



# Sustainability and Climate Action Planning: Empowering Our Champions

Dr. Dann Sklarew *Professor, Environmental Science and Policy*

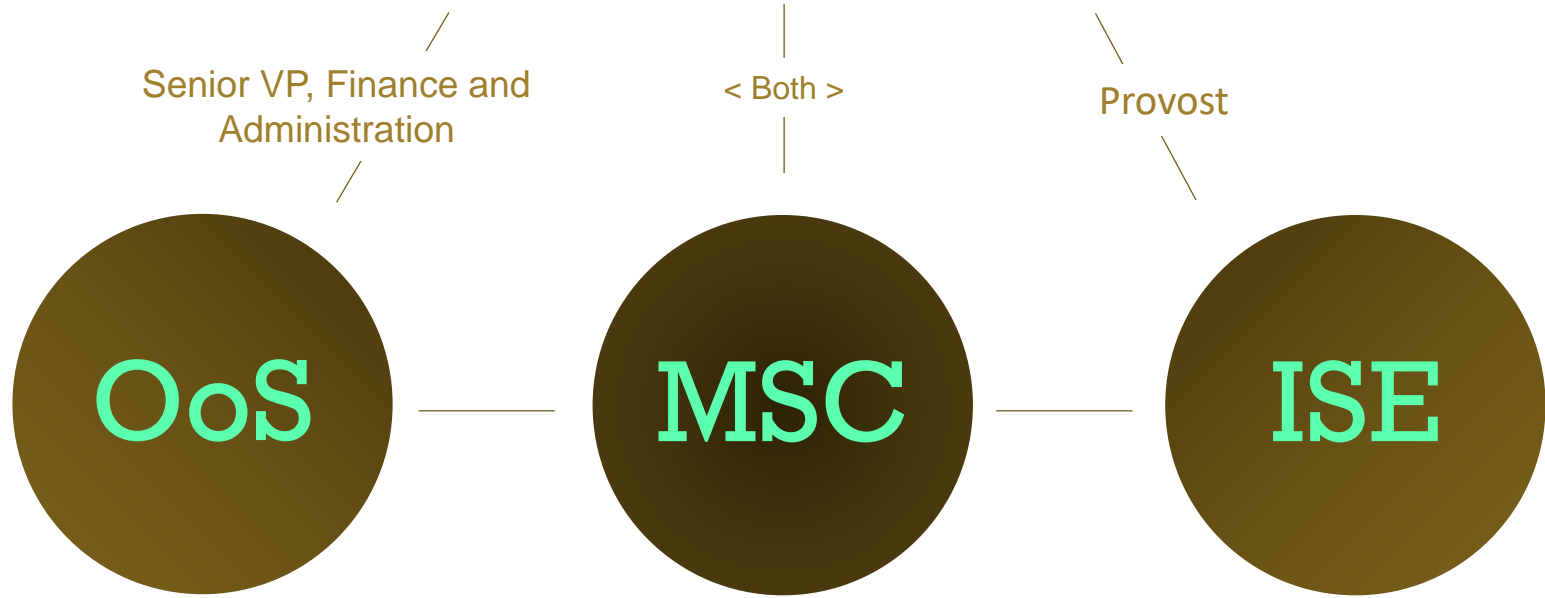
Greg Farley *Director, University Sustainability*

November 15, 2021





Complex, campus-wide  
**EFFORT TO 'GREEN' MASON**  
*(e.g., Sus. Strategic Plan & CAP, curriculum development, SDG alignment, campus-wide programs like "Sustainable Mason," green policy development, campus as a living lab, etc.)*



- Operations & Policy
- Engagement
- Institutional Sustainability Metrics, Reporting and Planning

- Vision
- Institutional Commitment
- Coordinates, Accelerates, and Amplifies Green Policy, Research, and Projects

- Research & Scholarship
- Curriculum
- Academic Sustainability Reporting and Planning

# MSC Sustainability Action Plan (in development)

## Establishment of Guiding Principles & Goals

### Mason's 5 Guiding Principles for Sustainability

1. Center social and environmental justice at the heart of Mason sustainability.
2. Foster an engaging culture of sustainability inclusive of all members of the Mason community and fundamental to the values of our graduates.
3. Ground all Mason decisions – operational, academic, and co-/extracurricular – in sustainability, and ensure transparency and accountability.
4. Mitigate our impact on the global climate and local environments, while prioritizing resilience and resource responsibility.
5. Strive to be a recognized local, national, and world leader for our excellence in sustainability.



