



Council for Sustainability of Campus Operations

Meeting Notes – May 3, 2021 Via Zoom

In Attendance: Ruth Bennett, Margot Biggin, Laura Ferguson, James Glaser, Lisa Halpert, Mike Howard (co-chair), Christine Lee, Jean Poteete, Cory Pouliot, Jianmin Qu, Ann Rappaport (co-chair), Barbara Stein, Tina Woolston

1. **Welcome.** This is the final meeting of the *Council for Sustainability of Campus Operations*. As discussed at prior meetings, a new charge and membership will be created with a strategic focus on university-wide sustainability.
2. **Council Review.** Tina Woolston discussed the Council's progress since its formation by President Monaco in 2016. Over the past five years, improvements in sustainability efforts have included outreach, education and engagement, establishment of financing mechanisms such as the Green Fund and the Revolving Fund, campus resilience assessments, renewable energy planning and planning for carbon neutrality.
3. **Campus Decarbonization Study.** Jean-Philippe (JP) Drouin of Ecosystem Energy Services discussed his work with Tufts over the past year in developing a decarbonization plan for the Medford/Somerville campus. JP's high-level overview (PPT attached) noted important factors and forecasting for greenhouse gas reduction at Tufts. Charts and graphs included:
 - University-wide carbon emissions use in FY19
 - GHG emissions and Energy Use Intensity (EUI) forecast for 2020-2050
 - Energy transition forecast for 2020-2050 shifting from fossil fuels:
 - Mostly natural gas, increasing renewable fuels and increasing efficiency.
 - Natural gas will never be fully eliminated (likely less than 20% will be remaining but carbon offsets could help achieve carbon neutrality).
 - Strategies for carbon neutrality reductions include:
 - Reducing wasted energy (more energy efficient systems) – 13%.
 - Optimizing district energy systems / converting steam to hot water – 7%.
 - Electrifying heating and heat pumps (which involves adapting all of the buildings, distribution and infrastructure for heating; highly efficient) – 32%.
 - Switching to alternative fuels (provides benefits, resiliency and redundancy to electric systems) – 8%.
 - Benefitting from the natural decarbonization of the grid – 20%.
 - Procuring renewable electricity and making use of carbon offsets – 20%.
 - Campus maps were reviewed highlighting carbon neutral heating infrastructure planning for the Medford/Somerville campus in years 2020, 2030 and 2050.

- Next steps involve incorporating goals into capital planning for major Medford/Somerville campus renovations and new facilities; targeting new term projects with positive net present value (NPV); implementing district energy systems' transition incrementally; and, creating renewable energy/carbon offset purchasing plan.
 - Discussions and long-term planning for the Grafton campus is being developed.
 - The Boston campus co-gen will impact Boston campus planning.

4. **Future Planning.** Tina Woolston and Ann Rappaport discussed STARS reporting and future planning.

- The [STARS Report](#) - The Sustainability Tracking, Assessment & Rating System (STARS) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance.
- This reporting tool is used by colleges and universities for benchmarking sustainability achievements against peer institutions.
- Benchmarking slides reflected Tufts' overall score against other participating universities.
 - Tufts' last self-reported submission was in March, 2019 and the university received a silver ranking.
 - The next update is currently being developed and expected to reflect improvements to data and reporting.
 - Tufts University STARS reporting data may be found at <https://reports.aashe.org/institutions/tufts-university-ma/report/>

5. **Thank you!** The co-chairs thanked the members of this Council for their time and contributions over the years. A new council will be established for the fall semester with a broader, more strategic focus on sustainability at Tufts. The charge and new membership are being finalized.

Mike Howard thanked Ann Rappaport for serving as council co-chair and acknowledged Ann's commitment to the environment, leadership in sustainability at Tufts and contributions to the Council. After many decades at the university, Ann will be retiring at the end of August.

Respectfully submitted,

Pamela Gratiano

Council for Sustainability of Campus Operations

May 2021

How far we've come

- Council for Sustainability of Campus Operations
 - Education and Engagement of Council Members
 - Financing Mechanisms – Revolving Fund, Green Fund
 - Resilience Assessments
 - Decarbonization plan for M/S campus
 - Peer review

MORE THAN GHG REDUCTION

Academics/Mission

- High-quality teaching and learning environment
- Campus as a living lab
- Sustainability leader status

