

Developing a Greenhouse Gas Emissions Inventory and Carbon Action Plan

Bruce Rich, PE, LEED
Parsons Brinckerhoff
richb@pbworld.com



Why Create a Carbon Action Plan

- AB 32- California Global Warming Solutions Act of 2006
 - Return to 1990 Emission Levels by 2020
 - Reporting GHG Emissions
 - Local and Regional Targets
- SB 375-Addressing GHG Emissions
 - Sustainable Communities Strategy (SCS)
 - CEQA will require a Climate Action Plan



The Climate Planning Process



GHG Emissions Inventory

- Set boundaries and identify all emission sources
- Collect data
- Calculate GHG emissions and offsets



Emission Categories

Emission Types	Examples
Scope 1 - Direct, On-site GHG Generators	<ul style="list-style-type: none"> • Co-generation Plants • Operational Vehicles • On-campus agricultural activities
Scope 2 - Indirect, Off-site GHG Generators	<ul style="list-style-type: none"> • Purchased electricity/natural gas/steam/chilled water
Scope 3 - Indirect, "Optional" emissions	<ul style="list-style-type: none"> • Commuter travel • Air travel/Mileage • Landfilled waste



GHG Offsets + Credits

- On-site composting
- Forest Preservation
- Retail Offsets (via Cap and Trade)
- Renewable Energy Generation
- Green Power Certificates



Data Collection

Las Positas College Transportation Survey

Please complete this confidential survey describing your commute for the past week. Completed hard copies can be dropped off at the Student Government Office, Room 1108 or the Student Government Club on Club Dr on September 16, 2009.

Please enter your W/D if you would like to be entered into the survey raffle. Your answers to the questions below will remain anonymous.

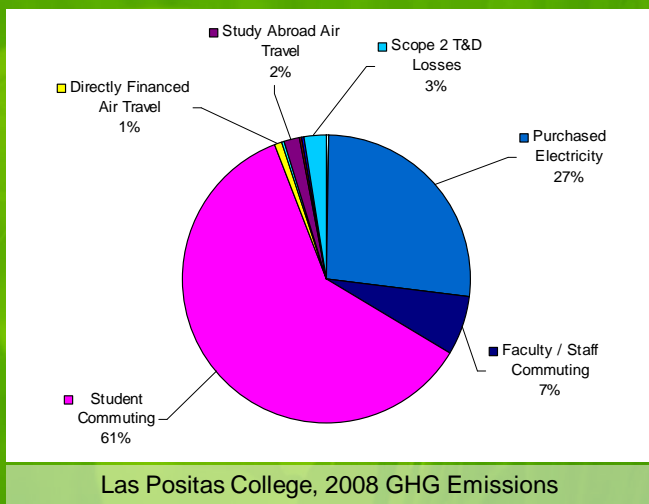
W/D: _____

1. What is your home ZIP code?
2. How far is...?
 - to work
 - to school
 - to the gym
 - to the library
 - to the student center
 - to the student union
 - to the student center
 - to the student union
3. What is the one-way distance between your home and campus? _____ miles

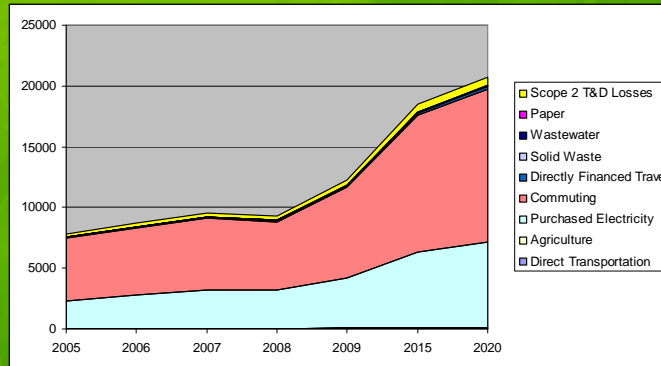
- District and College Level Staff, Managers, Executives
- Utility Bills
- Contract Vendors
- State Waste Reports
- Transportation Surveys



Relative Contributors of GHG



Historical and Reference Case GHG Emissions



Las Positas College, 2005-2020 GHG Emissions (MTCO₂e)

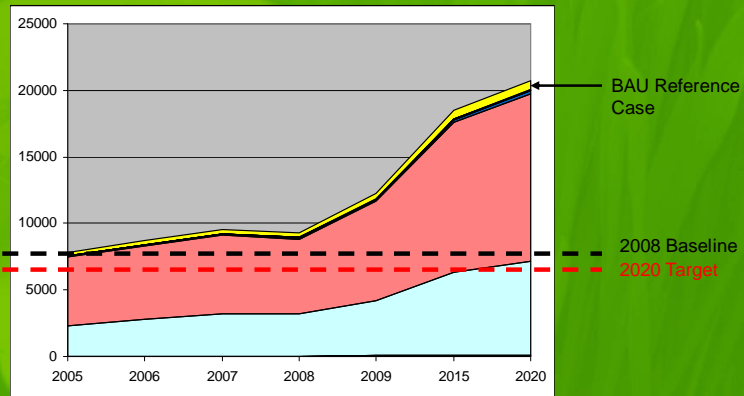


Set GHG Reduction Goals & Targets

- AB 32 Goals
 - Return to 1990 Levels by 2020 – (15% reduction from current levels)
- Executive Order S-3-05
 - 80% below 1990 Levels by 2050
- District to reach carbon neutrality by 2050



Target Scenario Development



Las Positas College, 2020 GHG Reduction Scenario at 15% below 2008 Levels



Develop Climate Action Plan

Mitigation Area	Example Measures
Buildings and Facilities	<ul style="list-style-type: none"> • Energy Efficient Retrofits (i.e. LEED) • LED/CFL/Motion Detecting Lights
Energy	<ul style="list-style-type: none"> • Solar Panels Above Parking Stalls • Energy Star Product Procurement
Education	<ul style="list-style-type: none"> • Online courses • Courses in Sustainability
Waste	<ul style="list-style-type: none"> • On-site Composting Program • Reusable Supply Exchange Program
Water	<ul style="list-style-type: none"> • Eliminate aesthetic pools and fountains • Waterless urinals or low-flow faucets
Transportation	<ul style="list-style-type: none"> • Improve Transit Service with Local Agency • Car-sharing or Ride-sharing programs



Questions?

