

Climate Resilience and Sustainability Strategies at OSU-Cascades



Oregon State University
Cascades



LONG RANGE DEVELOPMENT PLAN

March 2018

Oregon State University – Cascades
Bend, Oregon



“University goals for net zero energy, water, and waste will be addressed with creative solutions to campus infrastructure that will minimize dependency on precious resources.”

OSU-Cascades will establish itself as a leader in resilient design, providing a model for other university campuses and the surrounding Central Oregon community in sustainable development for arid climates.”



Simpson Avenue

Mt. Washington Drive

Recreation Road

Bowl Road

Rim Road

South Slope

Innovation Road

15th Street Extension

Century Drive

Bowstring Green

Main Plaza

Amphitheater

Oval Green

Cascades Lane

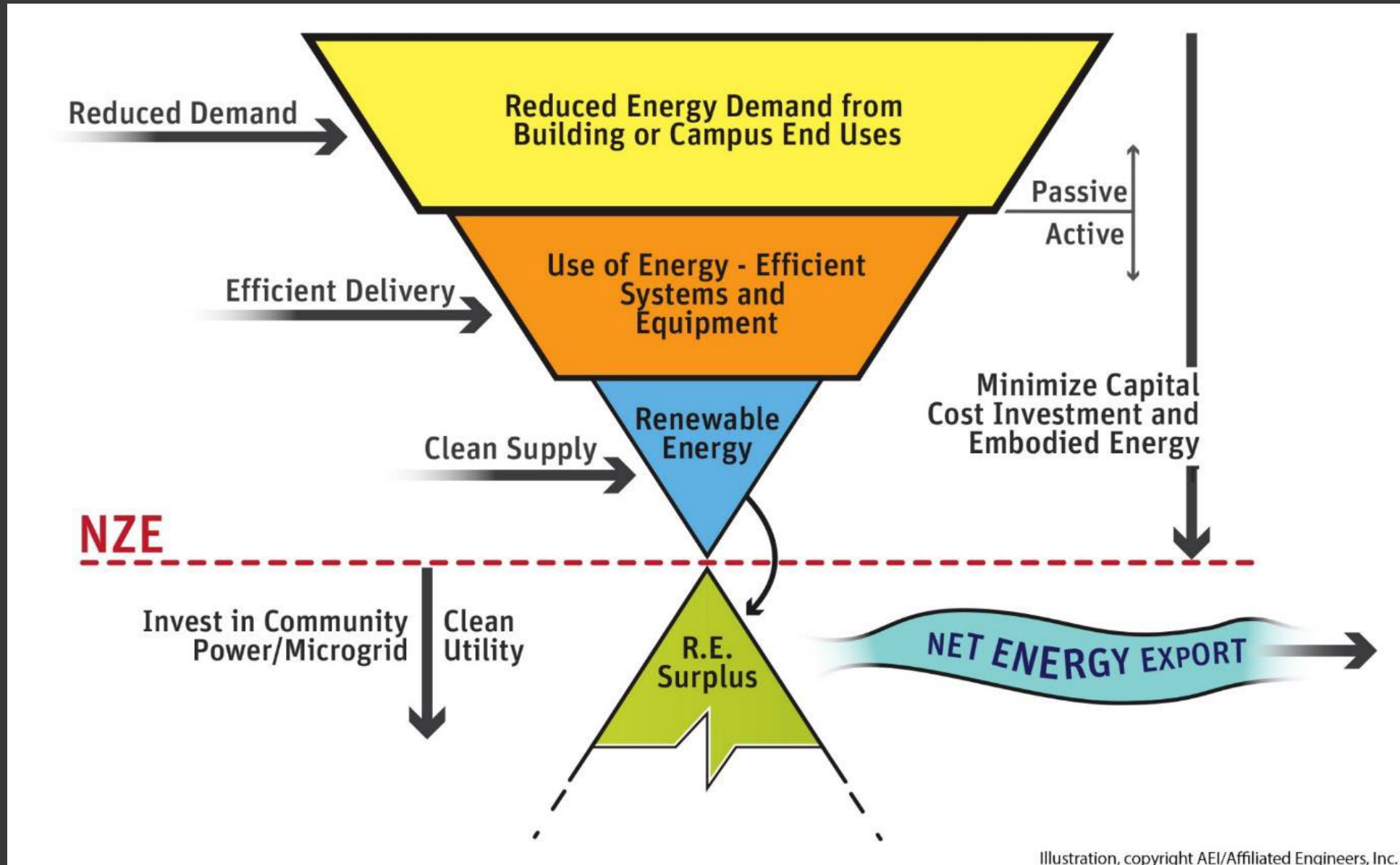
Chandler Avenue

Metolius Drive Extension



0' 100' 200' 400' 600'