Sustainability/Energy

- Conservation first
- EUI targets and energy mgmt. plan

Financial/Procurement

- Assessment tools
- Risk mitigation

Capital Planning

- Leverage capital plan funding
- Robust policies and standards



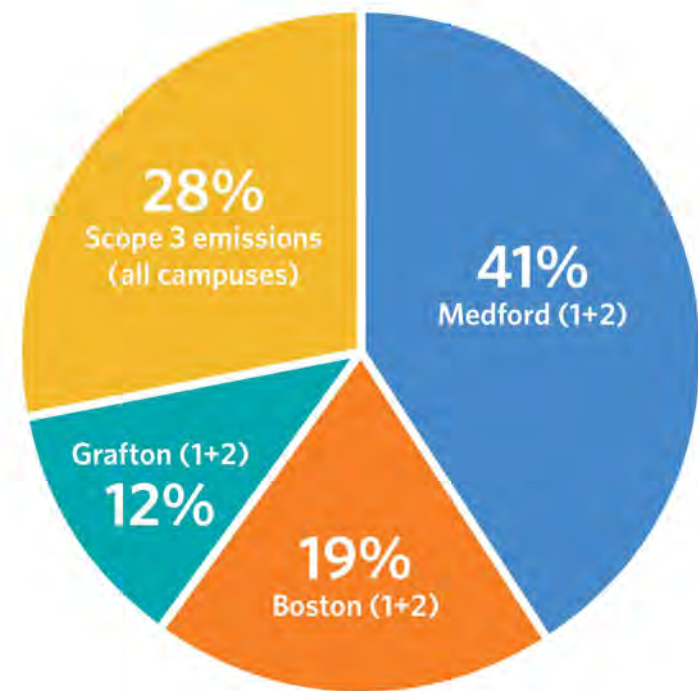
CARBON EMISSIONS UNIVERSITY WIDE – FY19

Total Emissions University Wide =

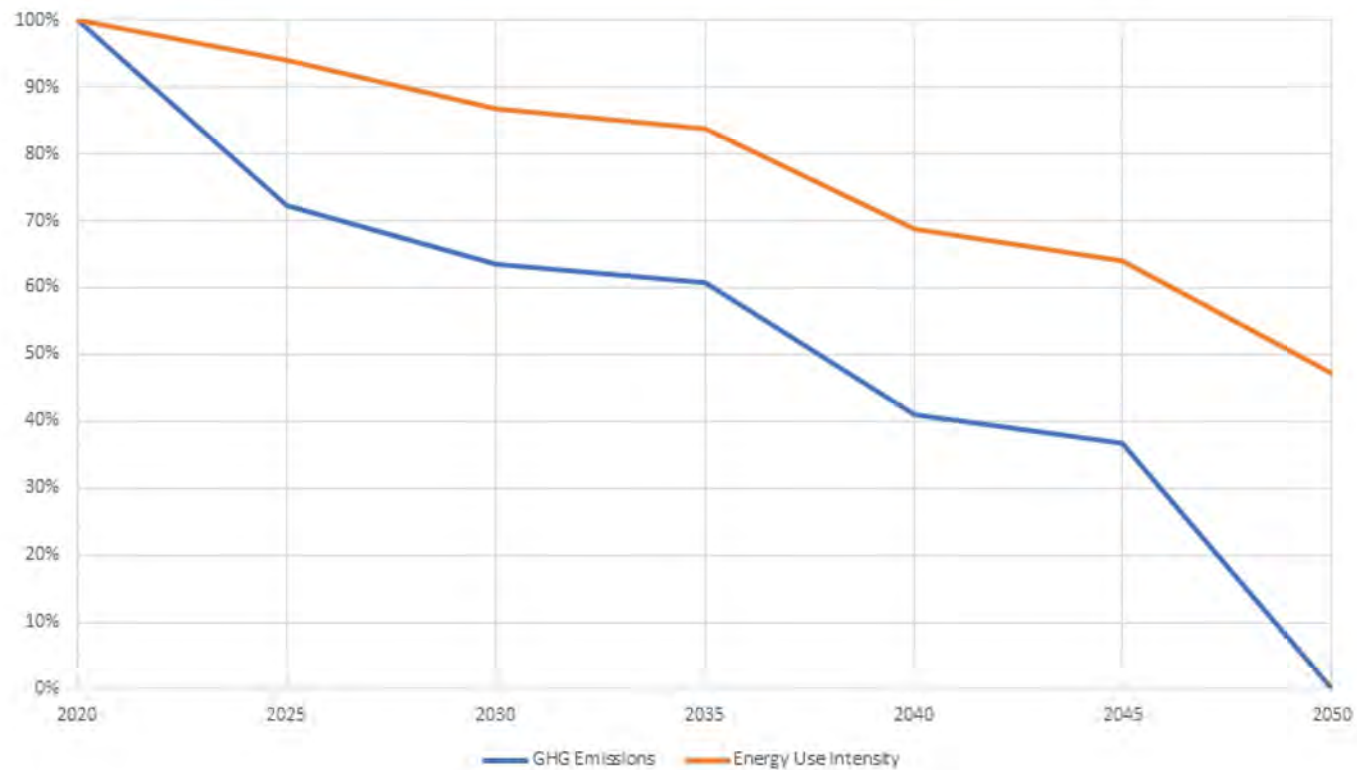
- 12,000 cars driven for one year
- (61,091 Metric Tons CO₂ Equivalent)

Medford on-campus emissions in buildings (blue slice) =

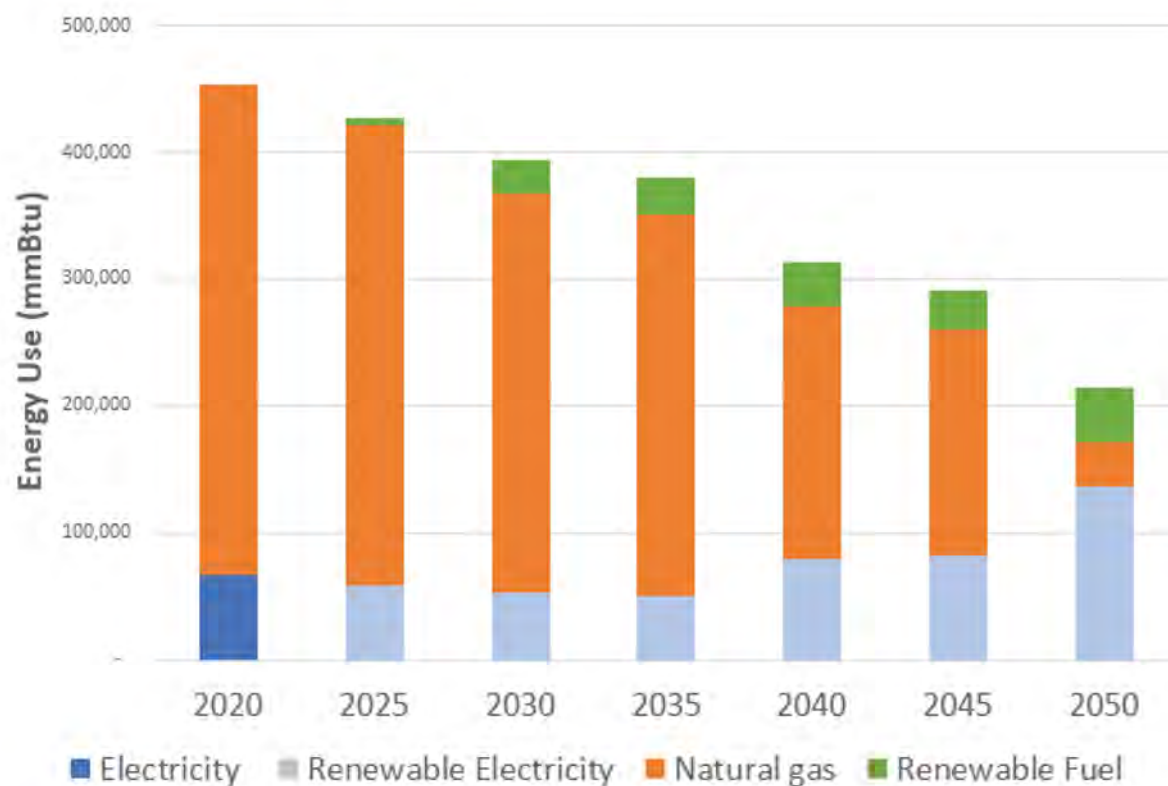
- 5,600 cars driven for one year
- (24,652 Metric Tons CO₂ Equivalent)



