

# Boston Green Ribbon Commission Health Care Working Group

*Delivering health benefits of climate-smart action to the patients and communities we serve*

Health care is on the front lines of climate change, functioning even under adverse conditions to protect, research, and heal. This life-saving mission, and our position as the largest employer and real estate presence in the City of Boston, infuse every collaboration. In partnership with the City of Boston, other Green Ribbon Commission (GRC) Working Groups, and many stakeholders, our resiliency efforts help the region prepare for this evolving and rapidly accelerating health crisis.

We seek to lead Boston in understanding and responding to the many health benefits of climate action, especially to protect our most vulnerable and historically oppressed neighbors and communities. We educate and empower clinicians, staff, patients, and their households to mitigate and adapt to protect their health.



## LOCAL

Hospitals act to save money, reduce GHG emissions and increase resilience—both on campus and in adjacent areas through energy efficiency, energy storage, and renewable energy, while advancing cutting-edge solutions and improving patient care.

## REGIONAL

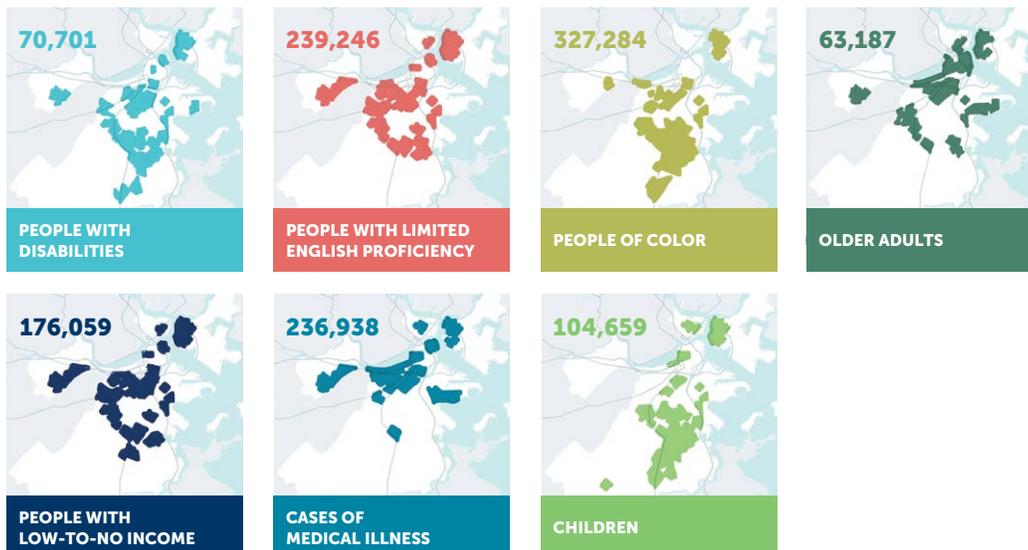
Through many regional collaborations, the GRC Health Care Working Group leverages strategies and ideas to expedite more equitable, positive change, while educating policy makers.

## GLOBAL

Inspire sector action worldwide by mirroring Metro Boston's worldwide leadership in clinical research and patient care with leadership in green and resilient health care facility operations.

## Social Vulnerability Summary—Top Quartile

As in many communities, a large portion of Boston's population is socially and/or economically vulnerable, and therefore less resilient to climate impacts. Source: City of Boston



# A diverse sector collaborates on ambitious climate action

The GRC Health Care Working Group’s (HCWG) diverse facilities protect, heal, and research while collaborating to reduce greenhouse gases and adapt to climate change.

Co-chaired by Anne Klibanski, MD, President and Chief Executive Officer of Partners HealthCare, and Kate Walsh, President and CEO of Boston Medical Center, the HCWG is coordinated by Health Care Without Harm—a global nonprofit, founded in Boston, reducing our sector’s environmental health footprint while advancing health justice.

