

Introduction

- 16 Member Institutions
- 2 Nationally Ranked Top 10 Academic Medical Centers
- MGH 1811, BWH 1832
- Principal Harvard Medical Teaching Affiliate
- Non-Profit Healthcare Organization
- 4,000 Licensed Beds
- 75,000 Employees
- Provides ~28% of all Healthcare Services in MA
 - 102,000 Inpatient Admissions (MGH&BWH)
 - 1,560,000 Outpatient Visits (MGH&BWH)
- World Leader in Hospital-based Medical Research
- \$2bn Annual Research Budget
- 2,700 Ongoing Clinical Trials



Mass General Brigham

General Root Problem

Unique Utility Needs

- Constant Outside Air Volumes
- Maintained Humidity
- High Purity Air Filtration
- High Temperature Sterilization
- Electric Power Quality
- High Utility Reliability

Minimizing GHG Emission Tools

- Energy Conservation
- Renewable Energy Procurement
- On-Site Generation

Healthcare Delivery is Complex & Energy Intensive
Higher Energy Consumption □ Higher GHG Emissions



Key Obstacles to Overcome

- Regulatory Compliance Challenges (State & Federal)
- Implementation in Existing Environments
- New Technology Adoption
- Reliability Concerns
- Increased Operational Risks
- Existing Physical Constraints
- Minimizing Impact on Cost of Care Delivery

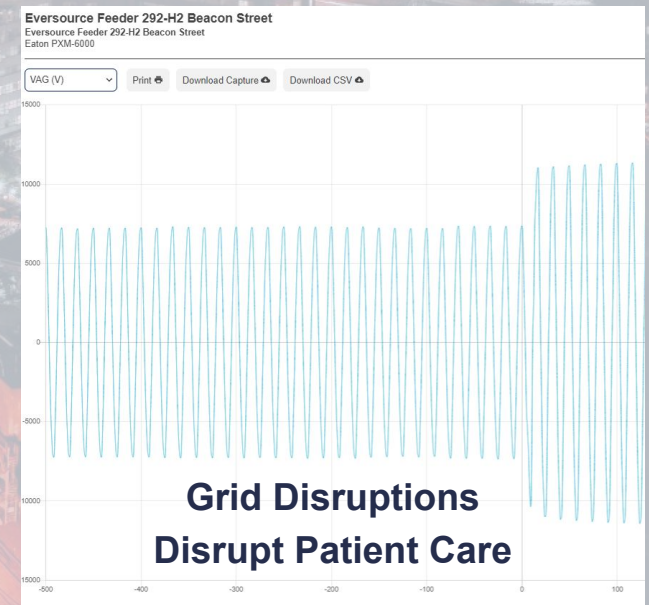


Benefits & Consequences

- Fuel switching (electrification) will reduce GHG emissions
- Fuel switching must be well planned and should not disrupt efforts to reduce the cost of care
- Reliance on a single utility type cannot adversely impact delivery of care

Thermal Electrical
System Annual Energy Consumption

Thermal Electrical
System Annual Energy Costs



Final Statement:

"Regarding Critical Infrastructure, Equity & Resilience, to achieve Boston's Carbon & Equity goals, a critical obstacle for Mass General Brigham to overcome is transitioning to lower GHG emissions while still being able to deliver high quality healthcare at a low cost."



Rendering of Integrated Care (iCare) Westborough