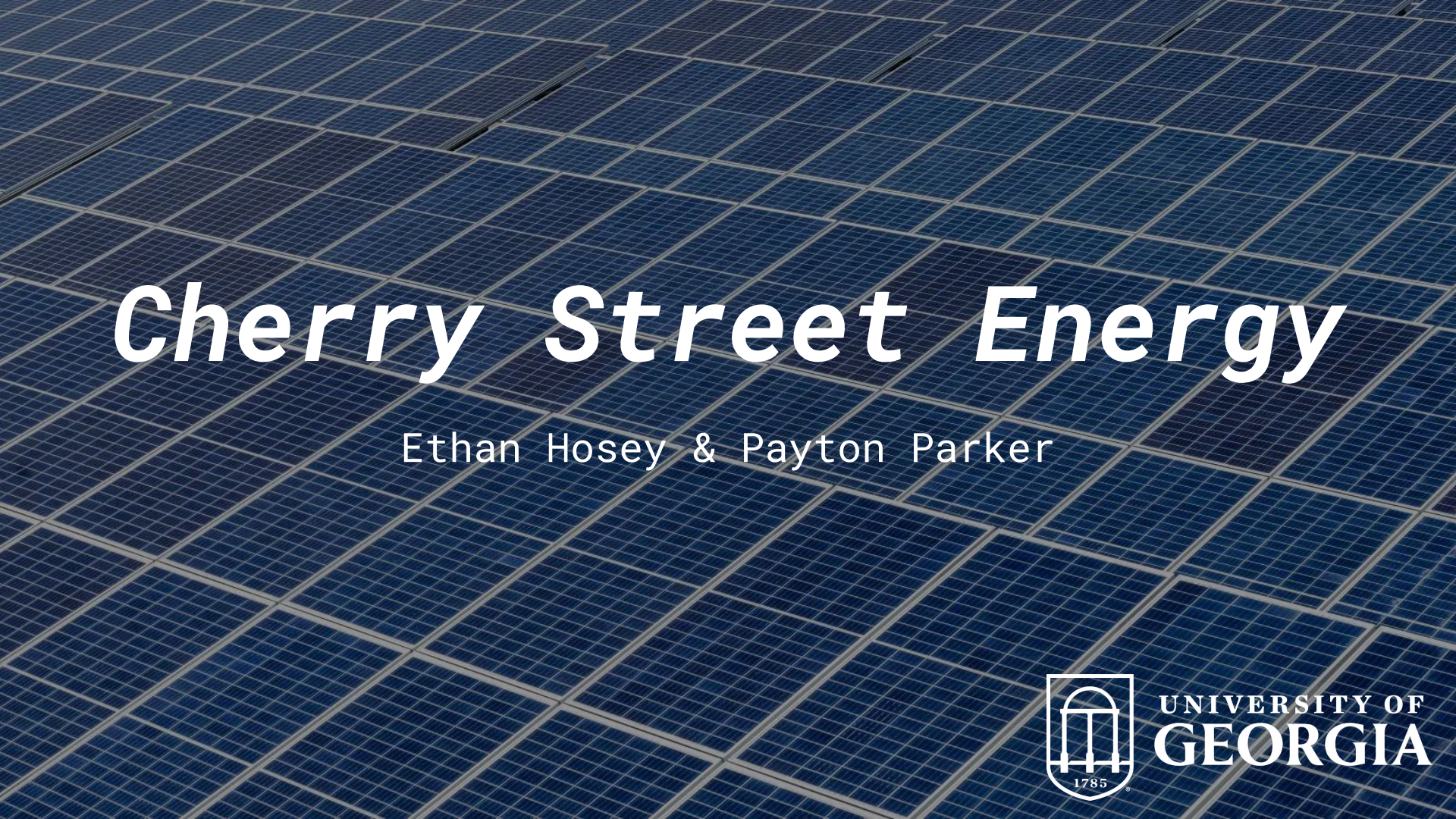


Cherry Street Energy

Ethan Hosey & Payton Parker

UNIVERSITY OF GEORGIA

Ethan Hosey
Major: Environmental Economics and Management
Minors: Environmental Law and Resource Economics

Payton Parker
Major: Astrophysics

Project Scope

- Investigating the feasibility of placing a solar array on top of clearwells in Atlanta
- Project Partners: Cherry Street Energy
  - City of Atlanta Department of Watershed Management
- Focus is to prove the economic, sustainable, and social benefit

Lew Puckett,
COA Hemphill
Site Manager

Dr. Ben Damiani,
CSE CTO

Quinton Fletcher,
COA Deputy
Commissioner

Olivia Wilson,
CSE Legal
Affairs
Coordinator &
Sust. Cert.
graduate

Who is Cherry Street Energy?

- Next generation solar power company based in Atlanta, Georgia
- Cherry Street handles the financing, installation, operation, and maintenance of a solar array system

EMORY UNIVERSITY

RESURGENS 1847 ATLANTA GA 1865

ATHENS GA
CREATURE COMFORTS
Brewing Co.

