Green Technologies at Chesapeake College

Presented by:
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Vice President for Administrative Services

Discussion Topics

- Center for Leadership in Environmental Education (CLEEn)
- Wind Turbine Specifics
- Credit Offerings
- Non-Credit/Continuing Education/Workforce Development
- Open Discussion and Q&A

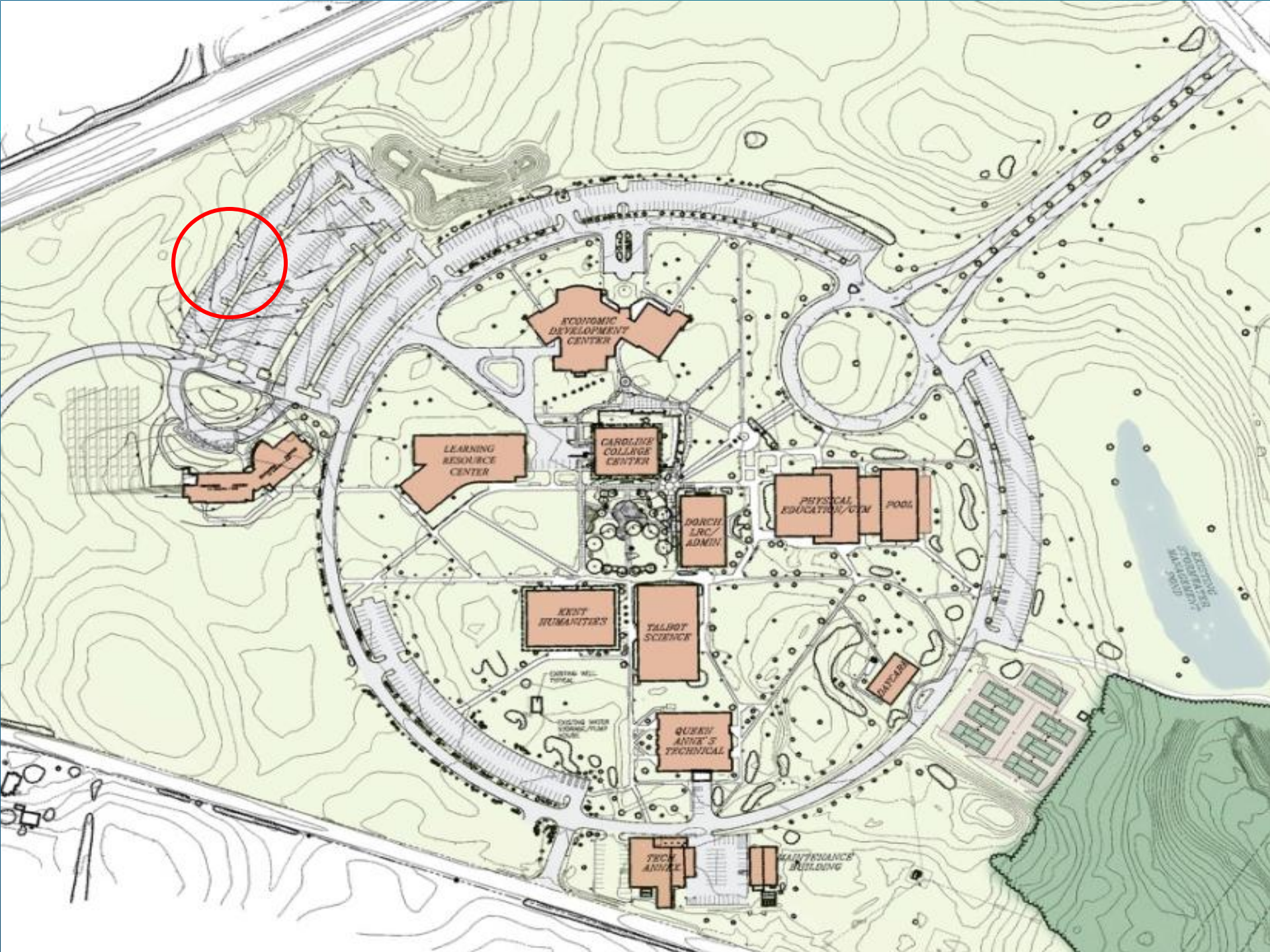
Chesapeake College's Center for Leadership in Environmental Education (CLEEn)

