Nathan King called the meeting to order at 2:00 pm. A quorum was present.

1. **Adoption of Agenda**

A motion was made and seconded to adopt the agenda. The motion carried.

2. **Announcement of approval and posting of minutes of February 27, 2023 and Membership Updates**

Nathan noted that the February minutes have been voted on electronically and can be publicly accessed on the Governance Information System on the Web (https://governance.vt.edu).

He also shared the following membership updates:
Welcome to new member Emily Williams. Emily is the new Sustainability Manager for Dining and Housing and is an ex-officio member.

3. **Presentation**

Matt Stolte (Director of Engineering Services), Nam Nguyen (Senior Director of Electric Services and Deputy to the AVP for Infrastructure), and Emily Vollmer (Sustainability Coordinator, Office of Sustainability) gave presentations that covered all agenda items for the committee meeting (attached).

4. **Open Discussion**

- VT Utility Master Plan (Nam Nguyen and Matt Stolte)
  - Scott Nachlis: In the Project Management and Stakeholders slide you mentioned Group 3 comprised of an Academic Advisory. At this high level of usage with buildings, is there a benefit to having a student affairs representative directly involved given how buildings/spaces managed by student affairs (dining halls, student centers, residence halls, rec center, health center) might have different needs than other academic spaces? I am not sure if this is needed, but rather just a general consideration if needed.
  - Matt Stolte: They're not on the academic advisory board, but they're in the stakeholder group that deals with operations in what I call the community and operational side. So, we have two folks from the DSA (Frances Keene and Ken Belcher) involved in that stakeholder committee, and that's where we're soliciting as much input as we can from Student Affairs. We're trying to get all levels of the organization and obviously, the ones that provide the service provide essentially the educational product, not just on the degree, but also all the other amenities that come with that we are reaching out to them as well. Athletics is also on that committee.
- Earth Week and CAC Day (Emily Vollmer)
Nathan King: It’s great to have a few extra incentives for students to join in for events- consider extra credit for them to attend the CAC Day.

Matt Stolte: I noticed there are a couple goals not being covered- like goal 5. Or is that embedded in a group of goals?

Emily Vollmer: Yes, goals 5 and 8 do not have presentations scheduled. If anyone is interested on presenting on goals 5 or 8, reach out to me because we do have, I think, two open time slots still that we can fill.

5. Announcements

- Nathan King: Spring 2023 Green Graduates
  - Sign up deadline is Wednesday, May 10th
  - Pledge information advertised on social media- spread the word! Scan QR code on attached presentation (announcements section).

- Nathan King: Subcommittee and CASE Team written reports week of May 22nd
  - April agenda is packed and so subcommittees are asked to provide written reports on progress in lieu of a presentation.
  - CASE team to provide campus progress on CAC goals

6. Adjournment

There being no further business, a motion was made and seconded to adjourn the meeting at 2:53pm.
Climate Action, Sustainability, and Energy Committee

March 27th, 2023 – 2:00 PM

[Image of a natural setting with rocks and a stream]
Agenda

• Welcome, Opening Remarks, and Membership Updates
• Approval of Proposed Agenda (if a quorum is present)
• Meeting Minutes: Electronic Vote Results
• New Business
  ▪ VT Utility Master Plan
  ▪ Earth Week 2023
  ▪ CAC Education Day, April 19th
• Announcements and Open Discussion
Overview & Engagement with Utilities Master Plan

March 27, 2023  2PM

Climate Action Sustainability and Energy Meeting

Matt Stolte (Director Eng. Services)
Nam Nguyen (Sr. Director/Deputy Assist VP)
Utility Master Planning

- Drivers for Campus Planning Priorities
- 2047 Campus Master Plan – growth
- 2020 Climate Action Commitment – Stewardship
- Infrastructure Systems long life cycles
- Bridging campus goals and Objectives
Bridging Goals and Objectives

In 2018, Virginia Tech completed its most recent master planning effort resulting in ‘Beyond Boundaries 2047: The Campus Plan.’

The Utilities Master Plan will provide a comprehensive roadmap to align campus wide utility systems with the strategies of the Campus Master Plan and the sustainability goals of the Climate Action Commitment.