THE RESULTS: GHG AND EUI REDUCTION FORECAST



THE ENERGY TRANSITION: AWAY FROM FOSSIL FUELS



STRATEGIES FOR CARBON NEUTRALITY

#1

Reduce wasted energy (13%)

#2

Optimize district energy systems /
convert steam to hot water (7%)

#3

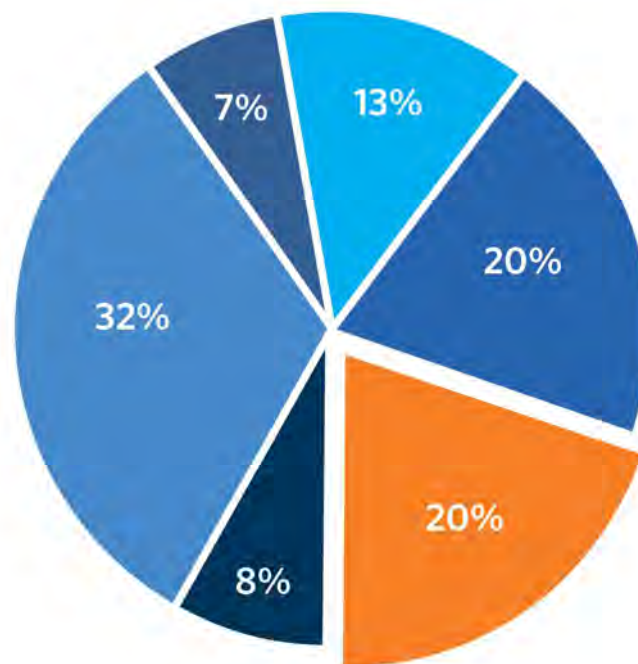
Electrify heating with heat pumps (32%)

#4

Switch to alternative fuels (8%)

#5

Benefit from the natural
decarbonization of the grid (20%)

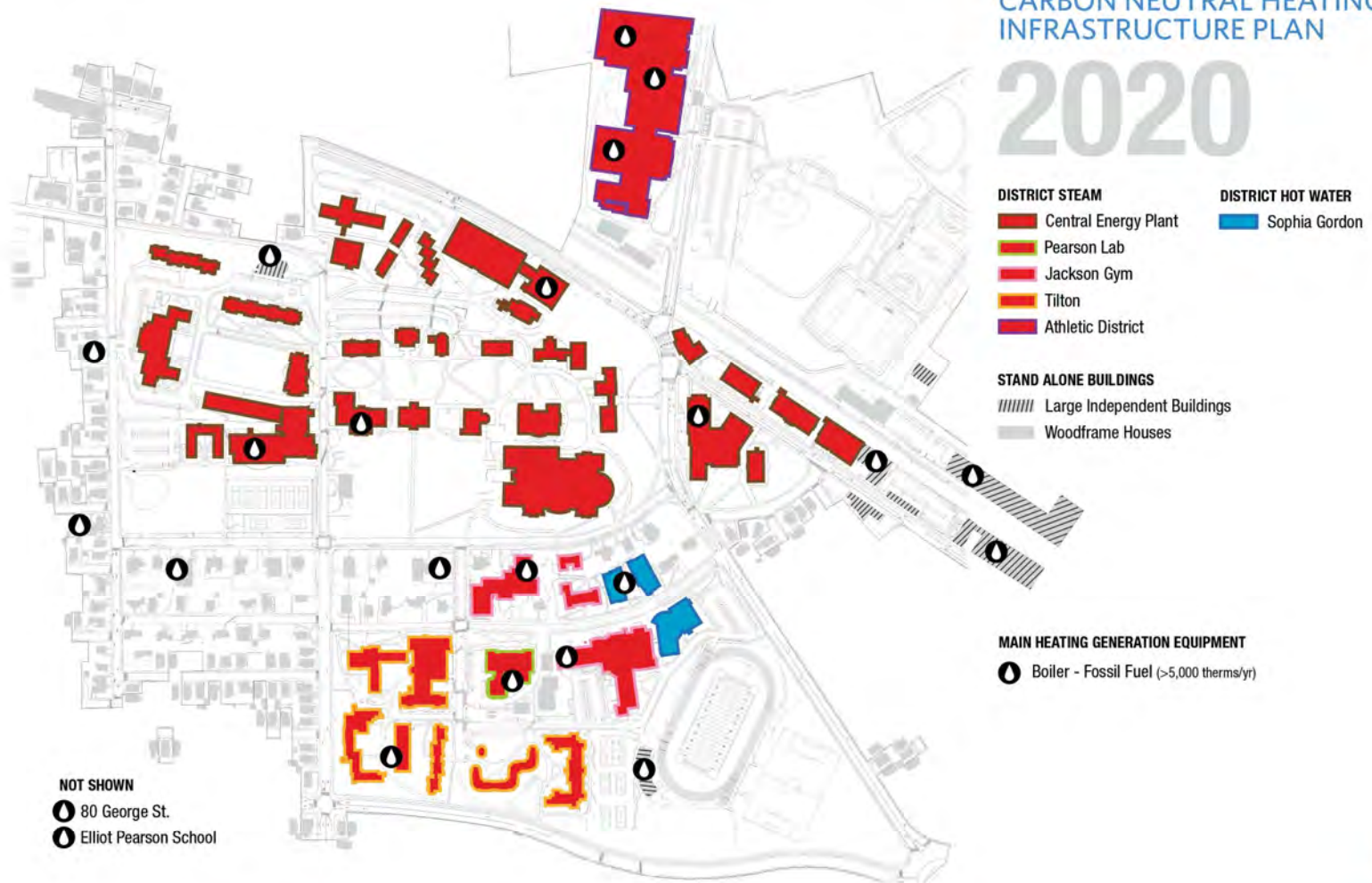


#6

Procure renewable electricity and
make use of carbon offsets (20%)