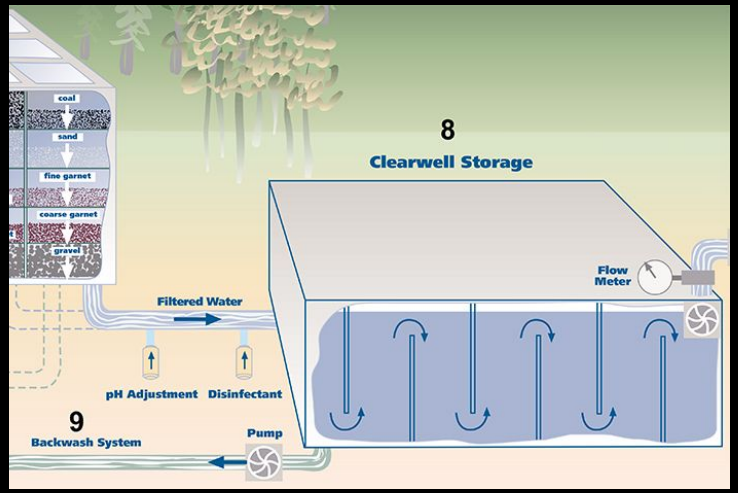
How is this related to sustainability?

- SDG: 7,9,11
- Climate Change
- Microgrids
- Energy Independence
- Sustainability
- Helping City of Atlanta reach their goal of 100% renewable energy by 2035
- Repurposing of unused land

https://sdgs.un.org/goals

Is the placement of a solar array at COA Hemphill clear well sites a ***beneficial project*** *for both CSE and COA?*

What is a Clearwell?



https://crwater.com/drinking-water-treatment/

DWM Concerns

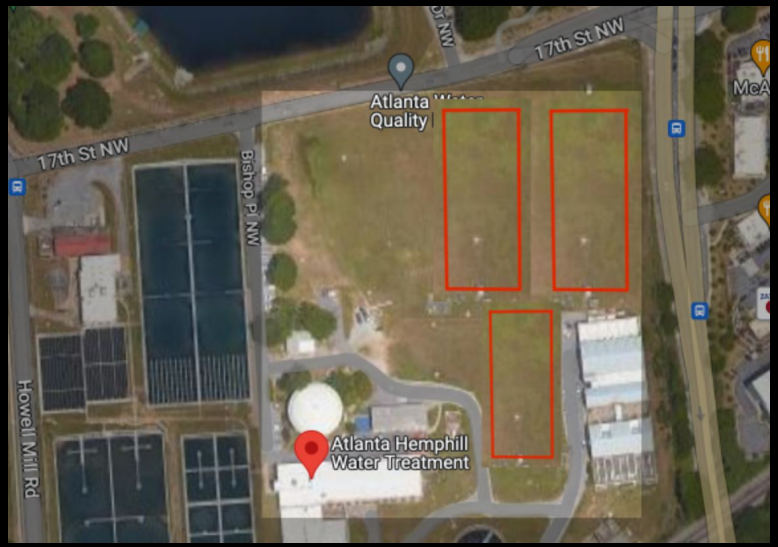
- Maintenance accessibility and emergencies
- Weight limit of clearwells
- Possible restoration of clearwell #1
- Loss of community space
- Legality

Solar Recommendations

- 24 panels: 335 watts each / 8040 watt total
- Wheeled trailer

- QCell: 480 watt module
- Paired with SolarFlex ballasted racking system

Output Analysis
Scenario 1



Full coverage -
220,000 sq ft

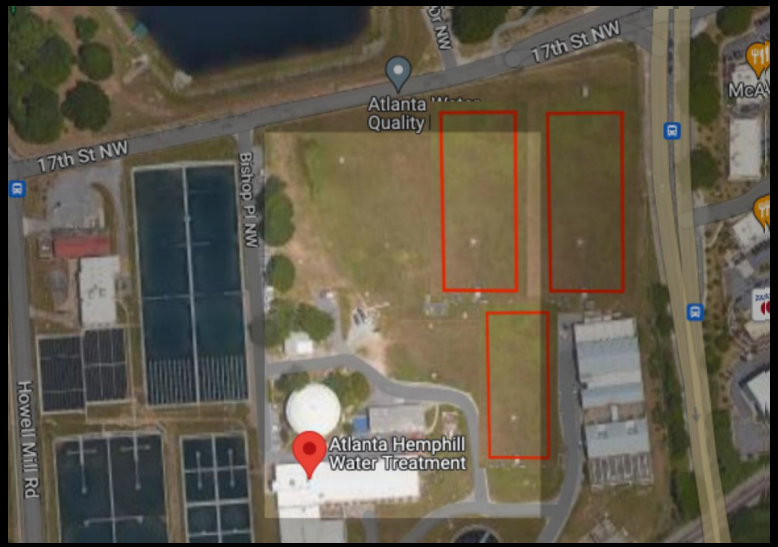
Wheeled mount

- ~2061 kW system size

Ballasted mount with QCells

- ~1424 kW system size

Output Analysis
Scenario 2



Excluding inactive clear well - 160,000 sq ft

Wheeled mount

- ~1439 kW system size

Ballasted mount with QCells

- ~994 kW system size

NPV Analysis

NPV w/o solar = $-207 million

NPV w/ solar = $29 million

- Multiple factors were included
  - Total bill with and without solar
  - Carbon reduction value
  - Possible tax credits

Conclusions

- Legal
- Maintenance is not a concern
- Advantageous project for both CSE and COA
- Main concern is loss of community space
  - Chattahoochee Clearwells
- Framework for future endeavors

Special Thanks

- Cherry Street Energy
  - Ben Damiani
  - Olivia Wilson
  - Ellie Wilkoff
- City of Atlanta, Department of Watershed Management
  - D.C. Quentin Fletcher
  - Lew Puckett
- UGA
  - Sustainability Capstone coordinators
  - Professor Adam Orford
  - Professor Jeffrey Mullen

Questions?