In 2020, Virginia Tech revised its Climate Action Commitment, setting sustainability goals and milestones thru 2050.
Campus Utility Systems

The University Operates and Maintains:

- Co-generation Power Plant (Electricity & Steam Generation)
- Central Compressed Air Utility
- Central Domestic Hot Water
- Electric Distribution Infrastructure
- Central Chilled Water Plants
- Back-up diesel generators
- Air Handling and HVAC Systems
- Stormwater BMP’s
- Associated Distribution Systems

Required to Transport Utility Services

- Central Utilities Listed Above
- Potable Water, Sanitary Sewage, and Storm Water
Expected Benefits & Outcomes

- **Stakeholder collaboration campus wide** on a regularly scheduled and reoccurring basis throughout the project.
- Development of a **Asset Management centric program** to evaluate the Capacity and Condition of major utilities.
- Development of a **methodology to prioritize service level risks** regarding systems performance, sustainability and resilience.
- Prioritize projects to **align with existing capital & renewal programs** (MR fund, 6yr & 10yr capital planning programs)
- **Programmatic structure embedded into a CPIF strategy** for utility planning process that can be used into the future.
Utility Master Planning

- Project Management & Stakeholders
- 4 Phases to the Project
- Implementation
Project Management & Stakeholders

• Engineering Services – manages the project and Consultant for VT
• Three Groups of Stakeholder are vital to Project

  Group –1: Utility and Planning
    – Engineering Services – Sector Project Managers
    – Utility Enterprises
    – Strategic Planners

  Group–2 : Organization & Community

  Group–3 : Academic Advisory
Utility Master Plan 4 Phases (1 & 2)

- **Phase –1:** Assess existing capacity and condition of utility systems to meet Current Levels of Service – (Primary Partners input)
  - Engage Utilities to capture & compile existing data
  - Field Investigate Critical Features & Attributes
  - Evaluate Risk for Current Operations
  - Identify Operational/Maintenance/Capital options
  - Existing conditions report for review

- **Phase–2:** Evaluate utility needs for 2047 Plan & CAC
  - Engage the OUP and CASE Partners for latest plans
  - Determine future capacity and condition for utilities

Utility Systems
- Electrical
- Chillers
- Steam
- Communications
- Potable water
- Wastewater
- Stormwater
Utility Master Plan Phases (3 & 4)

- Phase -3: Identify specific strategies, projects and programs for utility systems to meet the Future Levels of Service –
  - Develop Operational/Maintenance/Capital options
  - Provide evaluation of system risks
  - Identify performance, sustainability and resilient metrics.
  - Evaluate capital improvements to align with capital planning intervals.

- Phase–4: Compilation of Final Utility Plan
  - Inclusion of Stakeholder feed back
  - Structure for continual Utility Evaluation & Programing

Utility Systems
- Electrical
- Chillers
- Steam
- Communications
- Potable water
- Wastewater
- Stormwater
Utility Master Planning

- Fieldwork
- 4–6 Months
- Baseline Data for all Utilities
- Example VT Electric Services
- Monthly Zoom 10AM last Tuesday of Month
UTILITIES MASTER PLAN FIELD SURVEYS

- Comprehensive asset inventory
  - Power Plant survey completed
  - Currently surveying VTES and water sewer systems
- Cataloging equipment nameplates and attributes
- Capacity and Condition assessments
- Join Monthly Stakeholder Update Via Zoom Tuesday, 10 AM

CHECK OUT PROGRESS ON WEBSITE:
INVENTORY OF FEATURES & ATTRIBUTES
EXAMPLE - VTES
### GEOSPATIAL MAP FEATURES/ATTRIBUTES

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#### Additional Comments

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Utility Master Planning

- Phase -1: Assess existing capacity and condition of utility systems.  
  Spring 2023
- Phase-2: Evaluate utility needs for 2047 Plan & CAC  
  Fall 2023
- Phase -3: Identify specific strategies, projects and programs  
  Spring 2024
- Phase-4: Compilation of Final Utility Plan  
  Fall 2024
## Project Task Dashboard

### Phase 1: Field Investigation

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Phase 1: Assess Existing Capacity & Condition

Phase 2: Evaluate Utility Needs for 2047 Plan & CAC

Phase 3: Identify Specific Strategies/Projects/Programs to address 2047 Plan & CAC goals