**THE GLOBAL GOALS**  
For Sustainable Development



# Mason's Climate Commitments

2007: Pres. Merten signs [Second Nature Climate Commitment](#) (ACUPCC)  
→ carbon neutrality by 2050

2007: [Board of Visitors pledges LEED](#) Silver+ standard for new buildings.

2010: 1<sup>st</sup> [Climate Action Plan \(CAP\)](#) → -50% energy intensity & -20% net GHG by 2020

2014: Natural resource stewardship as core value in 2024 [Strategic Plan](#)

2015: Pres. Cabrera signs White House's [American Campuses Act on Climate initiative](#).

2019: Pres. Holton re-commits to carbon neutrality by 2050 + new CAP w/benchmarks.  
at student-led ['Fridays for Future' climate change rally](#).

2020: Pres. Washington signs ["America Is Still In,"](#) >1,500 orgs for US net-zero by 2050.

2022: Renewable to power 30% of VA government electricity, per VA EO 43 (2019).



**THE GLOBAL GOALS**  
For Sustainable Development



# Mason's Follow Through

2007: [Office of Sustainability](#) launched, in part, to pursue ACUPCC.

2008: 1<sup>st</sup> annual [Greenhouse Gas \(GHG\) Inventory](#).

2009: \$16.7 mil. for energy & water efficiency saves \$2.5 mil./yr.

2009: [Capital projects](#) drop yearly GHGs by 20,505 metric tons.

2010: 1<sup>st</sup> [Climate Action Plan](#)

2011: [Transportation Master Plan](#) w/alternative transport focus

2013: Environmental Standards added to [Design Info. Manual](#)

2014: New facility energy management system saves \$\$\$\$.

2020: ~90,000 square feet converted to LEDs.

2021: [Climate Neutrality Task Force](#) launch for Phase 1 CAP in 2022

# Climate Communication Survey (2007)

- 90% of 3,500 surveyed would be pleased if Mason reduced GHG emissions
- 11% self-identified “climate champions” (>1% of student body)

## MASON IS TAKING CLIMATE ACTION

- **INVESTING IN ENERGY EFFICIENCY**
  - MASON IS ALREADY SAVING MORE THAN \$1 MILLION IN ENERGY COSTS EVERY YEAR BECAUSE OF INVESTMENTS IN ENERGY EFFICIENCY.
- **PROVIDING TRANSPORTATION OPTIONS**
  - MASON IS WORKING TO MAKE PUBLIC TRANSPORTATION, CARPOOLING, BICYCLING, AND WALKING BETTER OPTIONS FOR THE MASON COMMUNITY.
  - SEE [TRANSPORTATION.GMU.EDU](http://TRANSPORTATION.GMU.EDU) FOR SHUTTLE SCHEDULES AND MORE.
- **BUILDING GREENER BUILDINGS**
  - MASON NOW HAS POLICIES THAT ALL NEW BUILDING WILL BE BUILT TO GREEN STANDARDS. THE VOLGENAU IT&E BUILDING AT FAIRFAX AND THE NEW BUILDING AT ARLINGTON WILL BE THE FIRST GREEN BUILDINGS.
- LEARN MORE AT [GREEN.GMU.EDU/CLIMATE](http://GREEN.GMU.EDU/CLIMATE)



### YOU CAN HELP WITH SEVEN SIMPLE STEPS:

1. TURN OFF LIGHTS ETC.
2. SHORTEN YOUR SHOWER.
3. DRESS FOR THE SEASON AND ADJUST YOUR THERMOSTAT.
4. REDUCE-REUSE-RECYCLE
5. EAT LESS MEAT AND MORE LOCAL FOODS.
6. AVOID THE DRIVE.
7. GET ACTIVE, TAKE A CLASS, TALK TO OTHERS.

FOR T-SHIRT INFORMATION, CONTACT CARRIE MEYER, [CMEYER@GMU.EDU](mailto:CMEYER@GMU.EDU)



Student climate champion  
Lenna Storm  
hired as 1st  
sust. coord.