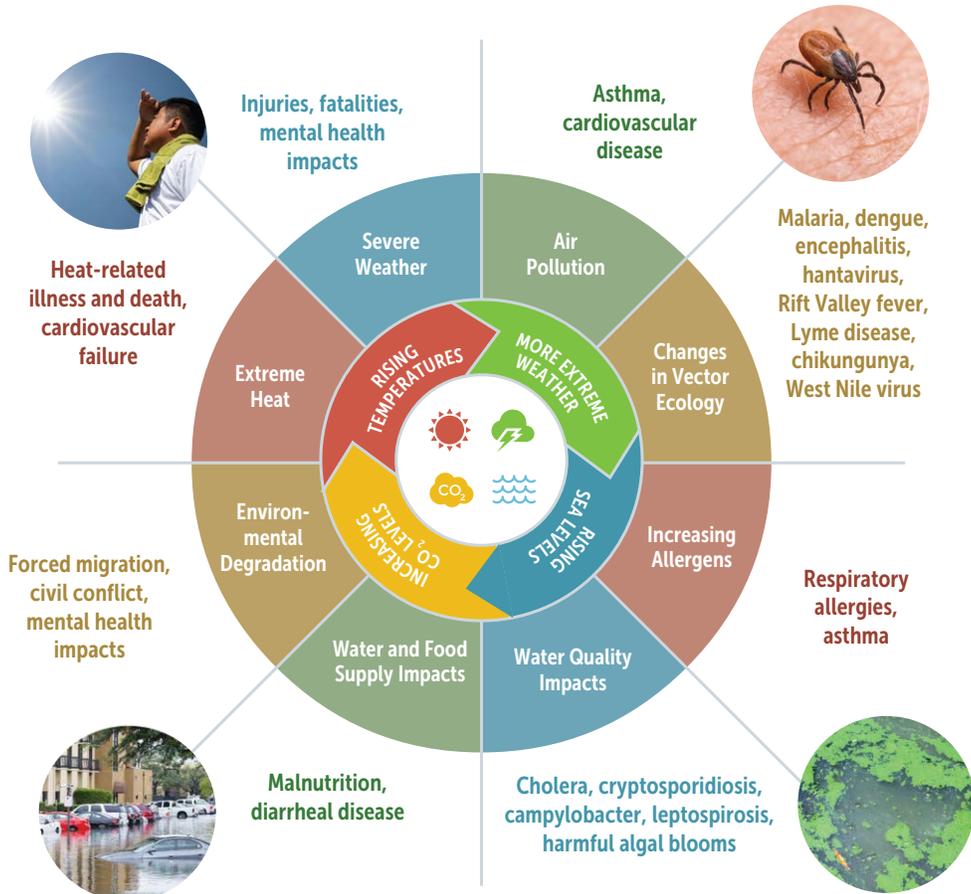
The serious health impacts of climate change on a hospital’s patients, staff, communities, and bottom lines drives HCWG members to aggressively reduce greenhouse gas emissions.

**HCWG MEMBERS:**

- Beth Israel Deaconess Medical
  - Boston Children’s Hospital
  - Boston Medical Center
  - Brigham & Women’s Hospital\*
  - Cambridge Health Alliance
  - Carney Hospital
  - Covenant Health Systems
  - Dana Farber Cancer Institute
  - Faulkner Hospital
  - Heywood Hospital
  - Massachusetts Eye & Ear Infirmary\*
  - Massachusetts General Hospital\*
  - MetroWest Medical Center
  - Newton Wellesley Hospital\*
  - North Shore Medical Center
  - Partners HealthCare System\*
  - Spaulding Hospital & Rehabilitation Network\*
  - St. Elizabeth’s Medical Center
  - Steward Health Care System
  - Tufts Medical Center
- \* Member institution of Partners Health-Care system. Partners HealthCare also includes North Shore Medical Center, and Cooley Dickinson, Martha’s Vineyard, McLean and Nantucket Hospitals

## Impact of Climate Change on Human Health

Medical societies and publications, the World Health Organization and many governments have declared climate change this century’s greatest health crisis and opportunity.