Analysis: Net-ZERO



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Buildings

Tykeson Hall

- upgraded shell and windows
 - passive solar orientation
 - solar ready
 - LED light conversion in 2020
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Residence Hall

- Heat recovery ventilation system
- passive solar orientation
- solar ready
- LED light conversion in 2020
- Real-time energy display

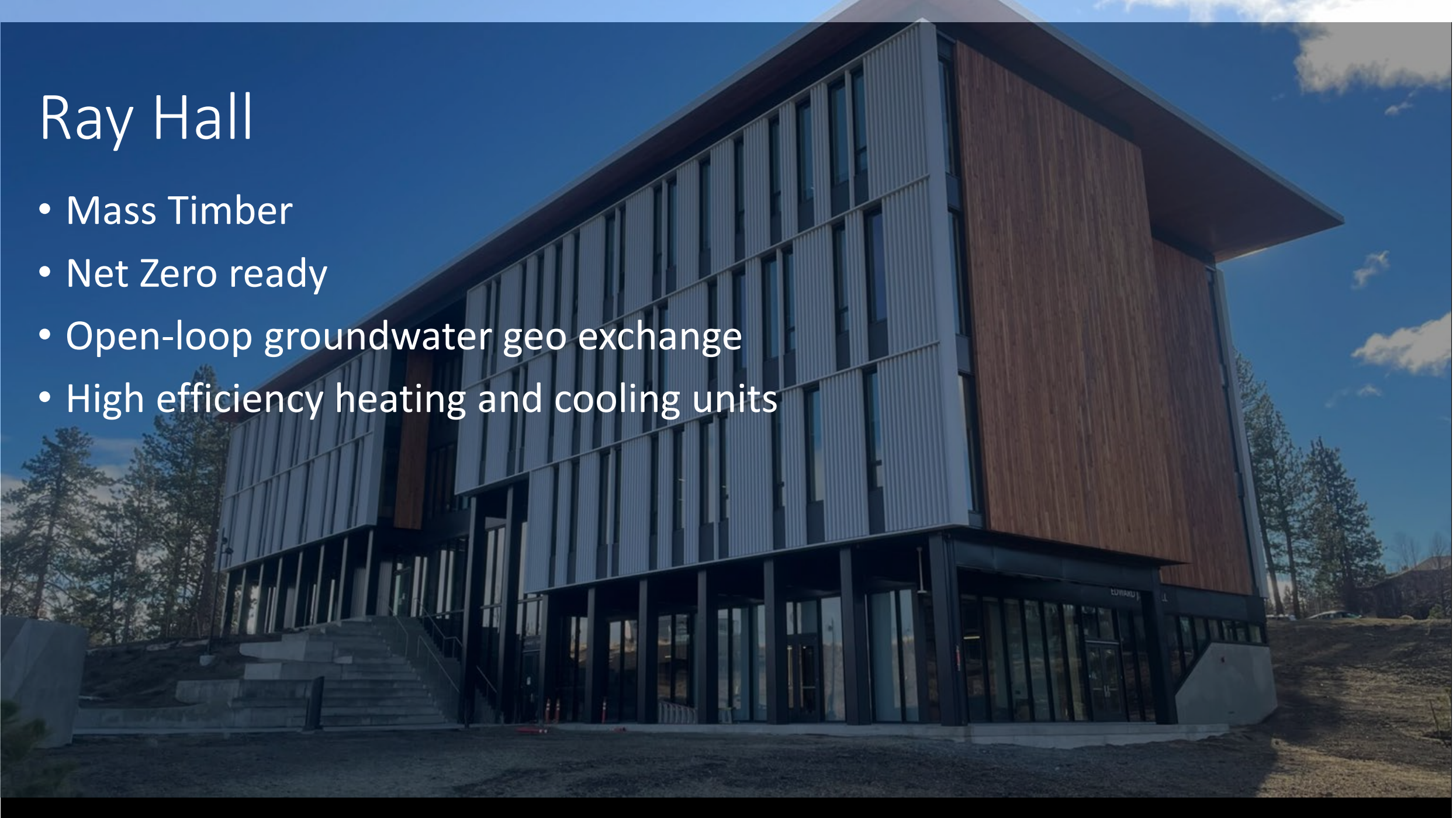
Obsidian Hall

- Upgraded windows
- Solar ready
- LED conversion in 2020

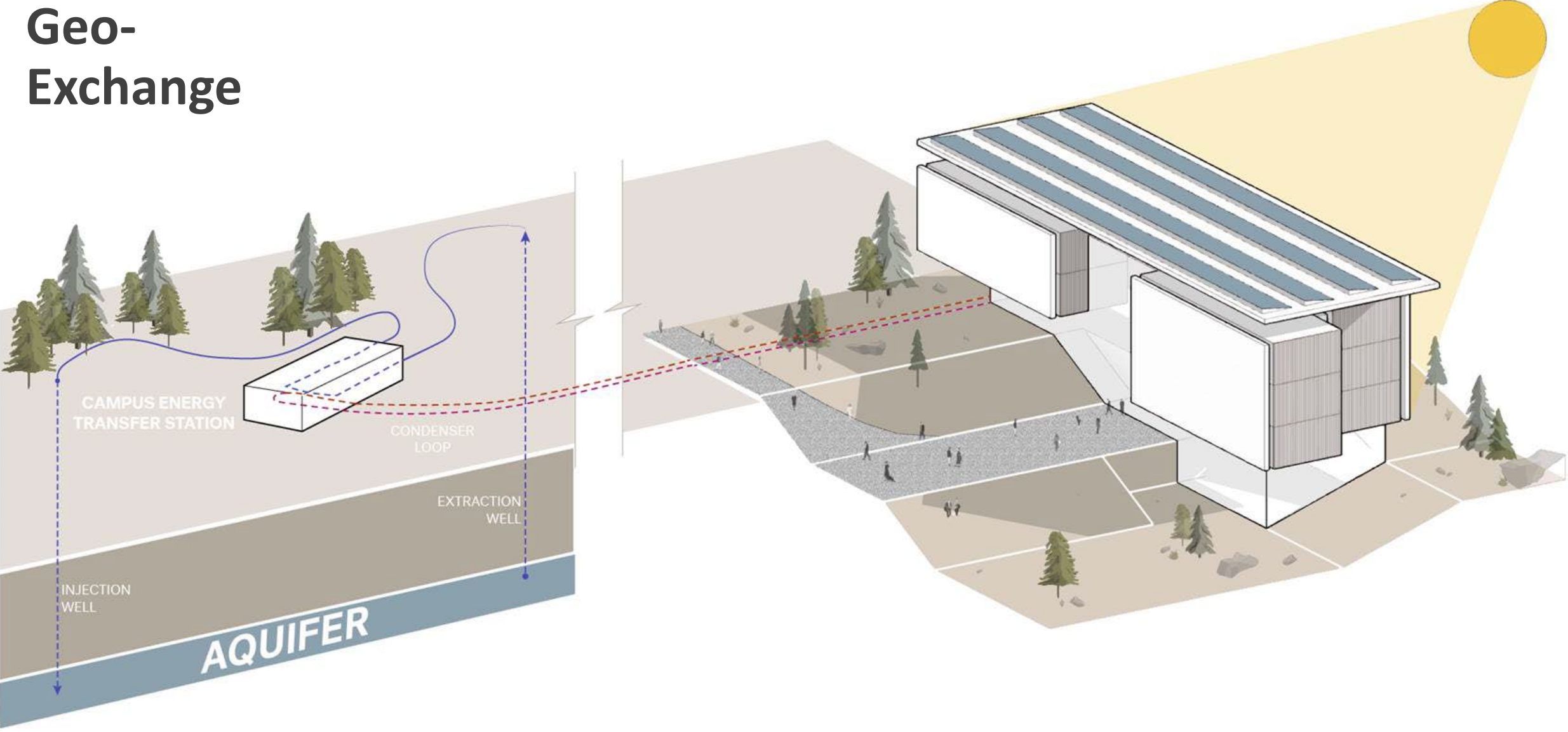


Ray Hall

- Mass Timber
- Net Zero ready
- Open-loop groundwater geo exchange
- High efficiency heating and cooling units