Faculty & staff help to enable

# Roles for Student Climate Champions

GEORGE MASON UNIVERSITY



## ADVOCATE

Sarah-Jane Dean  
Native Speaker at  
Fridays for Future



## SCHOLAR

Maheen Aziz  
Climate Action  
Researcher



## WRITER

Robert Johnson  
GHG Inventory &  
CAP co-Author

Climate Champions



Fairfax Campus



Arlington Campus



Prince William Campus

## Climate Champions



## Types of CAP recommendations\*

1. Efficiency Strategies
2. Updated Building Design Info. Manual
3. Renewable Energy Generation Strategies
4. Transportation Emissions Reduction Strat.
5. Waste Minimization and Recycling Strategy
6. Communications and Education Strategy
7. Dedicated Funding Strategies
8. Integrate Goals w/Master Planning Process
9. Offset Strategies

\* Policies, quantifiable projects, and research priorities were developed for each type.





Fairfax Campus



Arlington Campus



Prince William Campus

# GEORGE MASON UNIVERSITY

## CLIMATE ACTION PLAN

### JANUARY 2010 – DECEMBER 2011

**SETTING CARBON REDUCTION GOALS .....11**

2012 – BUILDING THE FOUNDATION..... 11

2014 – EMISSIONS STABLE AT 2006 LEVELS, ENERGY INTENSITY DOWN BY 10% FROM 2006..... 12

2020 – 50% ENERGY INTENSITY REDUCTION FROM 2006 LEVELS, 20% REDUCTION IN NET EMISSIONS ..... 12

2050 – CLIMATE NEUTRALITY ..... 12

INDICATORS OF SUCCESS..... 13

**CLIMATE ACTION STRATEGIES – JANUARY 2010 - DECEMBER 2011 .....13**

BUILDING THE FOUNDATION - MANAGING ONGOING EMISSIONS REDUCTION EFFORTS ..... 13

TARGETED STRATEGIES TO REDUCE EMISSIONS ..... 15

**NEXT STEPS .....19**

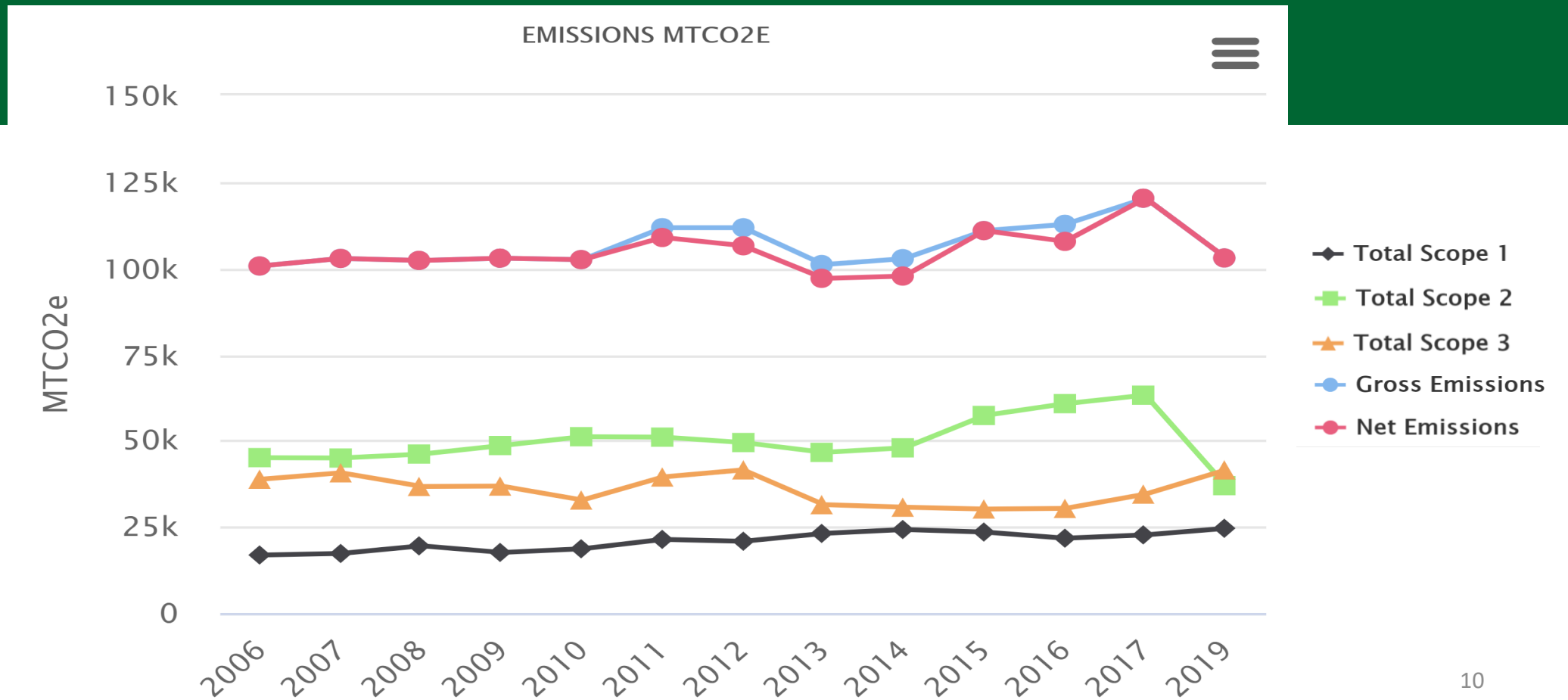
#### Types of CAP recommendations\*

1. Efficiency Strategies
2. Updated Building Design Info. Manual
3. Renewable Energy Generation Strategies
4. Transportation Emissions Reduction Strat.
5. Waste Minimization and Recycling Strategy
6. Communications and Education Strategy
7. Dedicated Funding Strategies
8. Integrate Goals w/Master Planning Process
9. Offset Strategies

\* Policies, quantifiable projects, and research priorities were developed for each type.

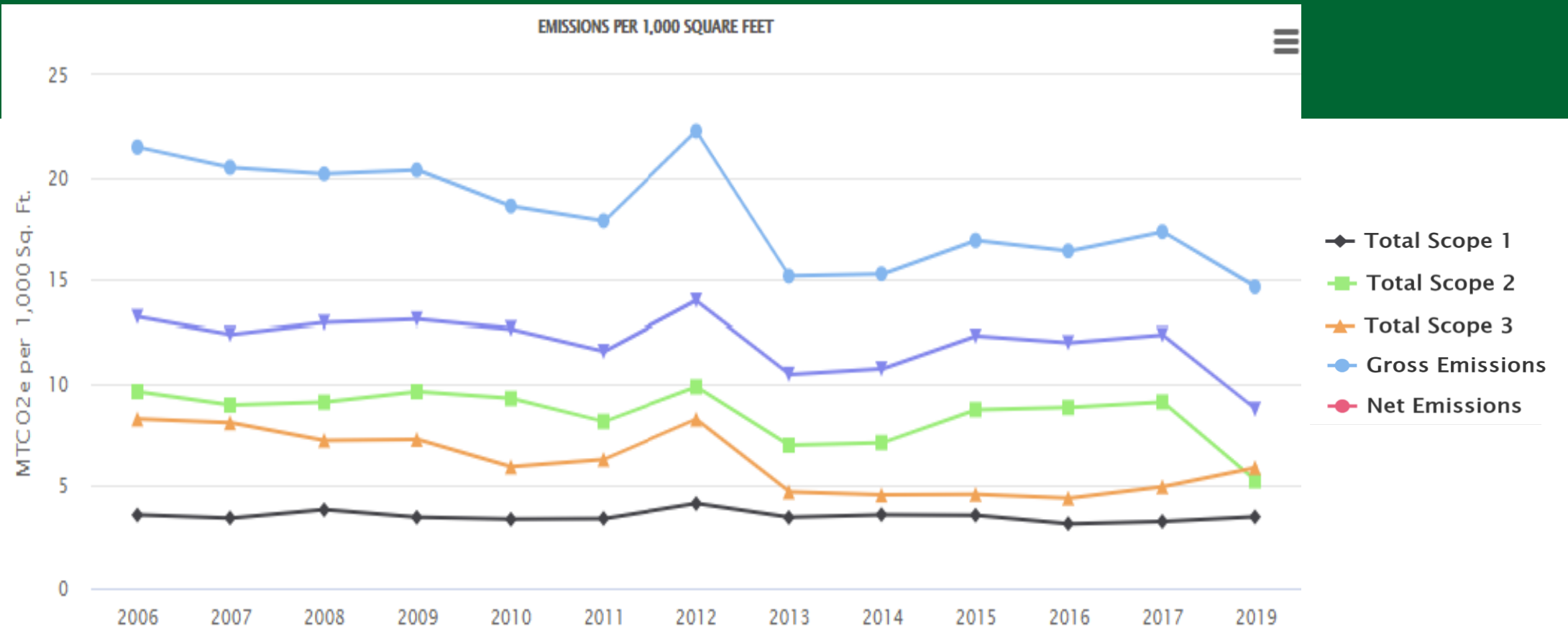
# Mason's Carbon Footprint

FY2006 – FY2019 (grew w/enrollment)



