

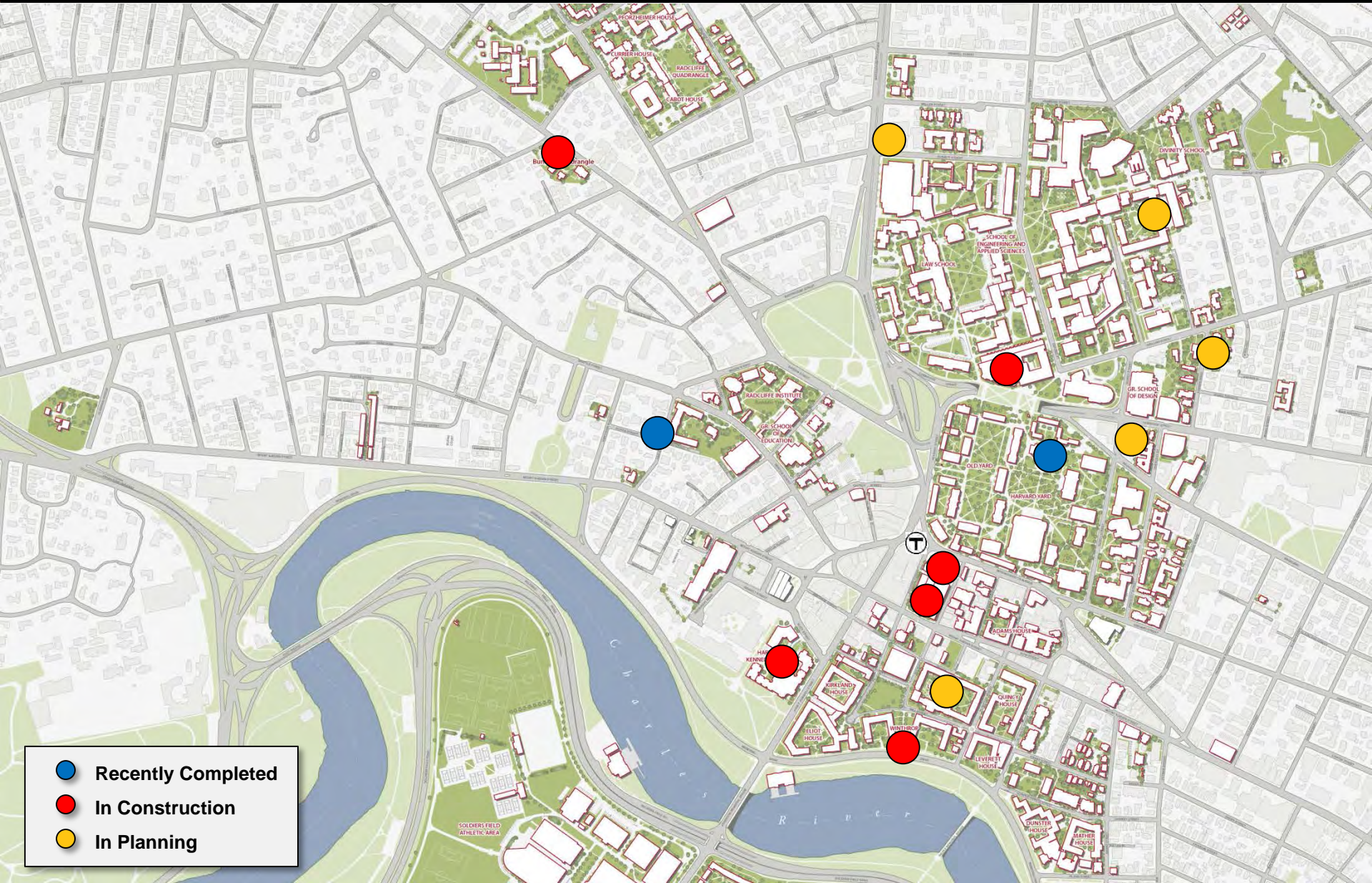


2016 Town Gown Report

City of Cambridge | Planning Board Presentation

February 7, 2017

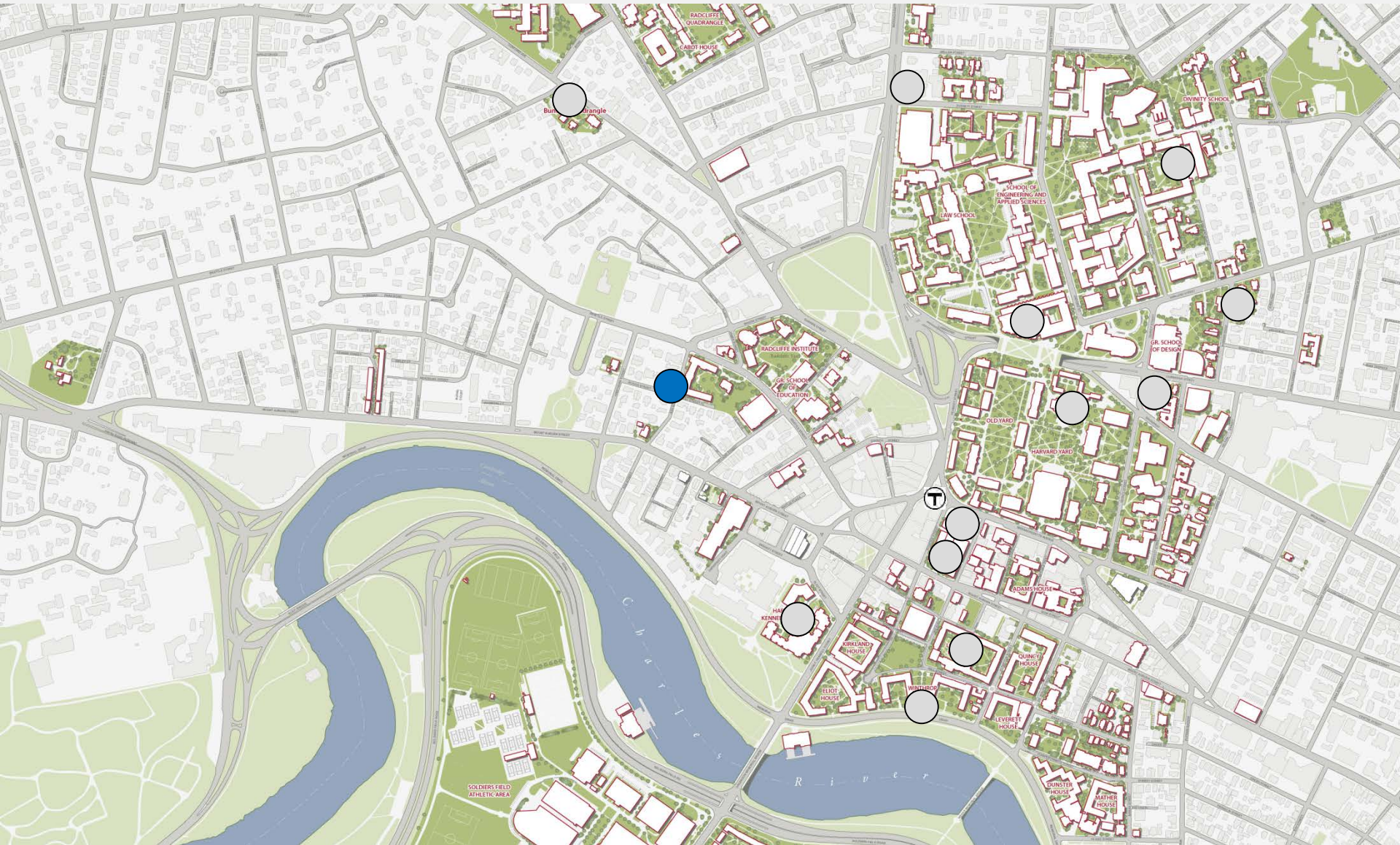
Current Projects in Cambridge



9 Ash Street – Renovation

Recently Completed

Graduate School of Design



Graduate School of Design



Restoration of historic house • *Thomas Pfifer and Partners*

Graduate School of Design



Restoration of historic house • *Thomas Pfifer and Partners*

Graduate School of Design



Restoration of historic house • *Thomas Pfifer and Partners*

Memorial Church – Renovation

Recently Completed

Memorial Church





Building system upgrades, renovation of space, and accessibility improvements • *Payette*



Building system upgrades, renovation of space, and accessibility improvements · Payette

Memorial Church – Renovation

Recently Completed



Building system upgrades, renovation of space, and accessibility improvements · Payette

Campus Development

In Construction

Harvard Kennedy School



Harvard Kennedy School



Construction of new academic space · *Robert A.M. Stern Architects*

Harvard Kennedy School



Construction of new academic space • *Robert A.M. Stern Architects*

Harvard Kennedy School



Construction of new academic space · *Robert A.M. Stern Architects*

Richard A. and Susan F. Smith Campus Center

In Construction

Harvard Campus Services



Smith Campus Center – *Facade Restoration*

In Construction

Harvard Campus Services



Building facade restoration • *Bruner/Cott*

Smith Campus Center

In Construction

Harvard Campus Services



Creation of a campus center · Hopkins Architects

Smith Campus Center

In Construction

Harvard Campus Services



Creation of a campus center · *Hopkins Architects*

Harvard Campus Services



Creation of a campus center · Hopkins Architects

Harvard Campus Services



Creation of a campus center · Hopkins Architects

Cabot Science Library – *Renovation*

In Construction

Faculty of Arts and Sciences



Cabot Science Library – *Renovation*

In Construction

Faculty of Arts and Sciences



Creation of collaborative learning environment • *Mack Scogin and Merrill Elam*

Cabot Science Library – *Renovation*

In Construction

Faculty of Arts and Sciences



Creation of collaborative learning environment • *Mack Scogin and Merrill Elam*

Winthrop House – House Renewal

In Construction

Harvard College



Winthrop House – House Renewal

In Construction

Harvard College



Comprehensive renewal of undergraduate House • *Beyer Blinder Belle*

Winthrop House – *House Renewal*

In Construction

Harvard College



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Winthrop House – House Renewal