# 1 Accelerating change with analyses, partnering, data & expertise

The HCWG's ground-breaking projects and reports demonstrate the art of the possible, overcoming many challenges.

## EXPERTISE INFORMING POLICY

Clinicians and facility leaders regularly inform City and statewide lawmakers on our sector's progress and the policies needed to address the growing climate health crisis.

## SHARING BEST PRACTICES

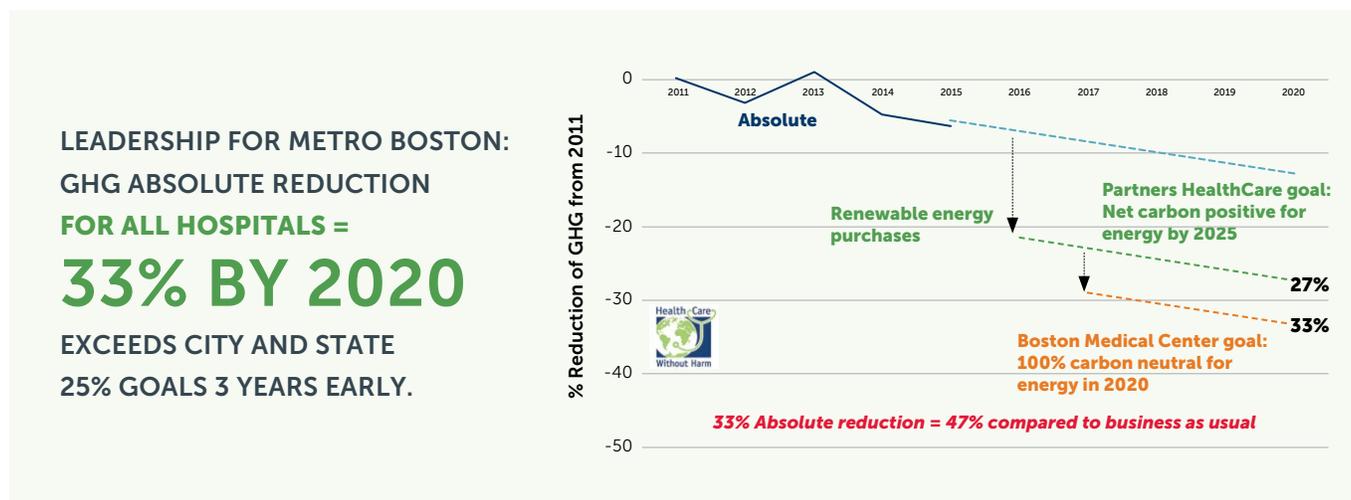
HCWG members share model RFP's for conducting hospital [Strategic Energy Master Plans](#), and [Climate Vulnerability Resilience Capital Planning](#). We support the GRC Higher Education Working Group's leadership in advancing research laboratory energy efficiency and other green practices.

## SHARING DATA TO SET THE PACE OF CLIMATE PROGRESS

The HCWG created the nation's only metro-wide health care energy/GHG tracking initiative, which demonstrates the group cut GHGs by 29% from 2011-2017, and are on track for 33% sector-wide reductions by 2020—47% below business as usual. Between 2011-2015 the actions avoided >9,000 health incidents and \$7 million in health care costs.

## UNIQUE ANALYSES AND REPORTS

With PricewaterhouseCoopers Advisory Services LLC, we created a unique report: [Safe haven in the storm: Protecting lives and margins with climate-smart health care](#). It analyzes billions of dollars in losses and resilience-related savings to show health care executives how preparing for extreme weather can make or break a health system.



# 2 Convening the community on key priorities

HCWG members and Health Care Without Harm organize events to learn from national experts, share best practices, discuss lessons learned, and create shared solutions.