# Mason's Carbon Footprint, per 1,000 SF

## FY2006 – FY2019 (32% decline)

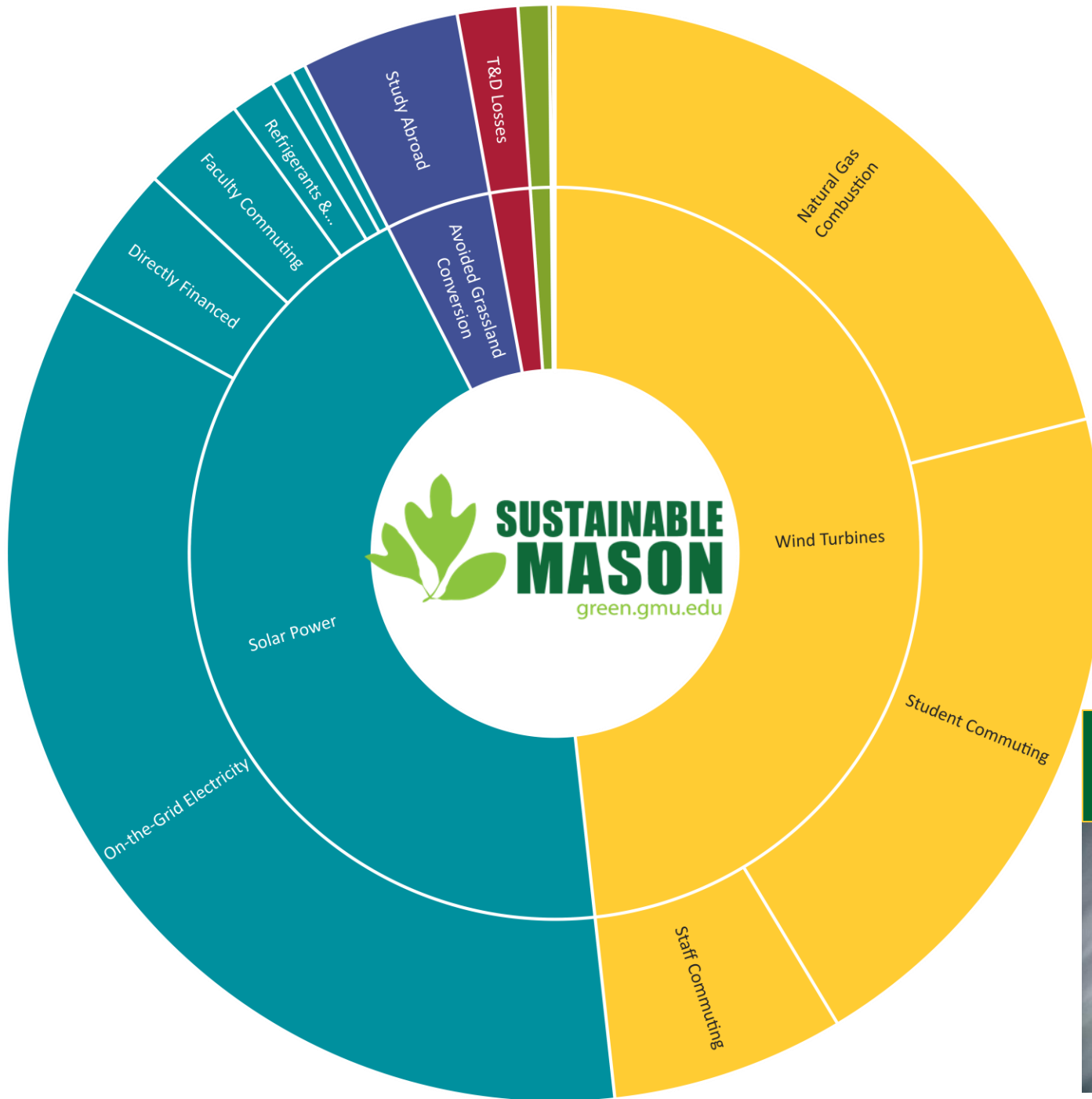




Climate Champions

# Mason Students' Climate Rally (2019)

# Students' Top Strategy to Reach Carbon Neutrality by 2030



- Wind Turbines
- Solar Power
- Avoided Grassland Conversion
- Conversion of Cropfields to Grassland
- On-Campus Afforestation
- Renewable Natural Gas
- Forest Preservation



