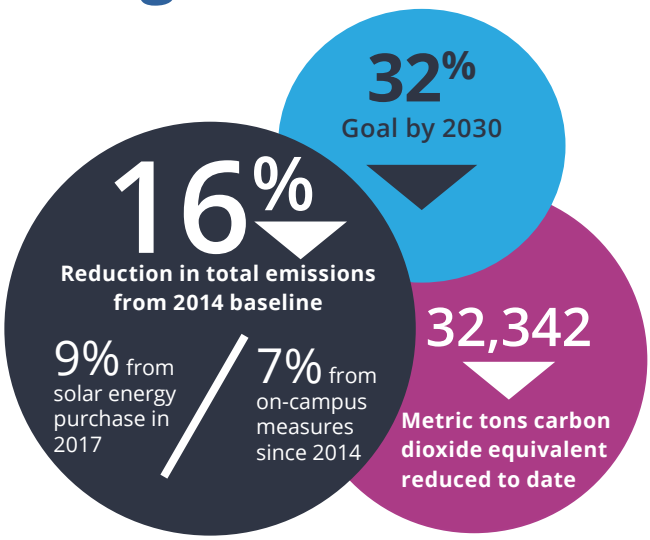
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

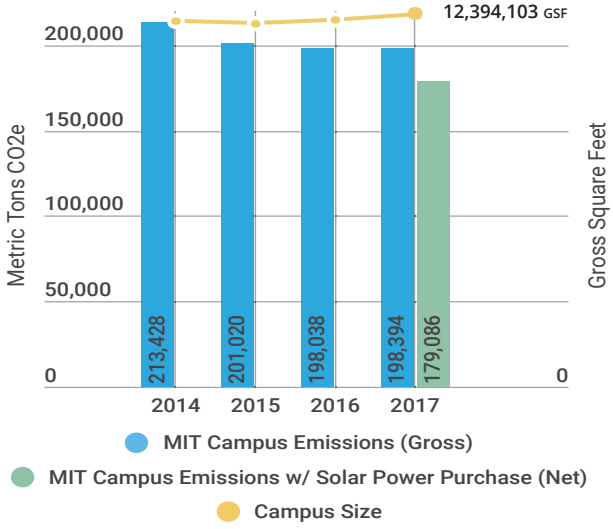
Climate Action Plan 2017

FROM PLAN TO ACTION:

Progress Towards MIT's Greenhouse Gas Goal



Total Campus Emissions By Year



2017 Campus Emissions By Source (MTCO2e)

Fleet Vehicles	1,094
Fugitive Gases	5,655
Leased Buildings	4,856
MIT Owned Buildings	186,780
Total	**198,394**

INTEGRATING RENEWABLE ENERGY PURCHASES

MIT has made substantial progress to implement the Institute's Plan for Action on Climate Change. Programs are underway to achieve the Plan's call for at least a 32 percent reduction in campus greenhouse gas emissions, by the year 2030. Since the baseline year of 2014, emissions have been reduced 16% – half of the minimum reduction called for. In FY2017, MIT's greenhouse gas footprint has been reduced by 9% from 2016 levels primarily due to electricity produced via a solar power purchase agreement. MIT's on-campus total emissions in 2017 were flat from 2016 levels. This is despite a growth in some campus emission sources combined with a colder winter, warmer summer and more carbon-intensive grid-purchased electricity.

Using standard greenhouse gas accounting practices, MIT was able to reduce its carbon footprint by deducting the full amount of the solar power purchased from the amount of MIT's grid-purchased electricity in Cambridge. Since the solar-generated electricity is considered to be carbon-free, the net impact is a reduction of greenhouse gas emissions associated with MIT's greenhouse gas inventory.

OUR EMISSIONS SOURCES

MIT Owned Buildings (94%) and Leased Space (2%): The largest source of campus emissions is the energy used to heat, cool, and power buildings.

Fugitive Emissions (3%): Fugitive emissions are GHGs that are emitted on campus through non-combustion processes used in research, refrigeration and electrical insulation.

Campus-Owned Vehicles (1%): MIT's fleet consists of over 160 departmental vehicles and shuttles and emissions are associated with their fuel combustion.

