

Appalachian Energy Summit

APPALACHIAN STATE UNIVERSITY

The University of North Carolina Energy Leadership Challenge

Breakout Session Notes

Solar Decathlon Europe 2014: An Energy-Plus, Mixed-Use, Campus Housing Case Study

Discussion Leaders: Mark Bridges, Appalachian State Student, Sustainable Design & Construction Class of 2014
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Please provide notes that are clear, concise, high level, and actionable. These notes will be initially forwarded to discussion leaders for final editing before publishing to all participants with the objective of providing them with good ideas and helpful contacts.

Best Practices

-Currently 300 Students have touched the Solar Decathlon project at Appalachian, with a goal to have more than 1000 students touch the project before the competition in the summer of 2014.

-At or less than 15 kWh per meter² per year to meet the PassivHaus standard

-Integrated design was the initial approach for the project, not simply designing a shell and then shoving various plumbing or electrical systems. To think of everything in the beginning, so that everything works together.

What are some of the financial advantages by looking at the house from an integrated perspective

Shortening the on site construction time. Reduction of all the fees that are often incurred with the conventional design and construction phases. Being able to lease a flex space for the tenants which would generate income.

What is Maison Reciprocity's return on investment?

Estimated to cost around \$150 per square foot. Return on the on investment roughly estimated around 5-8 years. The idea is also to have a flex space that is customizable to the needs of the tenant. Example, have the first floor that is leasable retail space, to generate income for the tenant (a different option for social housing)

Are these houses being used after the Competition? Some real world use?

Not exactly, its not exactly the goal of the competition. The option to turn the competition house into an actual production house is the decision of the competing team. Appalachians 2011 entry The Solar Homestead is available for production through Deltec Homes. But this competition can often help companies see their own products or systems used in a way they never intended it to be used, which can promote and expand markets to encourage and grow the use of sustainable technologies in everyday construction.

How do you keep track of all of the students involved on the project?

Incorporating the project with existing courses for various degree programs at Appalachian State. Rather than have various specialty classes, it's more effective to incorporate working on the project with already determined classes that all students are required to take for their degree program.