Campus Sustainability Committee Orientation

SEPTEMBER 20, 2019
Greenhouse gas (GHG) emissions
- Scope 1 – what campus owns/controls/operates
  - Natural gas boilers, vehicle fleet, back up generators
- Scope 2 – emissions associated with the generation of the electricity we purchase
- Scope 3 – not owned by campus, but contribute to operations
  - Students, faculty, staff commuting to/from campus, university supported travel, waste to landfill

Second Nature
- Formally American College and University President’s Climate Commitment (ACUPCC)

Association for the Advancement of Sustainability in Higher Education (AASHE)
- Administers Sustainability Tracking, Assessment and Rating System – STARS

Zero Waste
- At least 90% solid waste diverted from landfill
- More than simply what ends up in the trash – Redesign, Rethink, Reduce, Reuse, then Recycle
CSU Sustainability Policy

University Sustainability
▪ Integrate sustainability into the academic curriculum
▪ Develop green workforce skills, promote development of sustainable products and services, and foster economic development
▪ Pursue sustainable practices in all areas of the university
▪ Designate a sustainability officer

Climate Action Plan
▪ Reduce systemwide facility GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2040

Energy Conservation and Utility Management
▪ All buildings and facilities will be operated in the most energy efficient manner
▪ Continue to identify energy efficiency improvement measures, seek funding and expeditiously implement the measures
▪ Cooperate with federal, state, and local governments on energy conservation and utilities management objectives; inform students, faculty, staff and general public of need and methods of energy conservation and utilities management
▪ Designate an energy/utilities manager
▪ Monitor monthly energy and utility usage on all campuses and the Chancellor’s Office
▪ Develop and maintain a campus-wide integrated strategic energy resource plan
CSU Sustainability Policy (cont.)

Energy Independence and Procurement
- Pursue energy procurement and production to reduce energy capacity requirements from fossil fuels
- Exceed the State Renewable Portfolio Standard (RPS)

Water Conservation
- Reduce water consumption 10% by 2016, and 20% by 2020

Waste Management
- Reduce solid waste disposal 50% by 2016, 80% by 2020, and move to zero waste.
- Encourage the reduction of hazardous waste

Sustainable Procurement
- Promote use of suppliers and/or vendors who reduce waste, re-purpose recycled material, or support other environmentally friendly practices
- Encourage use of products that minimize the volume of trash sent to landfill or incinerators; participate in CalRecycle Buy-Recycled program or equivalent; and increase recycled content purchases in all BuyRecycled program product categories
- Continue to report on all recycled content product categories and implement improved tracking and reporting procedures for recycled content purchases
CSU Sustainability Policy (cont.)

Sustainable Food Service
- Track sustainable food purchases using Real Food Challenge or equivalent and increase sustainable food purchases to 20% of total food budget by 2020
- Provide information and/or training on sustainable food service operations to staff and patrons

Sustainable Building Practices
- All future new construction, remodeling, renovation, and repair projects will be designed with consideration of optimum energy utilization, low life cycle operating costs, compliance with all applicable energy codes
- Monitor building sustainability/energy performance and maintain information on design best practices
- Design and build all new buildings and major renovations to meet or exceed LEED Silver

Physical Plant Management
- Operate and maintain a comprehensive energy management system
- Academic and non-academic programs will be consolidated in a manner to achieve the highest building utilization
- Implement a utilities chargeback system to recover direct and indirect costs of utilities provided to self-supporting and external organizations
Climate Commitment: Carbon + Resilience

Develop a comprehensive Climate Action Plan (CAP)

- Create internal institutional structures to guide the development and implementation of the plan
- Actively support a joint campus-community task force (or equivalent) and complete a greenhouse gas emissions inventory
- Complete an initial campus-community resilience and vulnerability assessment
- CAP to include:
  - target date for achieving carbon neutrality and defined thresholds of resilience
  - mechanisms and indicators for tracking progress
  - actions to make carbon neutrality and resilience a part of the curriculum and other educational experiences
  - actions to expand research in carbon neutrality and resilience
- Review, revise if necessary, and resubmit the climate action plan not less frequently than every five years

Submit an annual evaluation of progress

Make the action plan, annual evaluation of progress publicly available in Second Nature reporting platform
AASHE STARS

Academics
- Curriculum + Research

Engagement
- Campus Engagement + Public Engagement

Operations
- Air and Climate + Buildings + Energy + Food and Dining + Grounds = Purchasing + Transportation + Waste + Water

Planning and Administration
- Coordination and Planning + Diversity and Affordability + Investment and Finance + Wellbeing and Work

Innovation and Leadership
INITIAL RECOMMENDATIONS
➢ Select a more climate-neutral grid mix
➢ Retrofit lighting systems in 15 campus buildings
➢ Upgrade HVAC, boiler-chiller, and air handler efficiencies
➢ Retrofit domestic H2O booster pump in housing
➢ Install PowerSave power management software
➢ Reduce single-occupancy vehicles
➢ University-sponsored travel education
1990 = 32,406 MT CO2e | 2018 = 20,866 MT CO2e
FY2017-2018 Largest Sources of Emissions

1. Commuting – 40%
2. Stationary combustion (natural gas) – 28%
3. Electricity use – 20%

= 88% of our emissions
Climate Action Plan 2.0

➢ Will be a guiding document to set high level path for climate neutrality by 2030

➢ Building in plans for resilience in the face of a changing climate

➢ Specific goals, targets, and actions will be needed from every entity on campus
  ➢ Energy Master Plan
  ➢ FMS 5 year goals
  ➢ Each Campus Sustainability Subcommittee should have specific goals and actions to contribute
  ➢ Procurement policies will be critical
**Climate Neutrality**

**Scope 1**
- “Wean the Steam” – electrification of campus
- Electrification of campus fleet including vehicles and grounds equipment
- Behavior changes from campus students, staff, faculty

**Scope 2**
- Invest in onsite renewable energy
- Invest in energy efficiency technologies and systems
- Explore Community Choice Aggregation or Direct Access electricity purchases
- Behavior changes

**Scope 3**
- Increase alternative transportation commuting to/from campus
- Discourage unnecessary campus sponsored travel and encourage webinar use
- Improve zero waste mindset, infrastructure, and operations
Chico Climate Change Vulnerabilities

**Increased Average Temperature**
- Increased frequency, intensity, & duration of heat days/waves
- Utilities (energy, water, wastewater) & housing
- Food systems & security

**Changes in Annual Precipitation**
- Increased flooding
- Increased wildfire
- Vulnerable populations & public health
- Decreased snowpack & water supplies
- Transportation & safe streets
As you build your subcommittee work plan...

- Keep in mind the overall campus and system-wide goals

- Make your subcommittee goals as SMART as possible

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<td>- State what you’ll do</td>
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<td>- State when you’ll get it done</td>
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<td>- Use action words</td>
<td>- Use metrics or data targets</td>
<td>- Possible to accomplish, attainable</td>
<td>- Improves the business in some way</td>
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