In Construction

Harvard College



Comprehensive renewal of undergraduate House • *Beyer Blinder Belle*

Lowell House – House Renewal

In Planning

Harvard College



Lowell House – House Renewal

In Planning

Harvard College



Comprehensive renewal of undergraduate House · *Kieran Timberlake*

Lowell House – House Renewal

In Planning

Harvard College



Comprehensive renewal of undergraduate House · *Kieran Timberlake*

Arthur M. Sackler Building – *Renovation*

In Planning

Harvard Real Estate



Arthur M. Sackler Building – *Renovation*

In Planning

Harvard Real Estate



Renew building systems and accommodate new uses · *designLAB*

Graduate School of Design



Graduate School of Design



Sustainable retrofit of wood-frame building • *Snøhetta*

Graduate School of Design



Sustainable retrofit of wood-frame building · *Snøhetta*

Graduate School of Design



Sustainable retrofit of wood-frame building · *Snøhetta*

Harvard Law School



Harvard Law School



New space for HLS public service programs · NBBJ

Digital Infrastructure



Harvard Yard Wi-Fi

Planning for Tree Resources



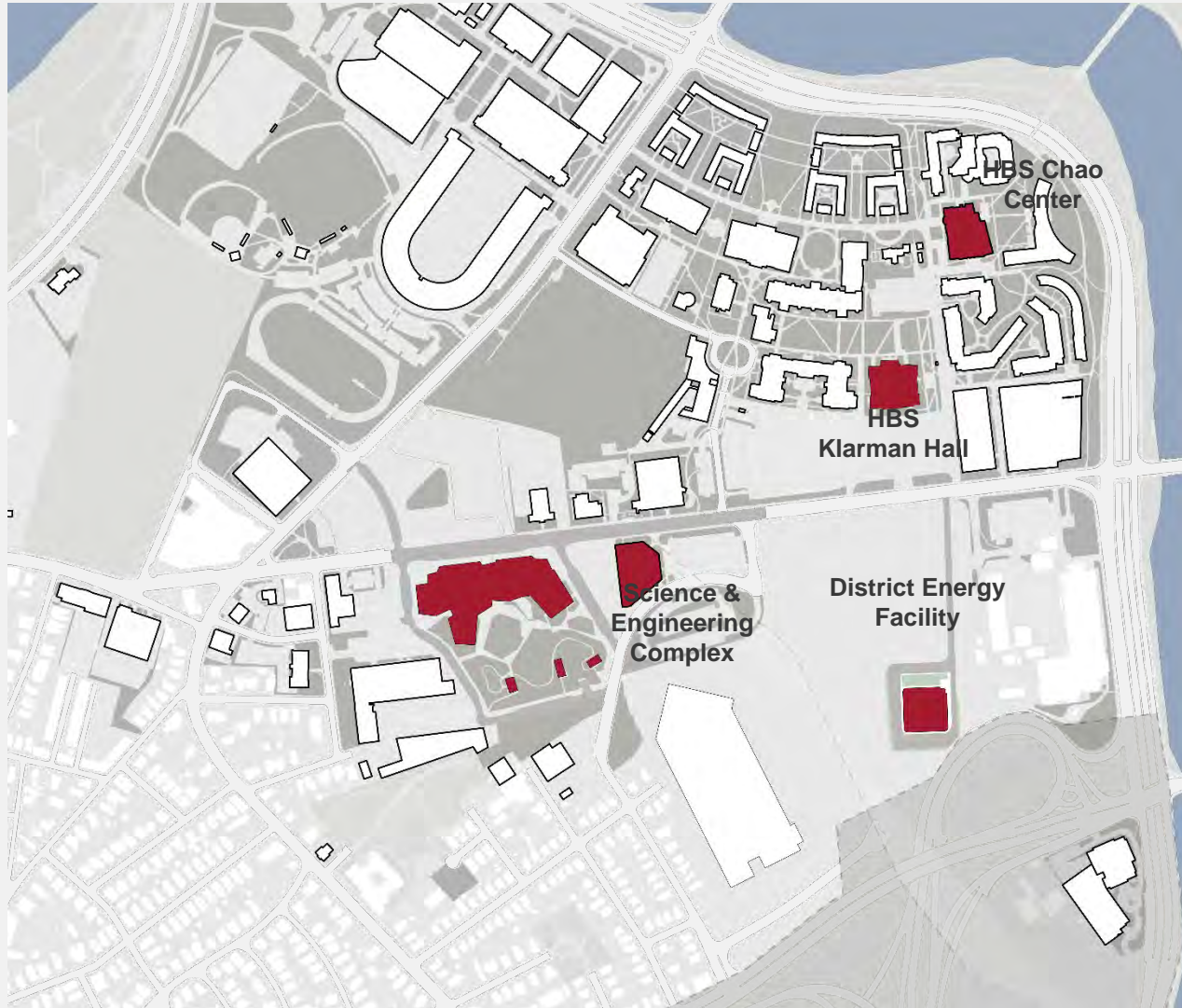
Trees in Harvard Yard

Planning for Tree Resources



Tree Types

- Canopy – Deciduous
- Canopy – Evergreen
- ◆ Ornamental – Deciduous
- ◆ Ornamental – Evergreen
- ◆ Ornamental – Flowering
- Not Identified



Harvard in Cambridge Public Schools



Harvard programs available in every public school in Cambridge

- Mentoring and enrichment programs
- Visits to the University's museums
- Learning from Harvard educators

Curriculum-based initiatives engaging every student at various grade levels

Partnerships with CRLS include:

- Cambridge-Harvard Summer Academy
- Harvard Crimson Summer Academy
- Cambridge students attending Harvard
- Student mentoring
- CRLS Marine Science Internship Program



**We have a shared
responsibility to build
and operate a campus
that contributes to the
well-being of every
member of our
community.**

Campus **Sustainability**

Research Across Boundaries

The New York Times

PLAY THE CROSSWORD

CANADA

Canada's Big Dams Produce Clean Energy, and High Levels of Mercury

By IAN AUSTEN NOV. 10, 2016



The Boston Globe

The seas are rising fast — and even faster in Mass



THE WALL STREET JOURNAL

Home World U.S. Politics Economy Business Tech Markets Opinion Arts Life Real Estate

WORLD | ASIA

Southeast Asia Haze Caused Over 100,000 Deaths, Study Says

U.S. researchers calculated 'excess deaths' from smoke last year in Indonesia, Singapore and Malaysia

By SARA SCHONHARDT
Sept. 19, 2016 4:25 a.m. ET

JAKARTA, Indonesia—A study by two U.S. universities estimated that more than 100,000 people in parts of Southeast Asia died prematurely last year from breathing the noxious haze related to fires set to clear land for agriculture.

Researchers from Harvard and Columbia compared the likely health impact of the smoke that spread across much of the region a year ago to 2006, another exceptionally bad year

SCIENCE & HEALTH > ENVIRONMENTS & SUSTAINABILITY

Targeting the ills of climate change

New initiative on health
Kerry to campus

May 6, 2016

HARVARDgazette



CAMPUS & COMMUNITY > AWARDS

Professor honored for work on climate change consensus

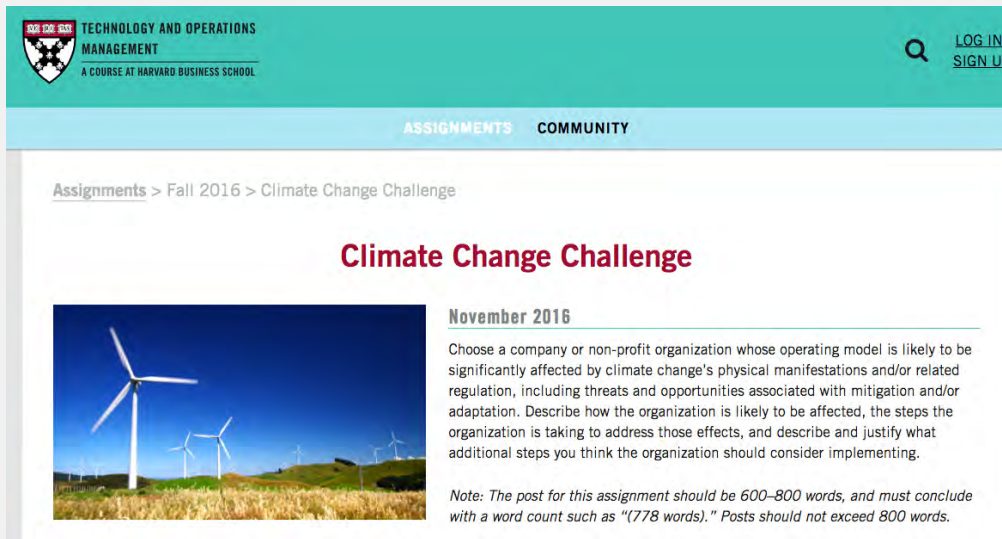
Naomi Oreskes to receive Sokolow Award for Outstanding Achievement in Science



A ONCE-IN-A-LIFETIME BY PRIVATE JET



Nurturing the Leaders of Tomorrow




TECHNOLOGY AND OPERATIONS MANAGEMENT
A COURSE AT HARVARD BUSINESS SCHOOL

LOG IN / SIGN UP

ASSIGNMENTS COMMUNITY

Assignments > Fall 2016 > Climate Change Challenge

Climate Change Challenge



November 2016

Choose a company or non-profit organization whose operating model is likely to be significantly affected by climate change's physical manifestations and/or related regulation, including threats and opportunities associated with mitigation and/or adaptation. Describe how the organization is likely to be affected, the steps the organization is taking to address those effects, and describe and justify what additional steps you think the organization should consider implementing.

Note: The post for this assignment should be 600–800 words, and must conclude with a word count such as "(778 words)." Posts should not exceed 800 words.


- All 900+ Harvard Business School first year students required to complete assignment on climate change
- Secondary field in energy and environment for undergraduates
- T.H. Chan School of Public Health and Harvard Medical School sign White House pledge to teach about climate change
- Classroom projects tackle climate and energy challenges (i.e. engineering students evaluated Harvard's resiliency planning.



Holistic Sustainability Plan



EMISSIONS AND ENERGY

A purple rectangular box with rounded corners. At the top left is a white sun icon. The text "EMISSIONS AND ENERGY" is centered in white, with a thin white horizontal line below it. At the bottom center is a white icon of a solar panel.

Translating Research Into Practice



EDUCATE AND
EMPOWER



INSTITUTIONALIZE

LEARN IT.
LIVE IT.

