Clean Power

COURTNEY CROSSFIELD SEAN MERTENS

We propose a best-fit clean energy investment strategy for Western.



Statement of Need

Climate Action Plan (CAP) Commitments

Promise to Students, Staff, and the Community

Western's Image

Financial Benefits



Projected eCO2 Emissions & CAP Goals (2005-2050)

Western's CAP Commitment

Western's CAP Commitment (cont.)

- Emissions Reduction
- Climate Neutrality
- Decision Making
- Continued Commitments



Statement of Need

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Financial Benefits

Renewable Energy Credits (RECs)





Renewable Ownership



Off-Site Wind

Why Direct Ownership?

- CAP Commitments
- Financial Benefits

Washington Has Wind Potential

Levelized Costs:

- Wind: \$75/mWh
- Solar: \$109/mWh
- Hydro: \$89/mWh



Off-Site Wind: The Numbers

- •36,000,000kWh per year
- •15MW, 8 2mW turbines
- •\$28,000,000 upfront
- •Environmental Studies Renovation:
 - \$92,000,000



Case Study: Appalachian State University

•100 kw turbine

•\$533,000

•Student fee/local utility



Financing For Wind

•Loan

- •Clean Renewable Energy Bond
- •Student Fee:
 - Payback period
 - \$25-\$45
- Combination of the two
- •Added Revenue
 - \$1,000,000



Energy Efficiency



Energy Efficiency: A Key Player



Carbon Offsets



Carbon Offsets: Duke

•Methane Capture

•Forest Management

•Solar Financing

•Options for Western



Duke Carbon Offsets Initiative 2014 Annual Report



Outreach



Western strives to be a sustainability leader in academics, operations, and student life. | Active Minds Changing Live

Outreach: University of Washington

University of Washington Sustainability Dashboard

click on an icon to explore metrics, or learn about the Sustainability Dashboard



Continuation of Research/Conclusion

Proposal

- Wind Farm Ownership
- Energy Efficiency
- Carbon Offsets
- Outreach
- •More to be Learned!
 - Small-Research Team
 - Collaboration, Other Renewables, etc.