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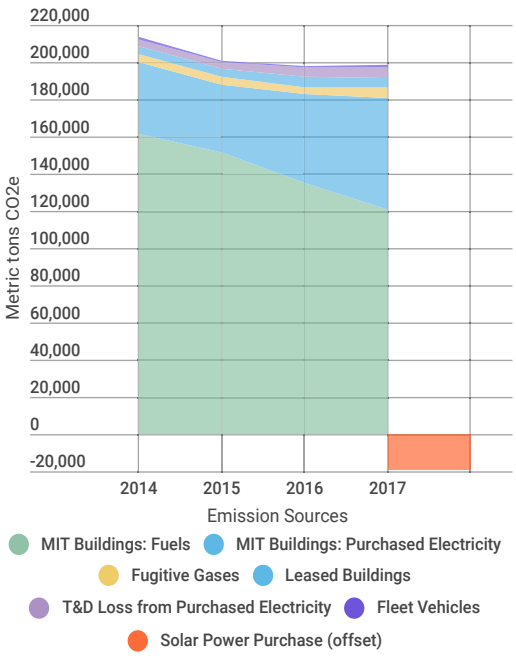
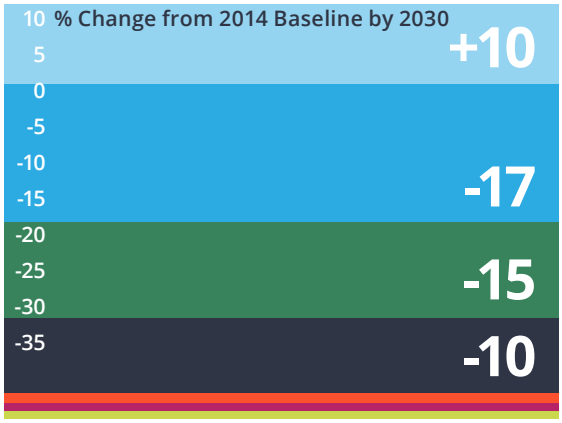
GHG Changes by Source & Year



Planned GHG Reduction Strategies
(Including campus growth)

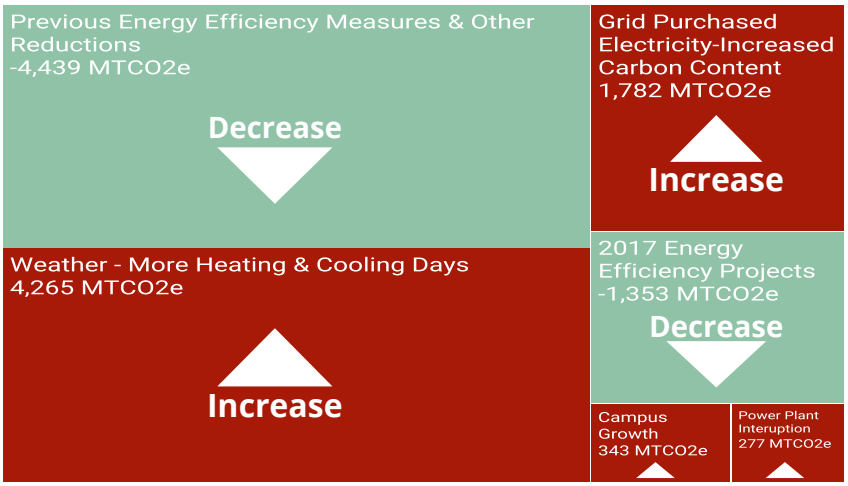


MITIGATION

- Campus Building Growth
- Renewable Energy Procurement (off-site)
- Energy Efficiency Investments (existing buildings)
- Central Utility Plant Upgrades
- Fleet Vehicle Optimization
- Renewable Energy Production (on-site)
- Non-Combustion Source Reduction

CAMPUS GHG DRIVERS

Campus building emissions in 2017 were down slightly despite increases from several sources. MIT offset these increases with energy efficiency measures. New efficiency projects reduced an estimated 1,353 MTCO2e, while reductions from previous investments were also realized. The impact on emissions of these drivers are summarized below.



PLANNING FOR OUR GHG REDUCTION GOAL

MIT has completed a plan for cutting campus greenhouse gas emissions. The report was developed collaboratively by the Department of Facilities, and the Offices of Sustainability, Campus Planning, and Environment, Health and Safety under the auspices of the Office of the Executive Vice President and Treasurer. The report lays out a roadmap of strategies, and a timeline for implementing its highest-priority recommendations over the next five years, providing a clear pathway toward achieving the Institute's near term emissions reduction goals.

The campus greenhouse gas reduction plan centers on four key approaches:

- reducing the overall energy use on campus,
- reducing the use of fossil fuels in campus buildings and vehicles,
- increasing the use of renewable energy sources to meet campus needs, and
- minimizing the release of "fugitive" gases from campus operations such as specialty research gases in laboratory buildings.