## TWO REPORTS AND A SUMMIT ON COMBINED HEAT AND POWER IN HEALTH CARE

analyzed how to drill through barriers to accelerate the adoption of more efficient, resilient systems.

## RENEWABLE ENERGY FINANCING BRIEFING

for health care chief financial officers and senior leaders, resulted in investments that have already created >50MW of new solar and wind power generation.

## HEALTH CARE RESILIENCE SUMMIT AND REPORT

for >100 diverse stakeholders explored key challenges, opportunities, tough questions, and recommendations to strengthen facilities and anchor our communities.

## CREATED THE MASSACHUSETTS HEALTH CARE CLIMATE ALLIANCE

to enable statewide sector progress in mitigation and adaptation, and to educate policy makers.

### 3 Driving climate-smart action through innovation and leadership: sampling of projects

**The HCWG enabled Boston’s metro-wide Community Health Needs Assessment** to include climate and environmental health threats for the first time—assessing resident’s concerns at home, work, and school. We support Boston’s determination to ensure climate solutions are both socially equitable and improve community health.

**Boston’s Building Energy and Reporting Disclosure Ordinance (BERDO)** supports the City of Boston’s and GRC’s shared goal of a 25% reduction in GHG’s by 2020, and carbon neutrality by 2050. The HCWG collaborated closely with the city to shape BERDO, and is credited with ensuring its passage.

**Beth Israel Deaconess Medical Center’s** focus on energy efficient labs delivered a 38% GHG/energy reduction in one building, and a national award with funding for its energy-efficient freezer program.

**Boston Medical Center (BMC)** partnered with MIT to enable construction of a 60-megawatt solar farm in North Carolina—the largest such project in the U.S. built through an alliance of diverse buyers. BMC buys 26% of the power, moving to carbon neutrality for energy in 2020.

BMC’s campus re-design and combined heat and power plant (CHP) save energy and millions, shifting dollars to patient care. The CHP powers BMC if the grid is down for extended periods, while also supporting the City of Boston’s emergency response communications infrastructure.

**Partners HealthCare** will be net carbon positive for energy by 2025. In 2018, 80% of their electricity came from zero emission generators. Renewable energy contracts for



Spaulding Hospital’s rehabilitation gardens double as storm surge barriers, protecting a raised ground floor. Photo: Copley Wolff Design Group

76.8 million kWh/year are the equivalent to taking 11,500 cars off the road annually.

Partners’ waterfront Spaulding Rehabilitation Hospital is lauded nationally as the “climate-resilient hospital of the future.” Among many innovations, rehabilitation gardens double as storm surge barriers, protecting a raised ground floor. Critical mechanical and power systems are in a rooftop penthouse. Operating windows enable passive ventilation, and storm water is captured and used.

**Newton-Wellesley Hospital’s** \$50 million mechanical, electrical, and plumbing upgrade included cooling towers, and building controls automation. These improved redundancy, while delivering electric consumption and demand reductions of 44%, and 51% respectively. Natural gas was reduced 40% compared to 2017, with more progress to come with completion of a 2.4 MW CHP plant.

#### SAMPLING OF MEMBER GOALS AND ACHIEVEMENTS

Institution	Climate Goal	Emissions Reductions
Beth Israel Deaconess Medical Center	25% reduction by 2020. Currently assessing capability to achieve net zero carbon by 2050.	Campus-wide 5.6% GHG reduction 2008–2018
Boston Medical Center	Carbon neutrality for all energy by 2020	Carbon emissions from energy reduced by over 90% 2011-2019
Dana Farber Cancer Institute	25% reduction by 2020. Currently assessing capability to achieve an 80% reduction in net carbon by 2050.	14.7% energy use & GHG reduction between 2009-2018
Partners HealthCare	100% neutralization of GHG emissions by 2025	Achieved system wide 25% energy use reduction between 2010-2019, new goal of 40% reduction by 2025