Phase 4: Compiling of Utility Master Plan/Process

Project Outreach & Workshops

Tuesday May 2, 2023 – 8:30-12:00 PM Workshop: Aligning Master Plan with Campus Plan & CAC
2020 CAC GOALS

2006 = 316,000 tons CO2
2019 = 228,512 T (28% reduction)
2025 = 205,660 T (48% reduction) Coal NG conversion
2030 = 159,000 T (50% reduction) Waste/Transport/land use
2030 = 44,744 T (86% reduction) 100% renewable electricity
2030 = 0 T (100% reduction) Carbon Offsets

HOW DO WE ACHIEVE THRU UTILITY MASTER PLAN?
Discussion or Questions

Matt Stolte, PE Director, Engineering Services

Virginia Tech | Campus Planning, Infrastructure, and Facilities
230 Sterrett Drive, Office 71B
Blacksburg, VA 24061
540-231-3939 (o) | mstolte@vt.edu
Agenda

• Welcome, Opening Remarks, and Membership Updates
• Approval of Proposed Agenda (if a quorum is present)
• Meeting Minutes: Electronic Vote Results
• New Business
  ▪ VT Utility Master Plan
  ▪ Earth Week 2023
    ▪ CAC Education Day, April 19th
• Announcements and Open Discussion
Earth Week – April 17-22

- Collaboratively planned week of events
  - Celebrate progress
  - Educate others
  - Engage peers and community
- Working in collaboration with:
  - 15 student groups
  - 12 campus units/depts
  - 5 community groups
- 20 events confirmed; 5-10 more events tentatively planned
  - Scaling back from previous years to allow for more meaningful and impactful events
- VT Bee Day – Monday, April 17
- CAC Day – Wednesday, April 19
- Earth Day and Arbor Day – Saturday, April 22
- All events found [here](#) (or google “VT Earth Week”)

[Image of people planting trees and a calendar for April 2023]
Pollinator Habitat Expansion at Hillcrest Hall
Monday, April 17 at 10:30 in the parking lot between Hillcrest and Wallace

Sustainable Fashion Show
Tuesday, April 18 from 7:00-9:00 PM, doors open 6:30 at Haymarket Theater in Squires

Bike to Work/School Day
Wednesday, April 19

Tour of the Old Growth Forest
Thursday, April 20 from 4:00-5:00 meeting in the parking lot in front of VT Engage office

Goodwin Waste Audit
Friday, April 21 at 1:30 at Goodwin Hall

Arbor Day Tree Planting
Saturday, April 22 from 10:00-12:00 meeting in the parking lot in front of VT Engage office
CAC Day – Wednesday, April 19
Squires Brush Mountain B

- **9:00-9:30** “What do you picture for Virginia Tech in 2050?” (Goal 15)
- **9:30-10:00** Carbon Neutrality and GHG Inventories (Goal 1)
- **10:30-11:30** Urban Forest Master Plan Feedback Session (Goal 6)
- **11:30-12:00** Climate Justice (Goal 11)
- **12:00-12:30** CALL (Goal 10)
- **12:30-1:00** Zero Waste (Goal 7)
- **1:00-1:30** Integrating Sustainability Principles into Campus Operations (Goal 13)
- **1:30-2:00** Sustainable Transportation (Goal 9)
- **2:00-2:30** Goals 2 and 14
- **2:30-3:00** Decarbonization of District Energy Systems (Goal 3)
- **3:00-3:30** The Impact of Energy Systems Optimization (Goal 4)
- **3:30-4:00** Carbon Neutrality and GHG Inventories (Goal 1)
- **4:00-4:30** Student Energy Value Action Gap (Goal 12)
Announcements
Green Grads Pledges

- Sign up deadline is Wednesday, May 10th
- Pledge information is being advertised on social media. Please spread the word!
Graduating soon?

Pledge to support a sustainable world and receive a FREE green cord

tinyurl.com/greengrads

Facebook: greengrads VT
Email: sustainability@vt.edu
Subcommittee written reports week of May 22nd

- April agenda is packed
- Written reports in lieu of a presentation
- CASE Team to provide campus progress on CAC goals
Open Discussion

Next Meeting: April 24, 2023
2:00 p.m. via Zoom