- What is this project?
  - Wind Turbine
  - Lab/Classroom Building for College and Community
  - An Opportunity for Endowed Instruction

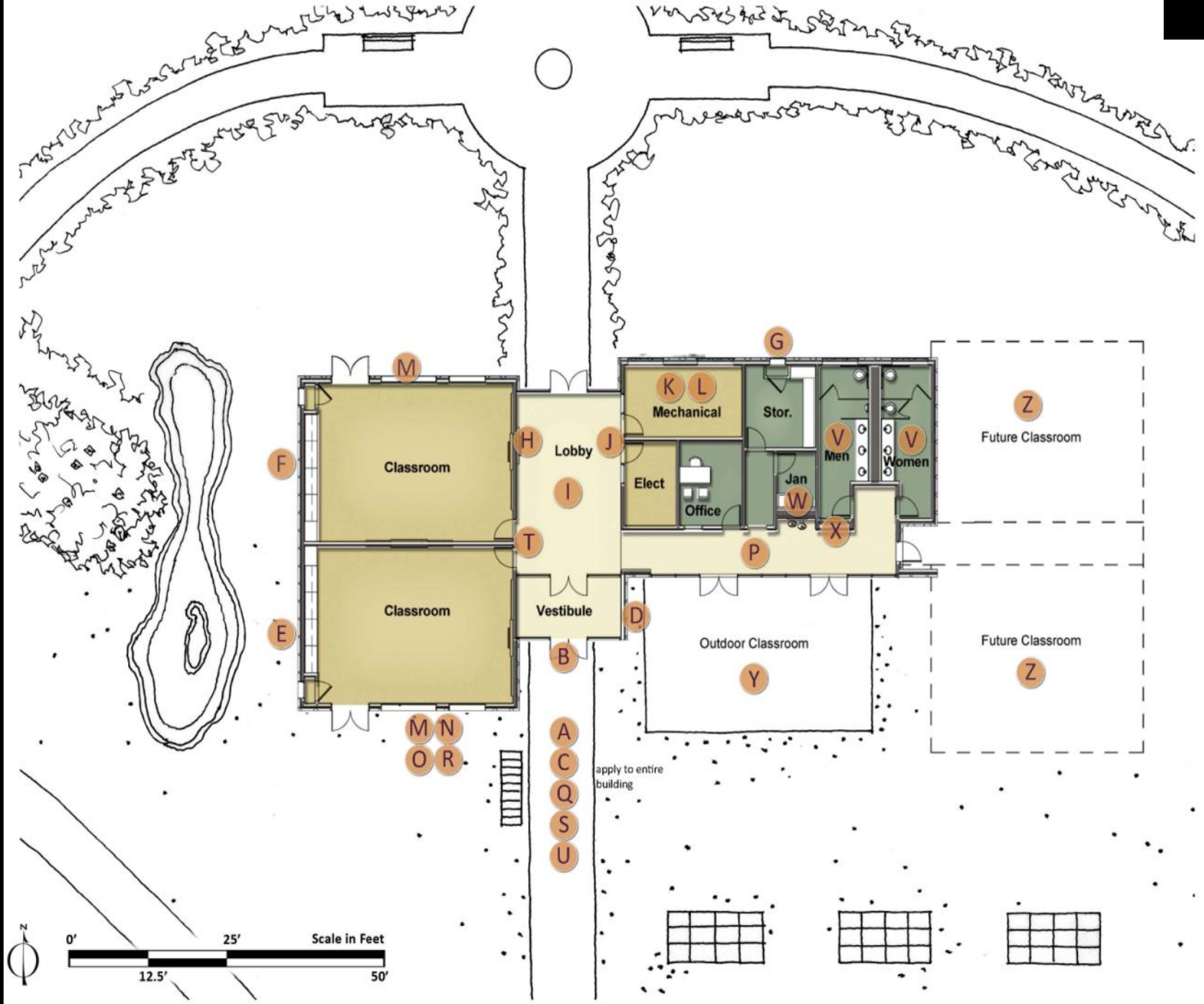
CLEEn… Why Do This Project?