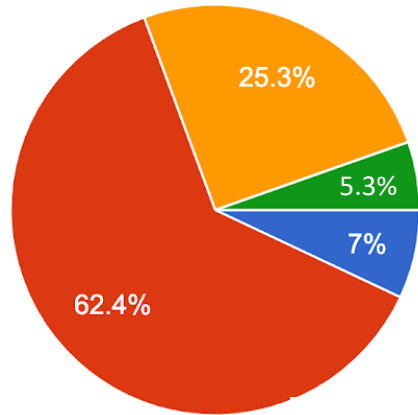
## Climate Champion



**Suzanne Grand Pré, lead author, students' Climate Action Plan 2021 (> 500 pages!)**

- 1. Carbon Neutrality by 2030**  
(est. \$ < 1% of Mason budget/y x 10 y)
- 2. Net Zero GHG Emissions by 2040**
- 3. Carbon Sink for GHGs by 2050**

Do you think George Mason University is practicing sustainable solutions to stop climate change?  
186 responses



- Not at all
- Somewhat
- Moderately
- Actively

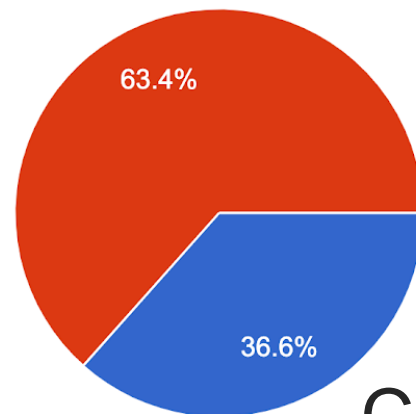
# Undergrads Survey 186 Peers

(Nov. 2021)



Are you aware of any actions on Mason's campus which could be better done to promote climate action?

186 responses



- Yes
- No

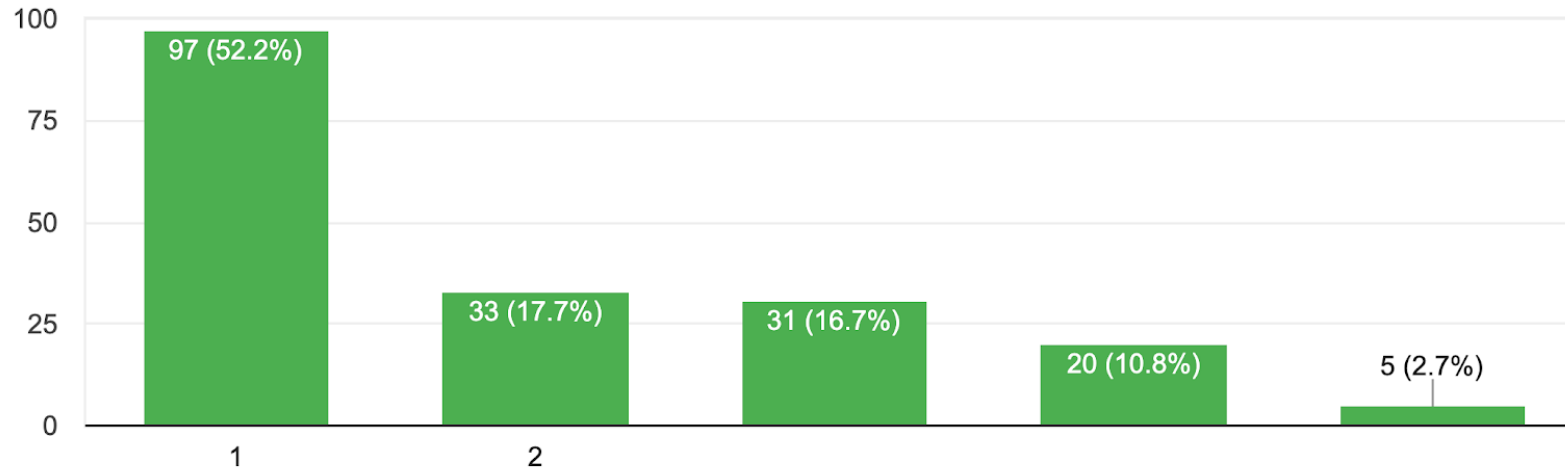
36%  
Climate  
Champions!

