption by 17 percent. Electricity is sourced from renewable sources through the local utility company.

## EDMONTON, ALBERTA, CANADA

Our Alberta facility employs more than 380 people and manufactures APIs for the company's investigational compounds and commercial products. The site provides technology transfer support to Gilead's commercial API manufacturing sites and partners around the world.

Gilead's Alberta site is expanding to accommodate the company's growth and demand for APIs. In 2016, the second phase of the new lab facility came online and is a continuation of the Phase 1 project that earned the Alberta Top Projects Award for Sustainability in 2015.

The combined facility measures more than 90,000 square feet and incorporates numerous innovative design elements including:

- · High-performance envelope that maximizes daylight usage
- Waste heat recovery from laboratory fume hoods
- 100 percent containment of stormwater runoff
- Integrated laboratory equipment software system that eliminates paper use during experimentation
- Environmental controls that condense volatile organic compounds from the exhaust ventilation. The liquid is sent offsite for solvent or energy recovery

Through a partnership with Edmonton Waste Management Centre of Excellence, approximately 90 percent of the nonhazardous waste is diverted from landfill.

In 2016, the Alberta site maintained its ISO 14001 certification, standardizing the procedures for managing sustainability and environmental activities. Members of the Green Initiative Committee conducted a series of departmental audits focused on improving sustainability behaviors through subtle reminders, well-placed signage and automating processes where possible.

## STOCKLEY PARK, UNITED KINGDOM

Stockley Park is Gilead's international headquarters. In 2016, the BREEAM "Very Good" rated facility achieved zero landfill status. All 6.49 metric tons of solid waste generated onsite in 2016 was diverted from landfills.

General waste is converted to energy and food waste is utilized as feedstock in an anaerobic digester.

Energy consumption at Stockley Park is measured against a 2012 benchmark electric energy use intensity (EUI) of 37.1 kBtu/ft<sup>2</sup>.

From 2012 to 2016, Stockley Park added 65 percent more occupied space and only increased its electric EUI by one percent.



## 2016 Solid Waste Diverted from Landfill



A major sustainability feature that we will be implementing is a 65 kW solar photovoltaic system that will be capable of displacing 25 metric tons of CO<sub>2</sub>e of electrical grid emissions annually.

## CAMBRIDGE, UNITED KINGDOM

Gilead's Cambridge office sits on the edge of Granta Park, a green space amid the city's urban activity. In 2016, construction began on a new facility that will support 170 countries in Europe, Australia and other parts of the world. The facility is expected to open in mid-2017. The new building is on track to achieve a BREEAM "Very Good" rating.

### The sustainability features implemented in the design include:

- Installation of 80 bicycle bays to promote alternative commuting options
- Sustainably sourced materials with documented custody chains back to suppliers
- 65 kW solar photovoltaic system that will be capable of displacing 25 metric tons of CO₂e of electrical grid emissions annually





### CORK, IRELAND

Gilead's Cork facility is responsible for manufacturing, quality control, packaging and the release and distribution of the company's products in the European Union and international locations.

The professionals that operate our Cork site received recognition for their sustainability efforts, winning the honor of In-House Facilities Team of the Year at the 2016 Irish National Facilities Management Awards.



Cork maintained its zero landfill waste status for the fourth consecutive year, continuing to divert more than 20 metric tons of solid waste from Ireland's landfills annually.

Submetering systems installed last year made it possible for the engineering staff to benchmark energy and water performance more accurately and use data to identify issues that may have otherwise gone unnoticed.

High-resolution meter data helped identify and isolate an underground system water leak, saving more than 1.4 million gallons of fresh water per year.

In 2016, the heating system equipment and controls were substantially upgraded, improving the system's overall efficiency by 50 percent and reducing the water consumption of the steam boilers.

The facility continues to focus on improving overall sustainability. Feasibility studies are underway to incorporate rainwater harvesting into the non-potable water systems and to install a solar photovoltaic system to generate electricity onsite.