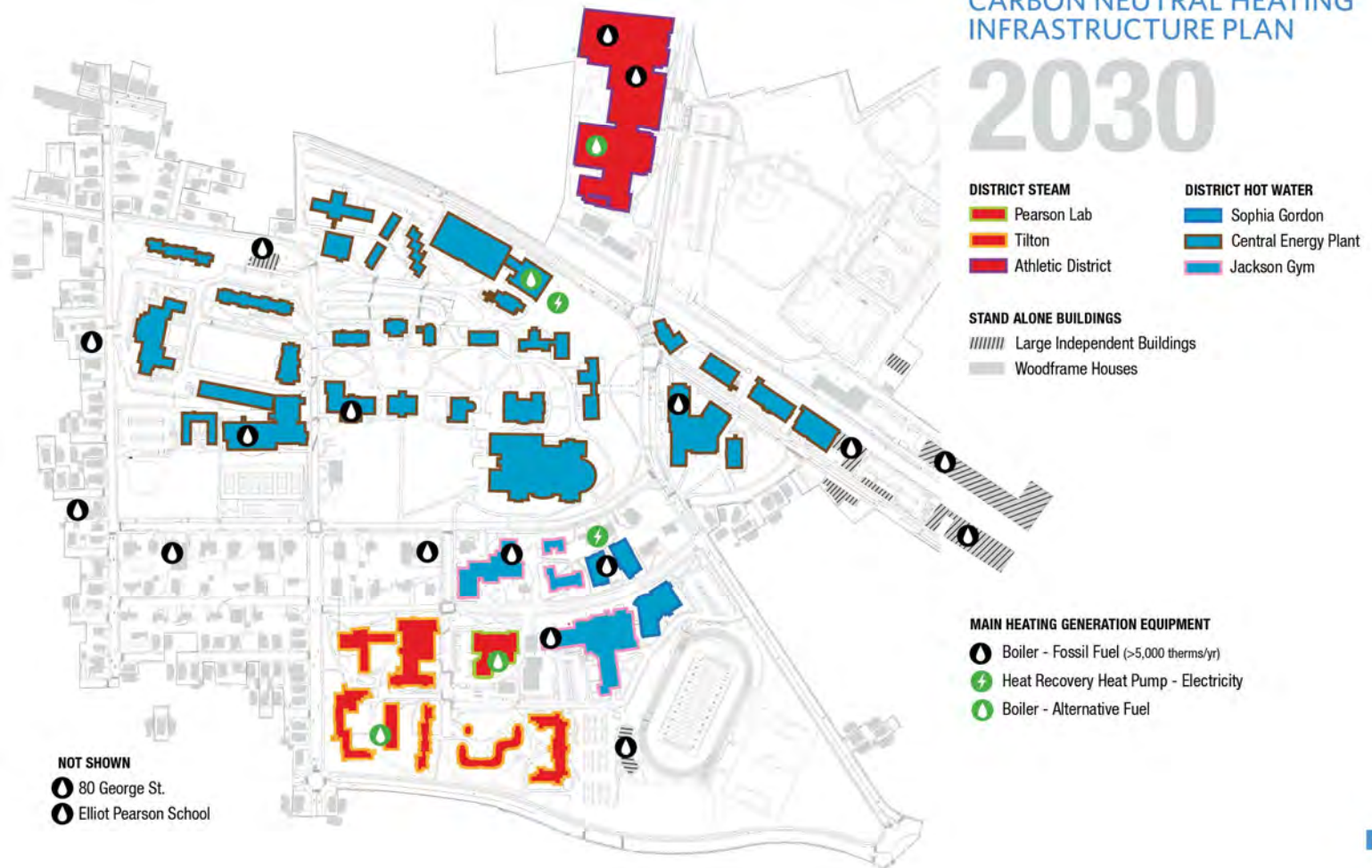
CARBON NEUTRAL HEATING INFRASTRUCTURE PLAN

2020



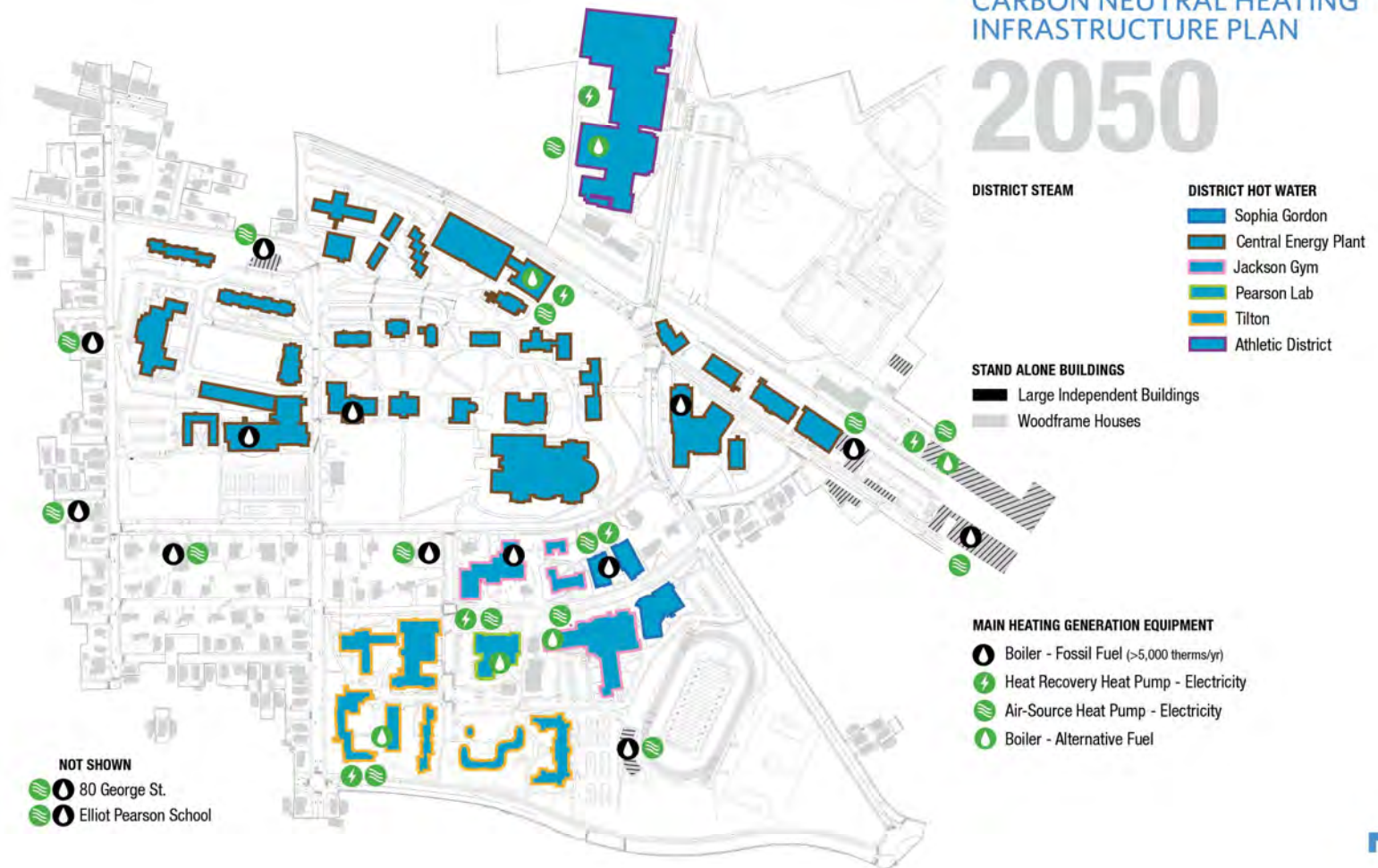
CARBON NEUTRAL HEATING INFRASTRUCTURE PLAN

2030



CARBON NEUTRAL HEATING INFRASTRUCTURE PLAN

2050



NEXT STEPS – INCORPORATE INTO CAPITAL PLAN

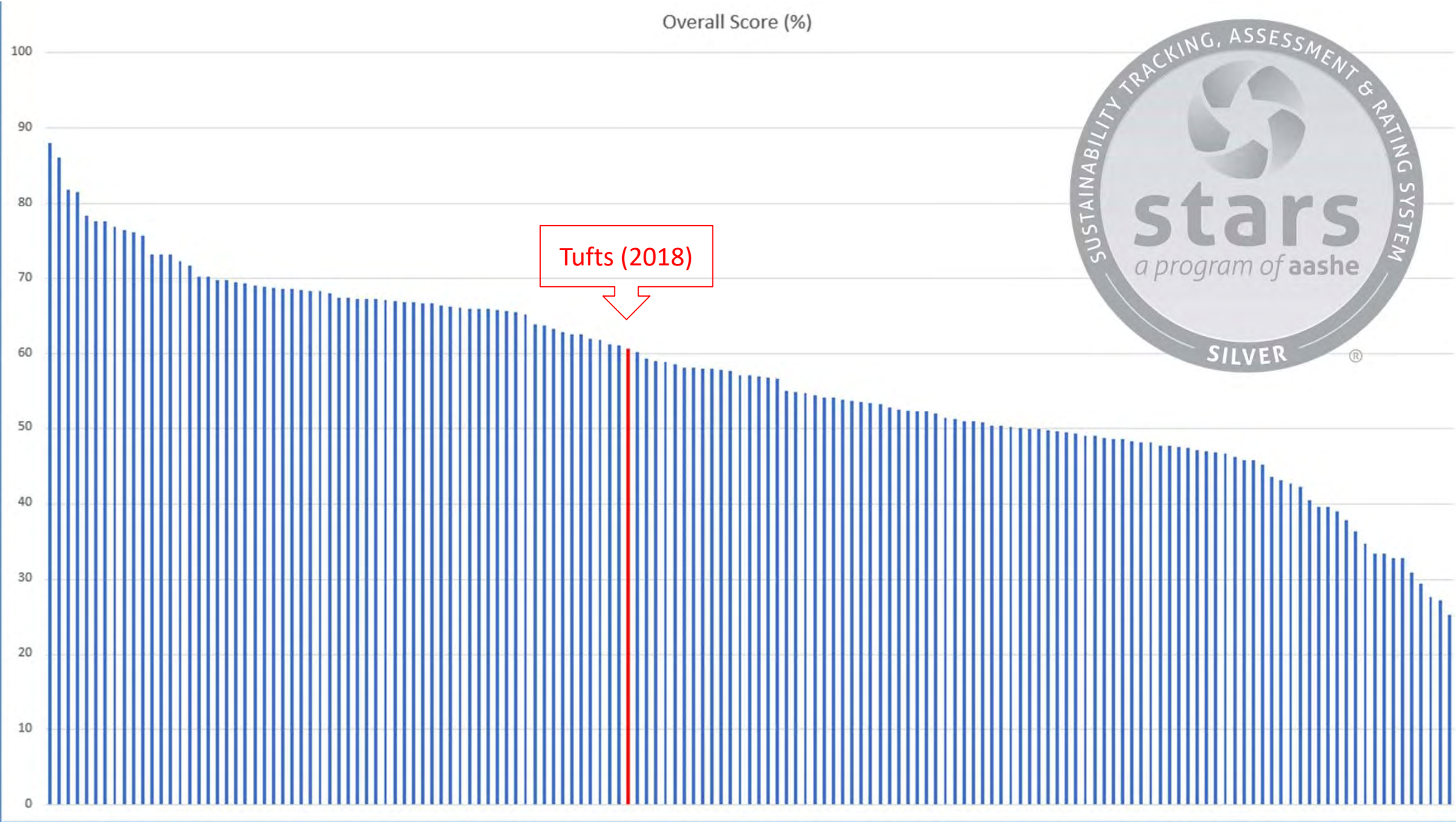
- **Major M/S Campus Renovations and New Facilities | Strategies #1-2**
 - New Residence Hall, Dewick, Eaton, Halligan, 4 Colby, Anderson, Bacon, etc.
- **Targeted near-term (2 yr) projects with positive NPV | Strategies #1-2-3**
 - SoGo, Granoff, Pearson, Jackson Gym, Campus Center, Carmichael, CEP
- **Implement district energy systems transition incrementally | Strategy #2**
- **Create renewable energy/carbon offset purchasing plan | Strategy #6**
 - Working with a consultant to prioritize University goals