TRANSLATE
RESEARCH



AMPLIFY
IMPACT



HARVARD
Office for Sustainability

1 Translate research and teaching into practice, by piloting solutions to real-world challenges on our campus.

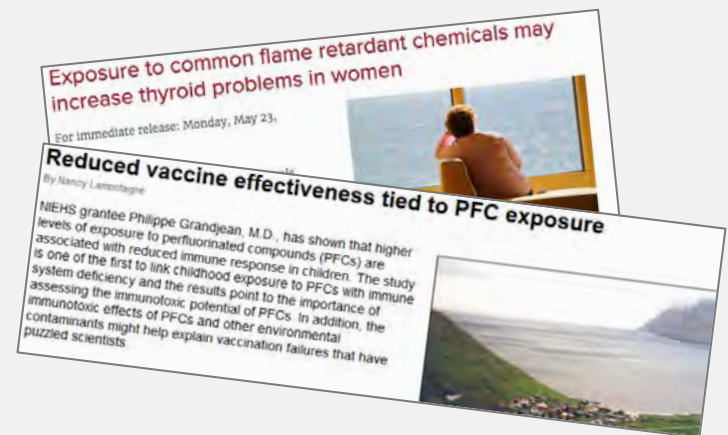
2 Educate and empower our students to understand their unique role in solving complex sustainability problems.

3 Institutionalize best practices in sustainable operations.

4 Amplify impact by sharing replicable models that can be implemented inside and outside Harvard.

Healthy Building Materials

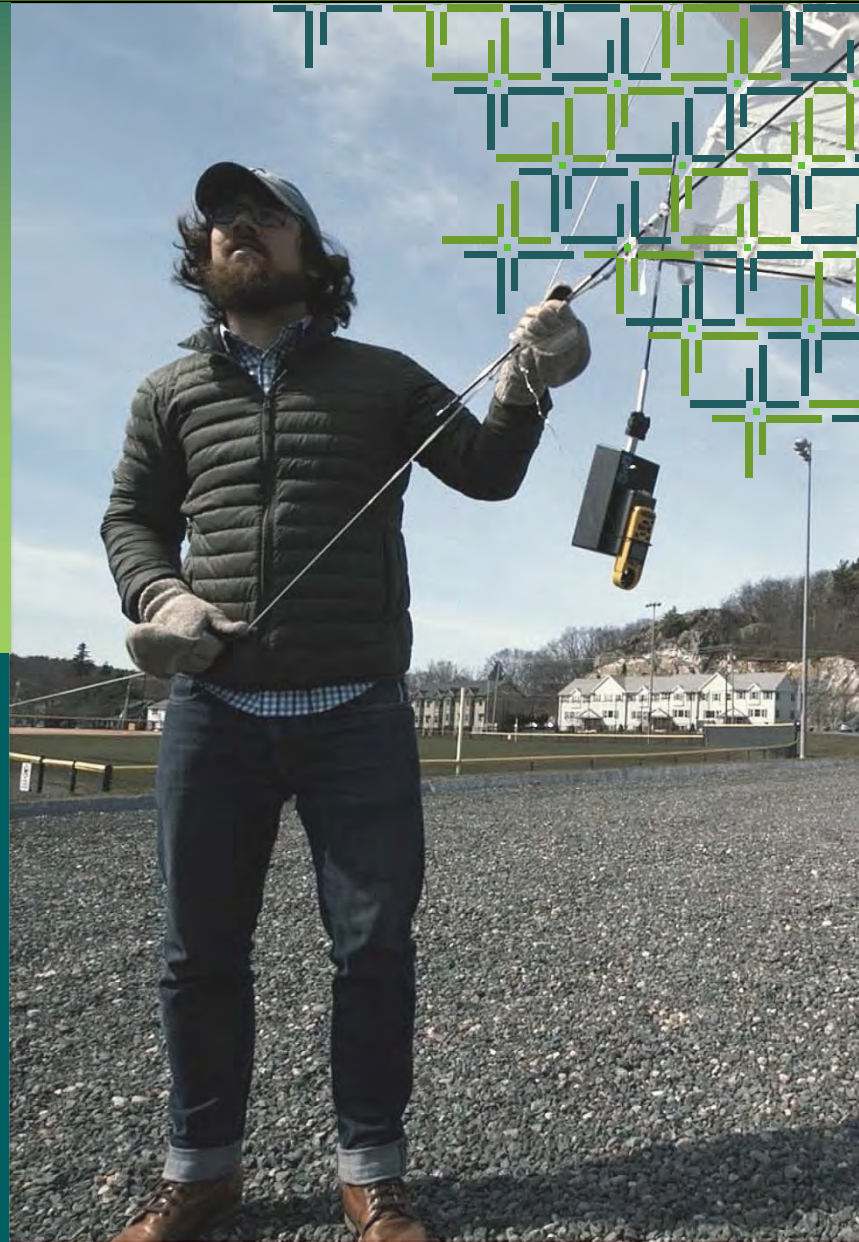
- First University to sign a national pledge stating preference for purchasing fire-safe furniture free of harmful chemical flame retardants
- Founding partner of Portico, a materials transparency and decision-making tool developed by Google and the Healthy Buildings Network
- Awarded grant from President's Administration Innovation Fund to launch a Healthy Building Materials Academy in collaboration with faculty researchers