# Undergrads Survey 186 Peers

(Nov. 2021)

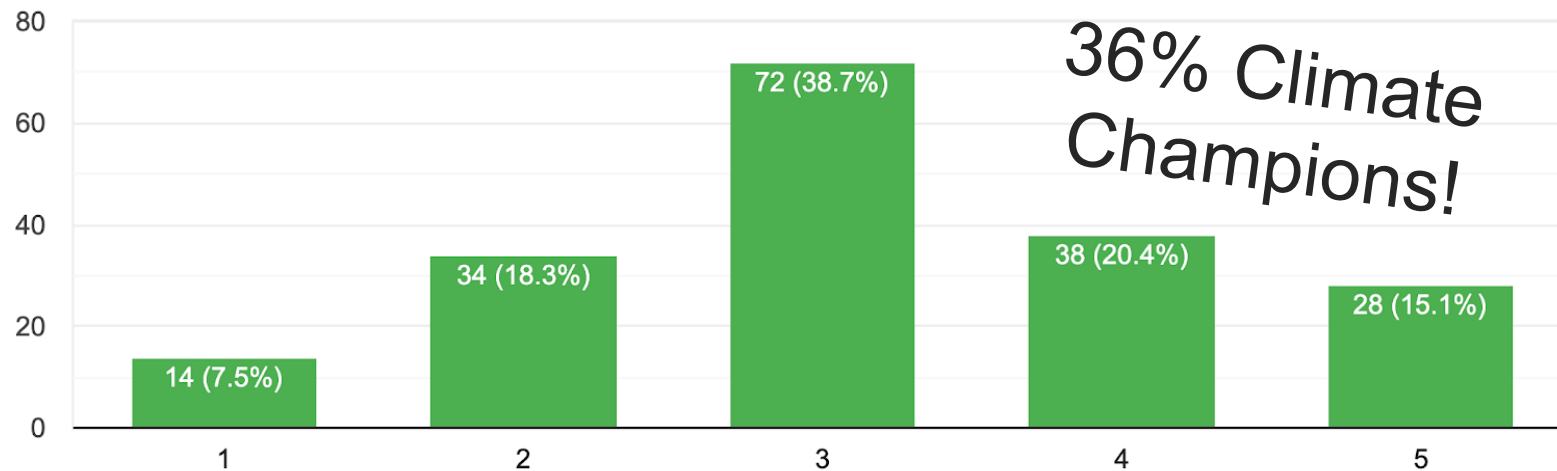
How familiar are you with George Mason's Climate Action Plan?

186 responses



How likely are you to get involved with the university's climate plan?