Opportunities for the Future

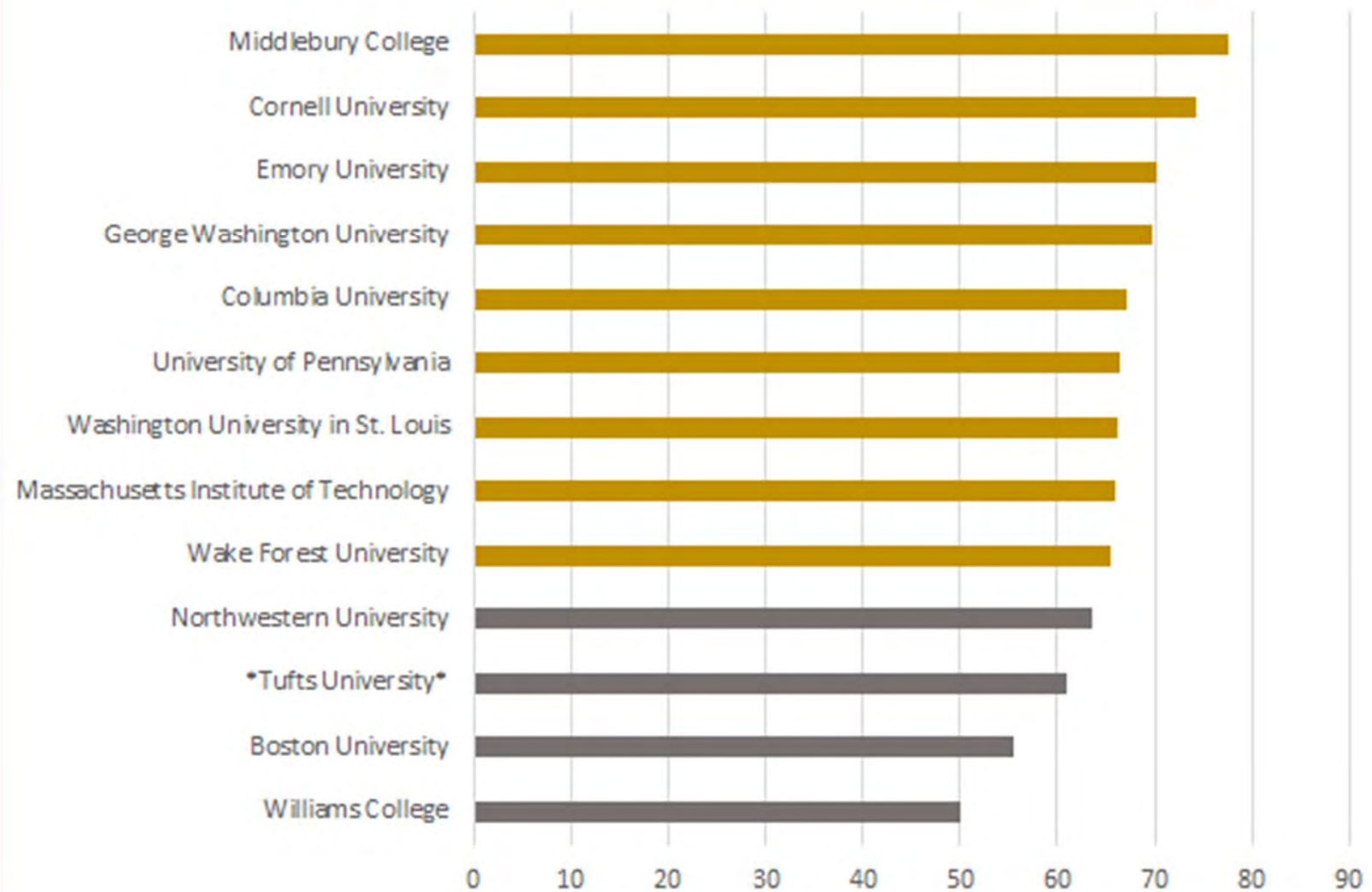
Overall Score (%)