Living Laboratory



- **Campus Sustainability Innovation Fund**
- **Climate Solutions Living Lab Course and Research Project**
- **Healthy Building Materials Academy and Center for Health and the Global Environment research collaboration**
- **Student Sustainability Grants**



2006 – 2016 Climate Goal Report

HOW HARVARD UNIVERSITY MET ITS GREENHOUSE GAS EMISSIONS REDUCTION TARGET

1. ENERGY EFFICIENCY FIRST

2. IMPROVING DISTRICT ENERGY

3. DECARBONIZATION OF THE REGIONAL ELECTRIC GRID

4. ADVANCING THE TRANSITION TO RENEWABLE ENERGY

5. EXPLORING OFF-SITE EMISSIONS REDUCTION

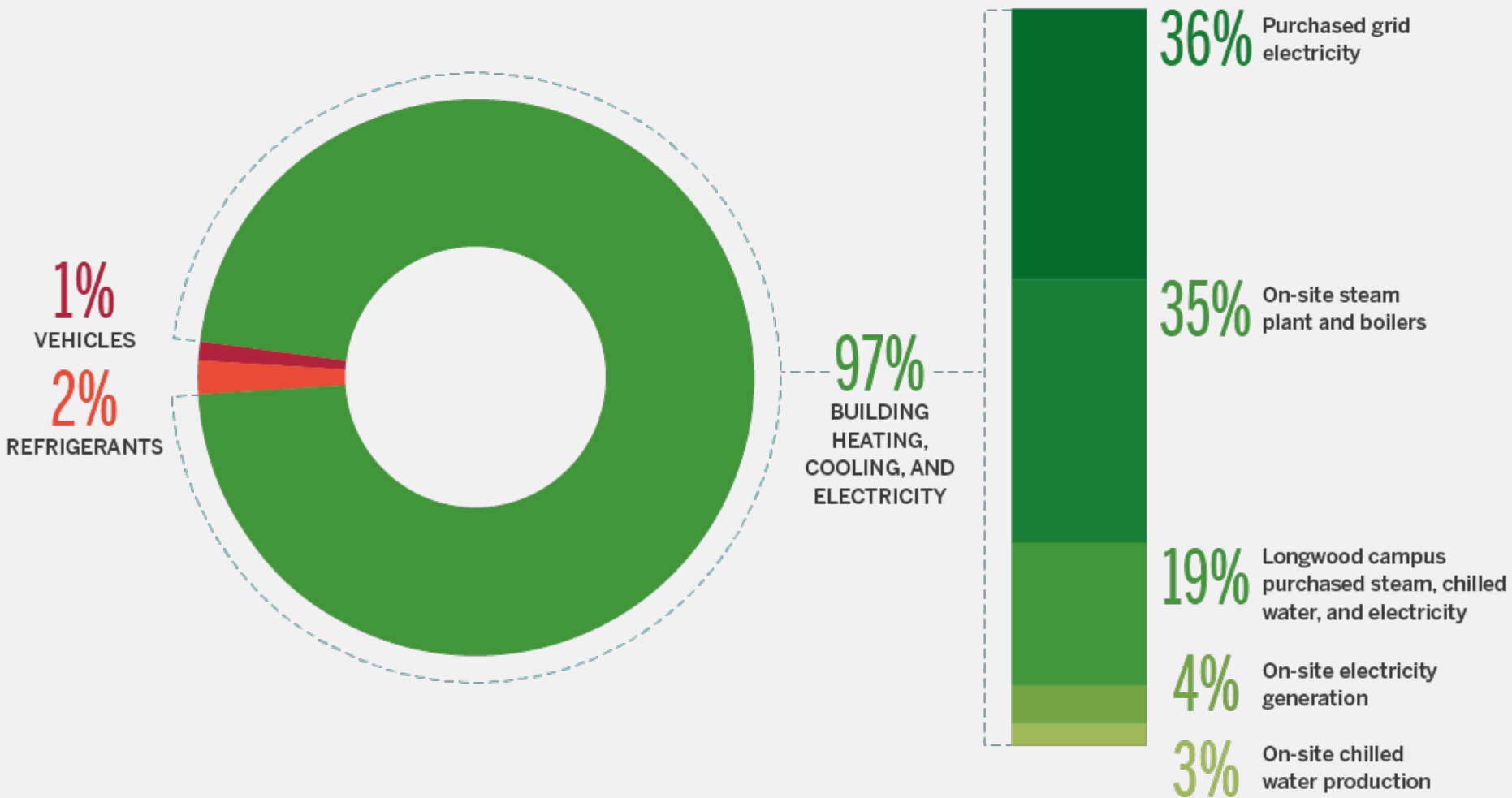
6. CREATING SYSTEMS CHANGE

What Made The Goal Unique:

- ▶ Based on established climate science
- ▶ Imposed a short-term target in order to spur immediate action
- ▶ Reflected absolute emissions, inclusive of campus growth
- ▶ Included all properties within operational control throughout North America