For many reasons:

- Sustainability is one of the College's 5 Strategic Goals
- Our proximity to the Chesapeake Bay and rural setting
- Our ability to provide the workforce for the rising demand in environmental jobs


ECONOMIC DEVELOPMENT CENTER
LEARNING RESOURCE CENTER
CAROLINE COLLEGE CENTER
DORCH LRC/ ADMIN
PHYSICAL EDUCATION/GYM
POOL
KENT HUMANITIES
TALBOT SCIENCE
QUEEN ANNE'S TECHNICAL
TECH ANNEX
MAINTENANCE BUILDING


wind solar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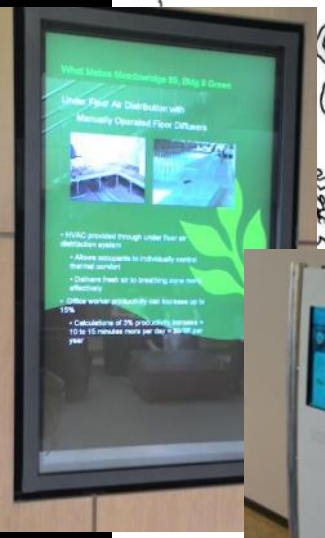
GREENGUARD
Indoor Air Quality Certified



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The Wind Turbine (Some Facts)

- 120’ Monopole, 152 Feet to Top Blade
- 30’ Blade length
- Will produce approximately 120,000Kwh per year
- Feeds directly into the Higher Education Center – covers approximately 30% of building’s electrical use
- It takes 8mph winds sustained for 4 minutes to turn the blades
- It will shut down when winds hit 56mph

Credit Offerings

- Environmental Science Degree offered through the Chesapeake Area Consortium of Higher Education
  - Broad Knowledge of the environmental sciences to prepare students for transfer to 4-year institutions.
- Environmental Monitoring Certificate
  - Teaches skills needed to evaluate the condition and status of ecosystems in MD for purposes of environmental assessment and compliance.
- Environmental Technology Certificate
  - Designed for those employed at the technical level in environmental related fields.

Non-Credit/CE/Workforce Development

- Energy Saving Ideas for Your Home

- Wind Energy

  This course explores the practical methods, in which government, business, utilities, engineers and others are utilizing wind energy to meet the challenges of global warming, pollution, balance of trade, national security, stimulating the economy and other major issues facing our country. Topics covered include: measuring wind, wind turbine site selection, large turbines for wind farms – for the sale of electricity to utilities, permit issues, and opportunities for jobs in the wind industry and the economic impact of wind farms.

- Solar Thermal: System Design and Performance

  This course is designed to provide training on the green technology of solar thermal. Topics include: solar electric cells vs. solar thermal devices; mounting systems; installation options; system designs; and savings calculations.

More Non-Credit/CE/Workforce Development

- Wind Turbine Generators

  A wind Turbine is a rotating machine which converts the kinetic energy in wind into mechanical energy. This course will provide an overview of the wind turbine industry, focusing primarily on small commercial and residential applications. Explore the micro wind generators' pros and cons, site issues, and performance prediction.

- Geothermal HVAC

  What makes up a geothermal system and why is it's performance so much more efficient than conventional heat pumps? Sizing, installation issues, and ways of calculating performance and pay back periods are reviewed.

- Green Wedding Planner Certification

Looking Ahead…

- Potential Future Credit and/or Non-Credit/CE Workforce Development Programs being considered include the following:

  - Horticulture
  - Agriculture
  - Turbine Repair and Maintenance Certifications
  - Pole Climbing Certifications
  - Installation and Repairs for Solar and Geothermal

Thanks for Attending!!!

Questions & Comments