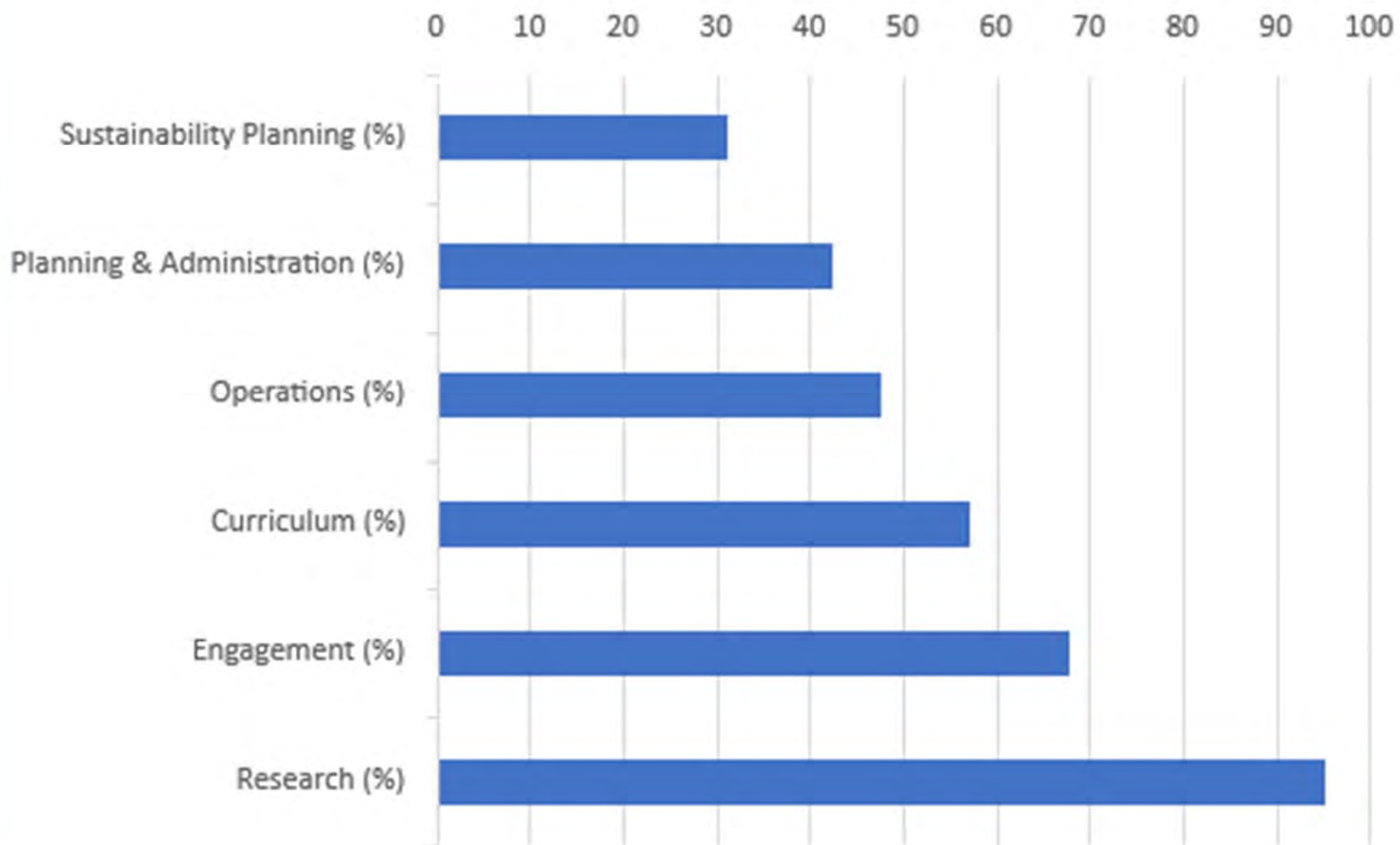
Tufts (2018)



STARS Overall score 2017/18



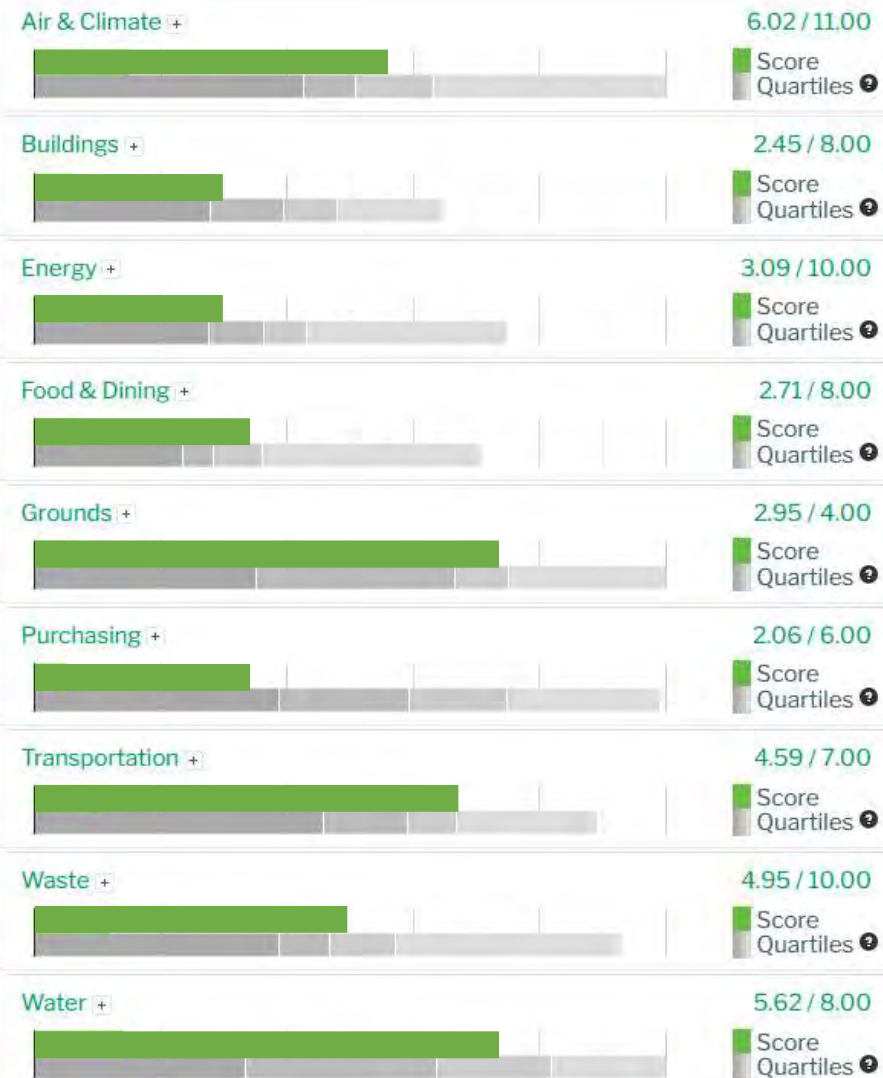
STARS 2018



STARS 2018 Benchmarking

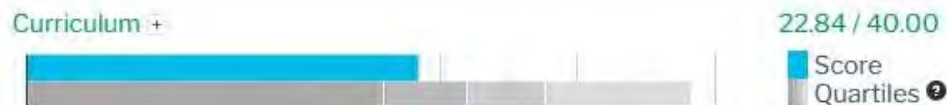


Operations



STARS 2018 Benchmarking

Academics



Engagement



Planning & Administration



Innovation & Leadership



Credit	Status	Points
Certified Green Cleaning	✓ Complete	0.50 / 0.50
Sustainable Dining Certification	✓ Complete	0.50 / 0.50
Adjunct Faculty Compensation	✓ Complete	0.50 / 0.50
Campus Pride Index	✓ Complete	0.50 / 0.50