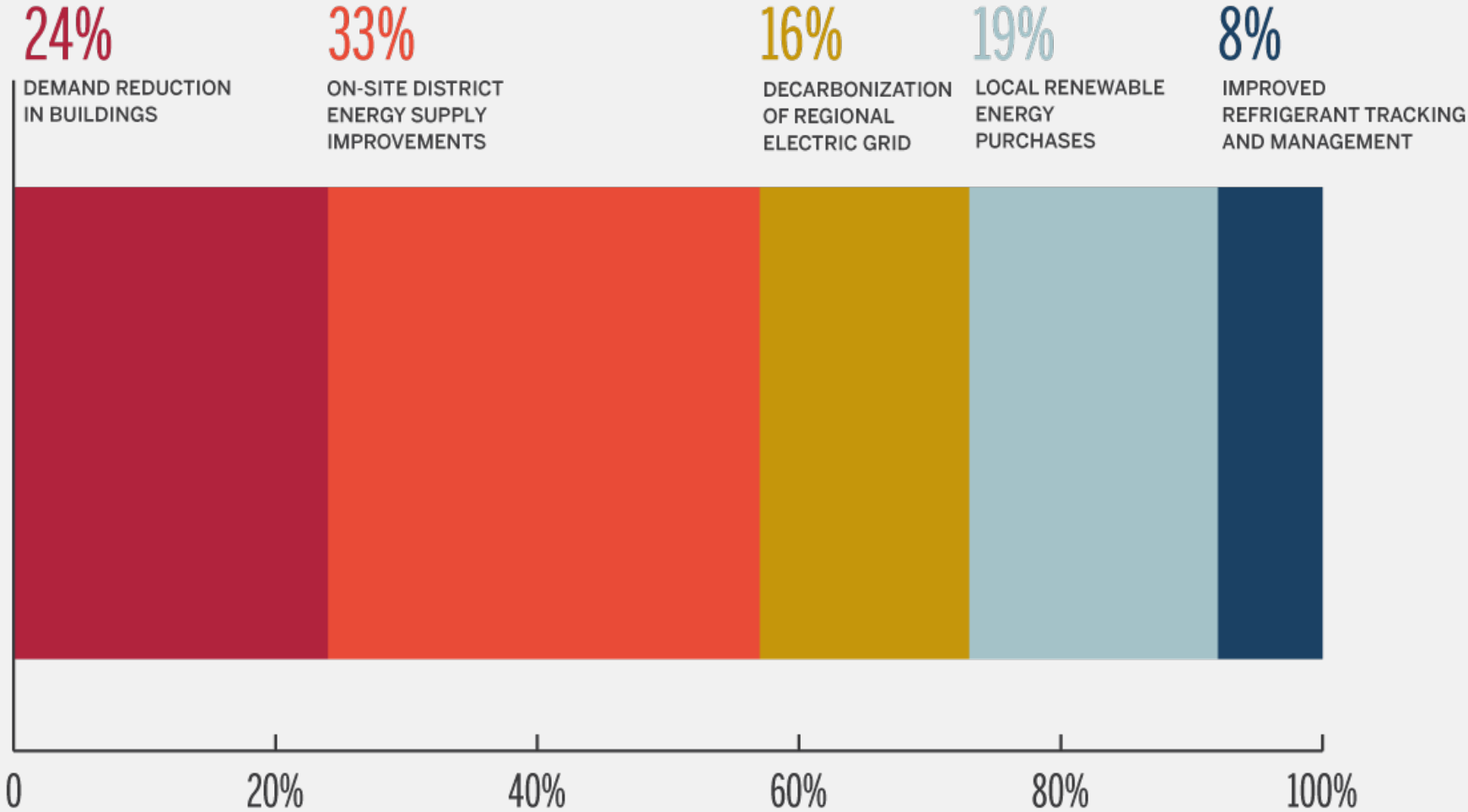
University-Wide Greenhouse Gas Emissions Profile