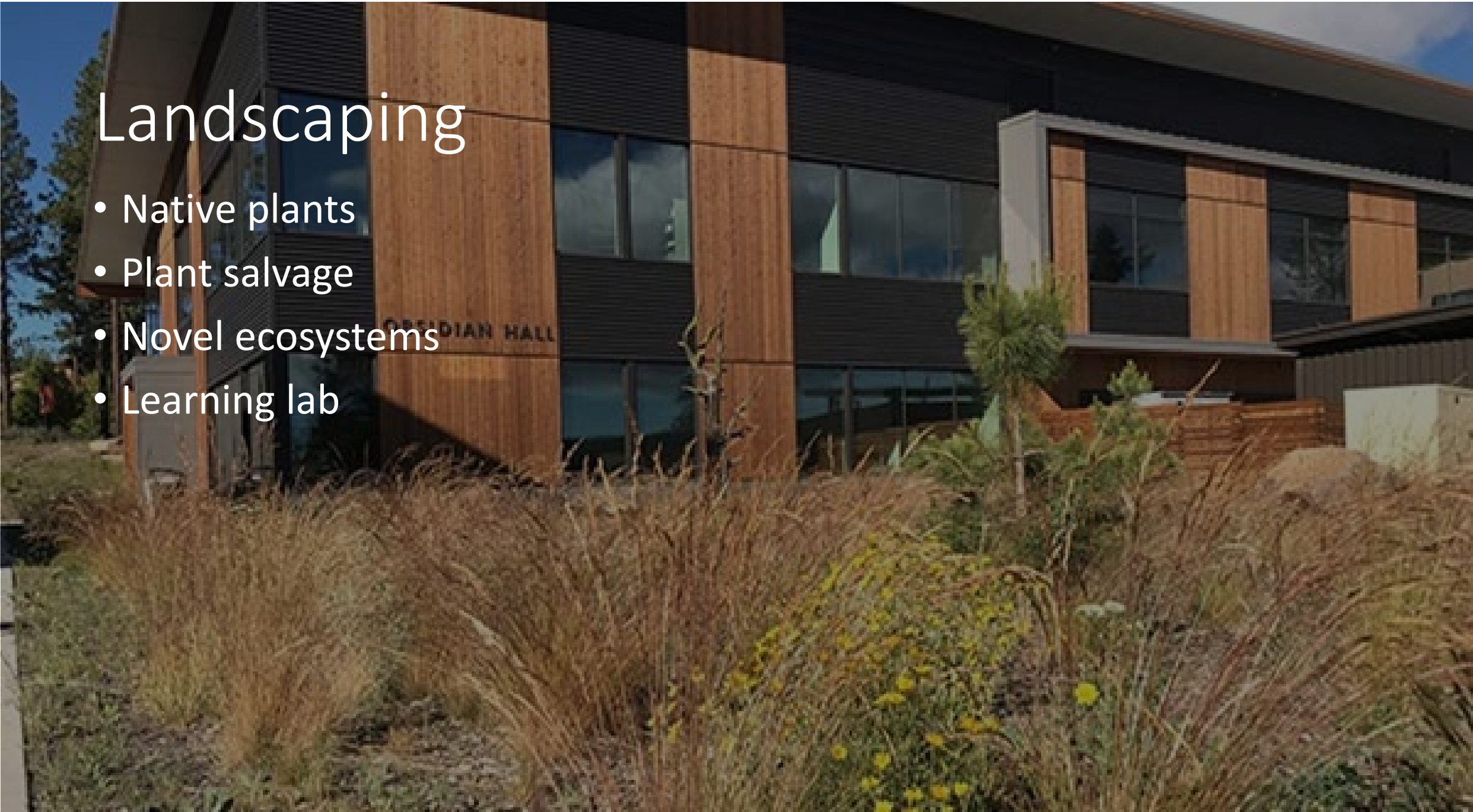


Geo-Exchange



Landscaping

- Native plants
- Plant salvage
- Novel ecosystems
- Learning lab



Transportation

- Incentive programs
 - Paid parking
 - Free carpool parking
 - Carpooling app
 - Free bus passes
 - Past efforts (bike share, Zip Cars, on-demand transit pilot study)
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Moving Forward

- Energy Systems
 - Water recovery/re-use
 - Waste
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