STARS Gap Analysis – Planning & Governance

- **Lack of published plans with measurable objectives**
- No staff senate equivalent, no representation on BoT
- No written policy and procedure for engaging the local community in land use planning and capital investment
- No committee on investor responsibility, positive impact investment, investment disclosure
- Contractor compensation unknown
- No employee satisfaction survey

Future Plans

- New Council – broader focus, including academics
 - Mission: set direction and some priorities for next few years
 - More faculty, student representatives, but maintain size
-
- Positive response from senior administrators

Council Charge

The council, made up of **thought leaders**, helps Tufts select **effective, impactful goals** and strategies leading to a sustainable university that serves current and future students and employees equally while supporting the health and wellbeing of all of humanity and our home planet.

Its goal is to:

1. **Facilitate collaboration** through
 1. Exploring the more impactful and attainable ways to **integrate sustainability** into school, division, and university priorities
 2. Using its **leadership position** to look across the university and link the disparate sustainability efforts together into a cohesive whole.
2. **Shape the vision**, key principles, focus areas, and, ultimately, plan for sustainability and climate action at Tufts, including reaffirming existing or developing new principles for decision making.
3. Hold an understanding of what Tufts is doing university wide regarding sustainability, enabling a **unified message** about the breadth and depth of Tufts actions in this area.

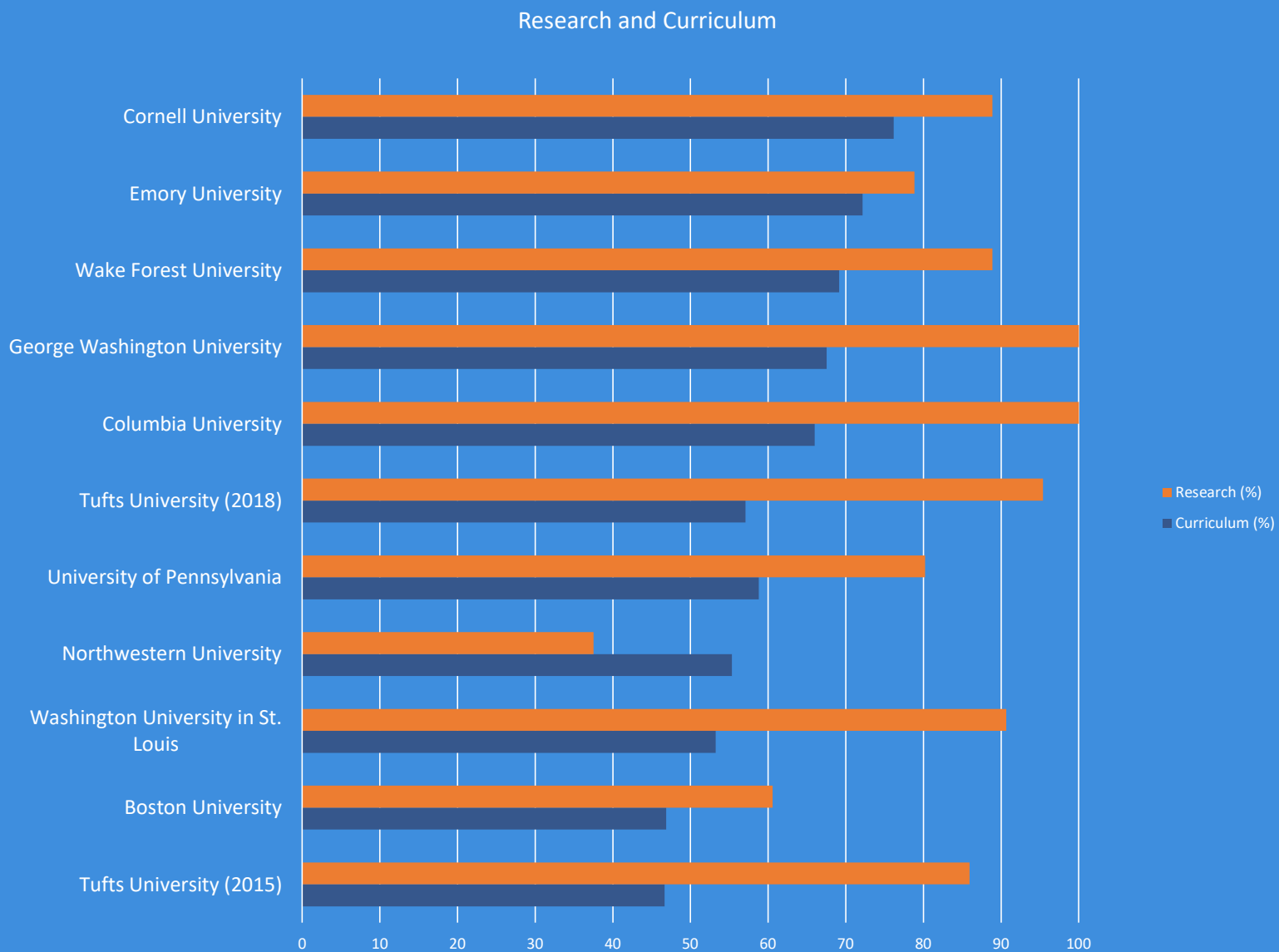
Current Focus

- Renewable Energy purchasing priorities
 - Consultant & engagement
- Sustainability plan with University Sustainability Council
- Transportation Plan – fleet, TDM, charging stations
- Decarbonization plans for M/S and Grafton
- Task Force for Energy and the Environment

THANK YOU!



Tufts compared to Peers



Where have we improved?

- Research
- Curriculum