Reflects scope 1 and 2 emissions as of 2016



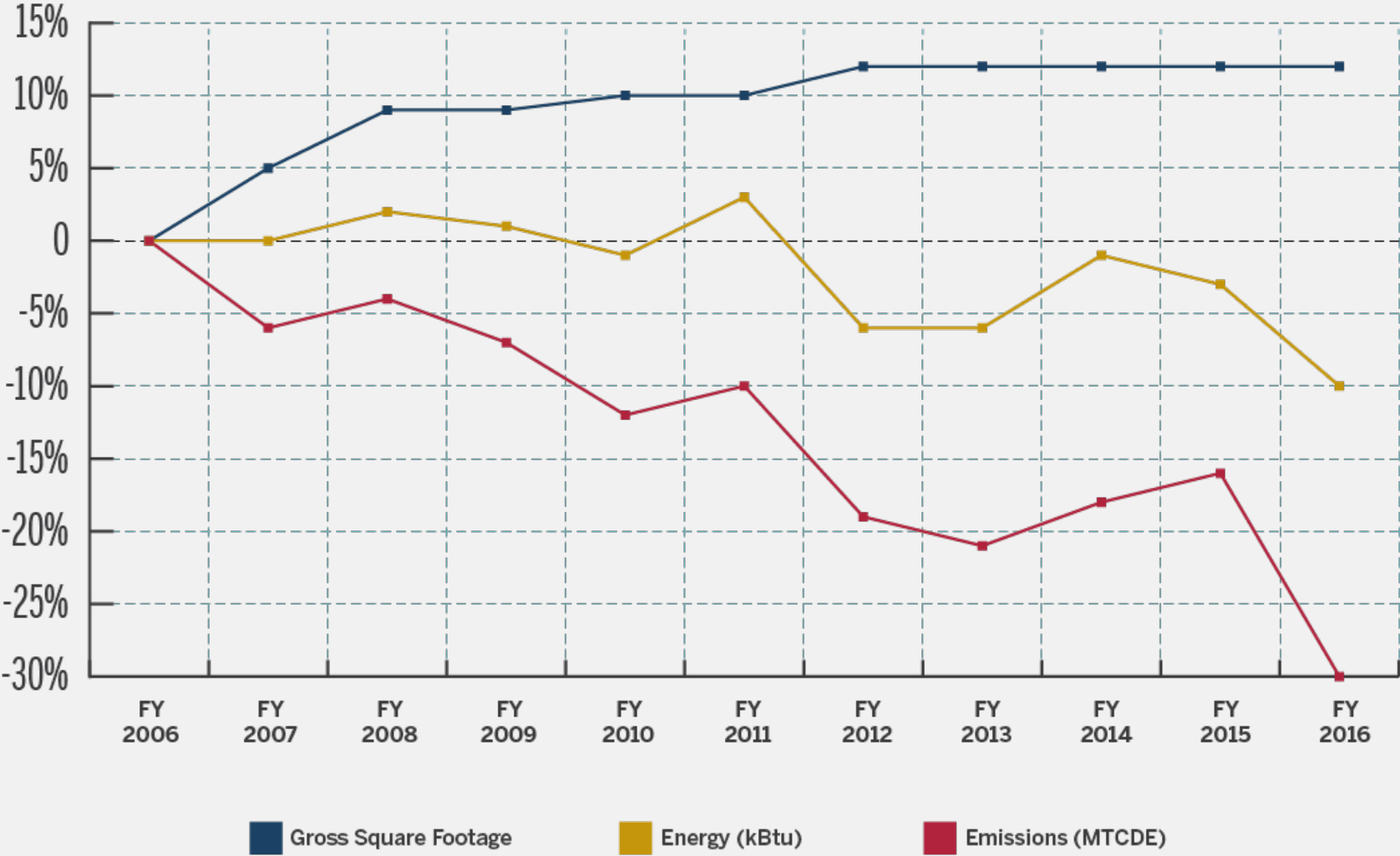
How Harvard Met its Greenhouse Gas Reduction Goal

30% reduction by 2016 from a 2006 baseline, including growth



Change in Absolute Emissions, Energy and Square Footage

2006-2016



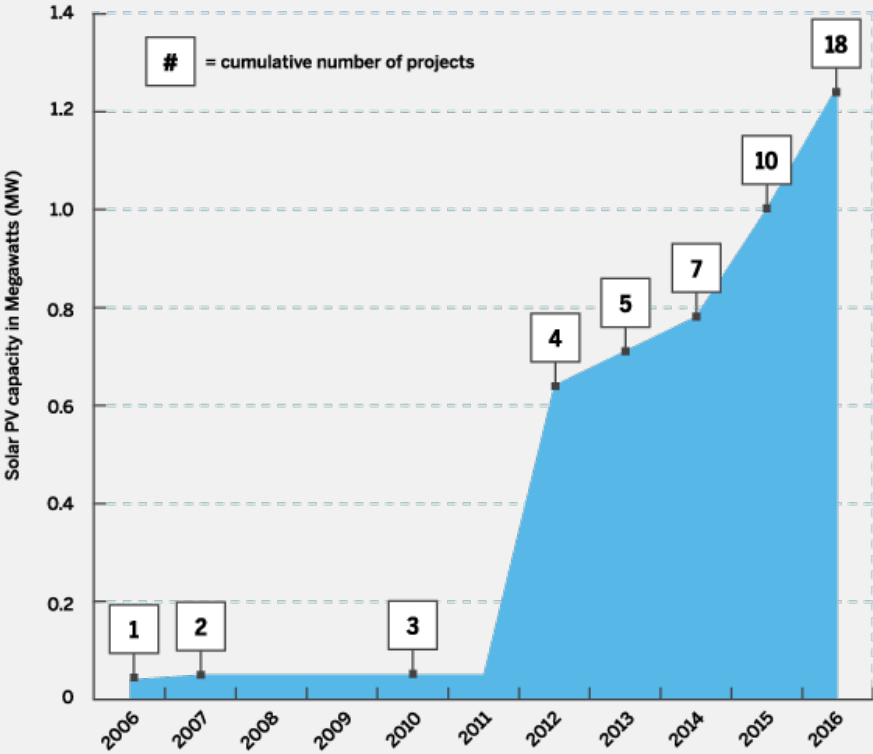
Commitment to Renewable Energy

WIND POWER



12MW Maine Stetson II wind power PPA (2009)

GROWTH IN CAMPUS SOLAR PV PROJECTS



Organizational Transformation



Resources for Additional Information

PLANNING

Harvard Planning Office

www.planningoffice.harvard.edu/

Construction Mitigation

www.construction.harvard.edu

HARVARD IN THE COMMUNITY

www.community.harvard.edu

SUSTAINABILITY

Office for Sustainability

www.green.harvard.edu

Harvard University Sustainability Plan

www.green.harvard.edu/plan

Sustainability Report

www.green.harvard.edu/report



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