186 responses



Source: Kyle Ellingsen, Olivia Garcia & Laura Scudder

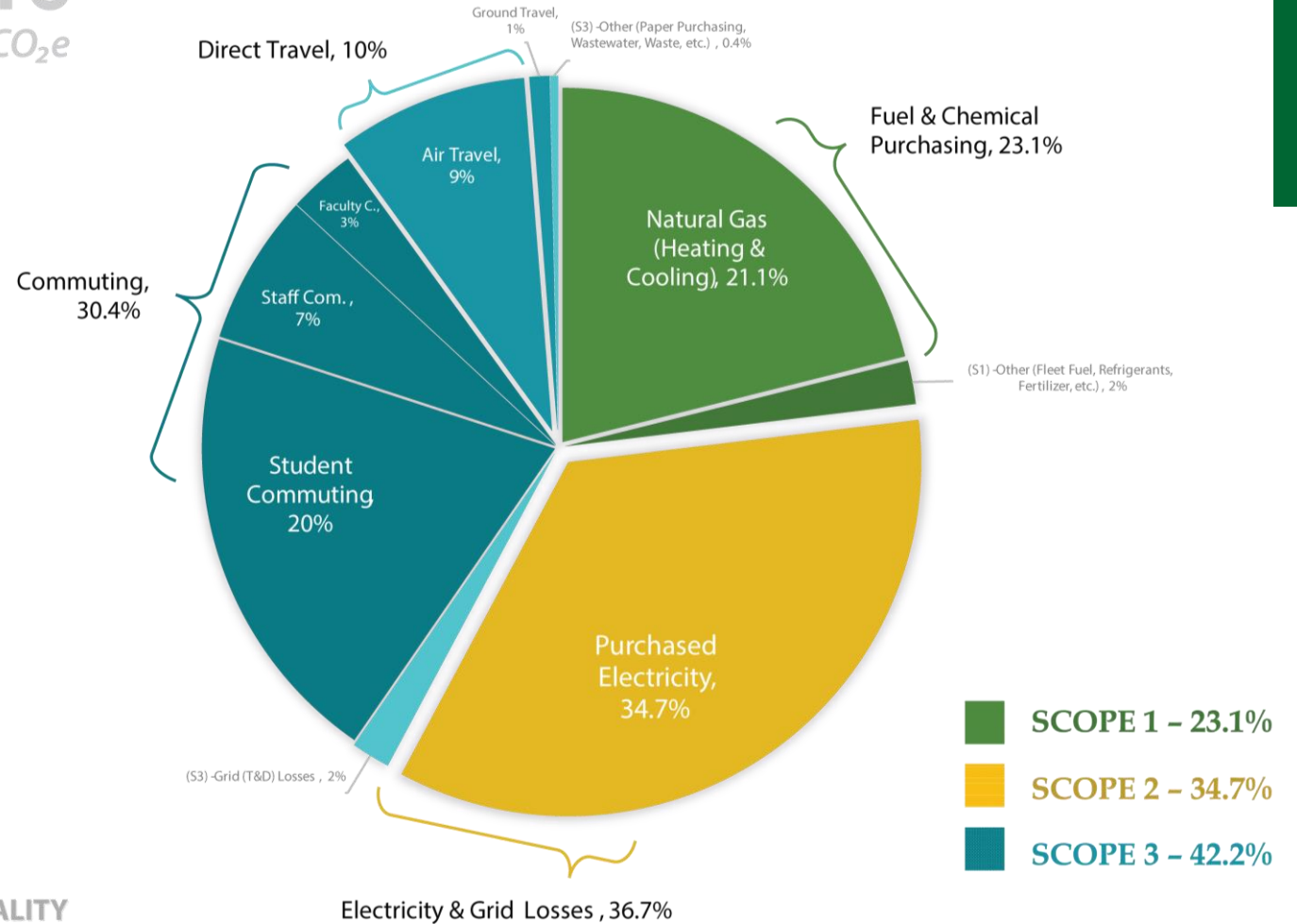
# Mason's Carbon Footprint

FY2019

106,216  
metric tons CO<sub>2</sub>e



TARGET:  
CARBON NEUTRALITY





# New Climate Action Planning

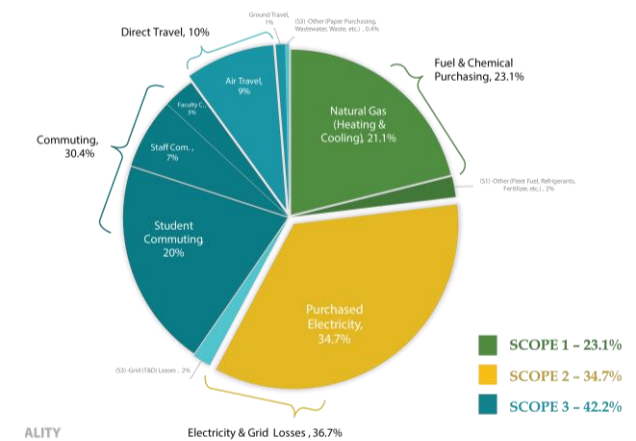
Beginning October, 2021

Phase I: by April 2022

Phase II: after Phase I

## Carbon Neutrality Task Force:

- 20 faculty, staff, students & alumni champs
- Alignment with science, higher ed. best practices, localities' & regional CAPs
- Consulting team hired to lead the process
- Town halls get community champs' insights





**THE GLOBAL GOALS**  
For Sustainable Development



# Climate Action Plan Values



- Environmental Justice, the well-being of all people and nature everywhere
- Viable economies and ecosystems upon which wellness relies
- Restoration and protection of nature
- Aligning with the United Nations' Global Goals for Sustainable Development
- Decoupling human development from greenhouse gas emissions due to:
  - Fossil-generated energy
  - Land cover change
  - Certain food and waste practices
  - Other pollution sources
- Learning, inquiry, and creativity, as a destabilizing climate threatens all these endeavors
- Honoring George Mason University, for its efficiency, and its pivotal role in understanding, modeling, and teaching how to thrive in harmony with each other and our shared planet



# Conclusions

## Sustainability Strategy

**WE ARE  
STILL IN**

- Lead with our values
- Empower students (and other key stakeholders) to be climate champions
- Plan for sustainability (and resilience!) and growth
- Develop Climate Action Plan in phases
- Prioritize actions to reduce carbon & GHG emissions
- Develop strategies for energy, water, waste, curriculum, research, etc.
- Fully embrace sustainability culture & foster champs across the university

