



**Engage  
Innovate  
Lead**

[fortzed.com](http://fortzed.com)



FortZED Champion: New Belgium Brewing

Photo Courtesy of NBB



## Visionary Beginning

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- FortZED began as a community based initiative of UniverCity Connections & Community Foundation of NoCO as an Economic Development project- 2.5 mile zero energy district in Fort Collins
- Early win by receiving \$6.1M DOE RDSI Study with \$5M in matching funds and additional phase to advance renewable energy technology
- International recognition and case study
- Highly engaged community, but hard to maintain momentum– “Post Project Depression”
- Importance of political support







**FortZED** is a unique collaboration of clean energy technical expertise, civic leadership, higher education, and community participation to meet our environmental and economic goals.



Civic Leadership



Higher Education



Technical Expertise

**Community**





## FortZED's Goal

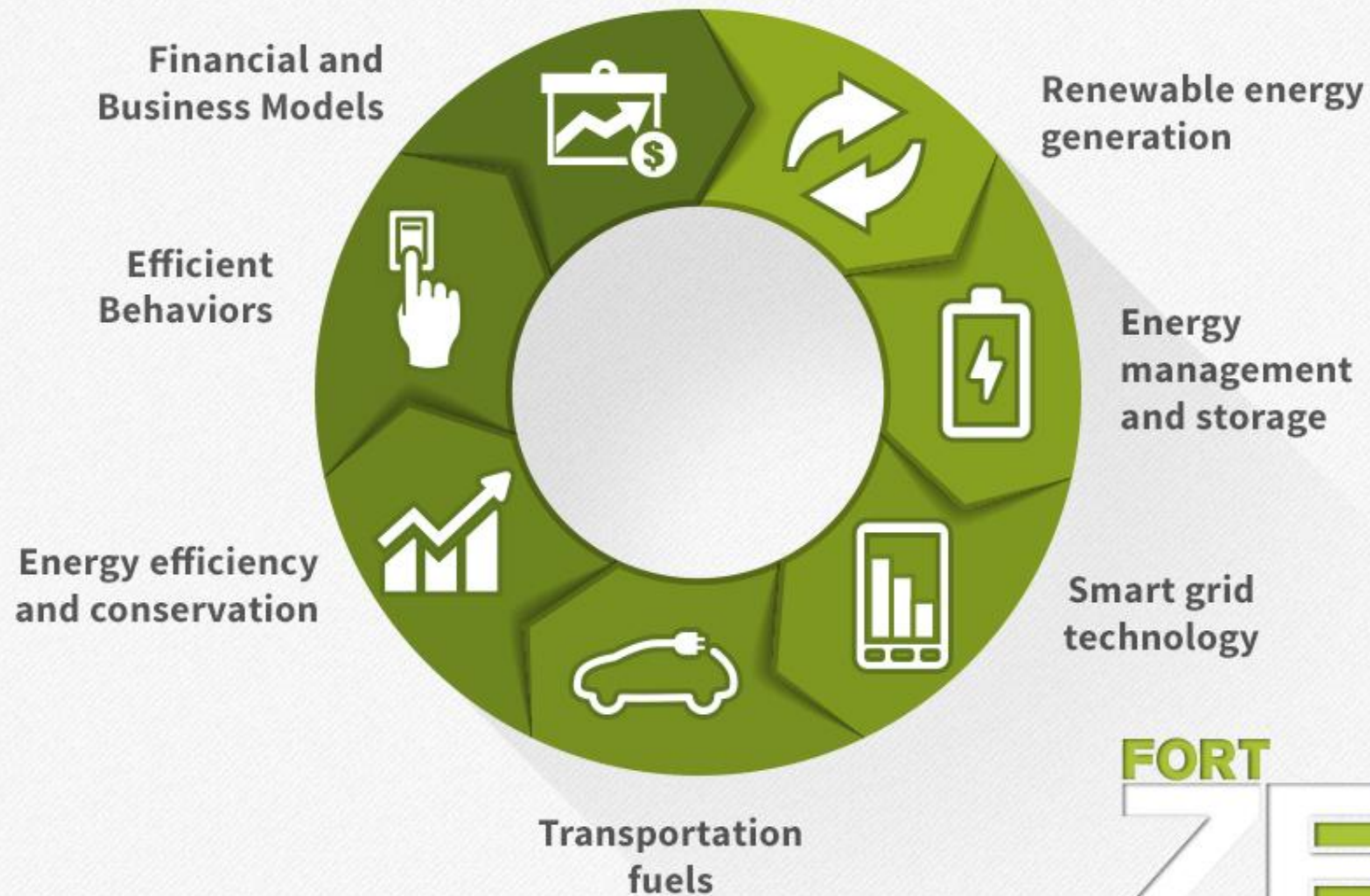
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To advance the development of energy projects that accelerate Fort Collins' path to a zero emissions community.





# **FORTZED IS AN ENERGY SOLUTIONS TESTING GROUND:**



**FORT**  
**ZED**



## Re-Engage Residents with a \$5M hook

- 2 year competition hosted by Georgetown University focusing on energy efficiency and innovation
- Leverage existing resources
- Use of social science to tailor messaging and re-develop engagement program
- Supplemental alternative financing tool in partnership with CCEC

Lose-a-watt.com





# Integrated Utility Services Model



## Rethinking the Utility Model

- Developed in partnership with RMI's ELab, Schneider Electric and Brendle Group
- Offer bundled package of integrated services
- Financing options for efficiency upgrades, solar
- Accelerate customer adoption while helping municipal utility stabilize revenue base
- Pilot in late 2015 of up to 300 households that span a range of customer types





# Potential & Longer Term Projects

## Queued Up for the Next Opportunity

- Modeling DC Solar Installation on new Utility building (innovative technology)
- Large scale ground source heat pump at CSU (challenging financing)
- Combined Heat and Power options in Fort Collins (challenging financing/scale)
- New Opportunities as part of Fort Collins Climate Action Plan goals (80/30, Carbon Neutral by 2050)







# Thank You!

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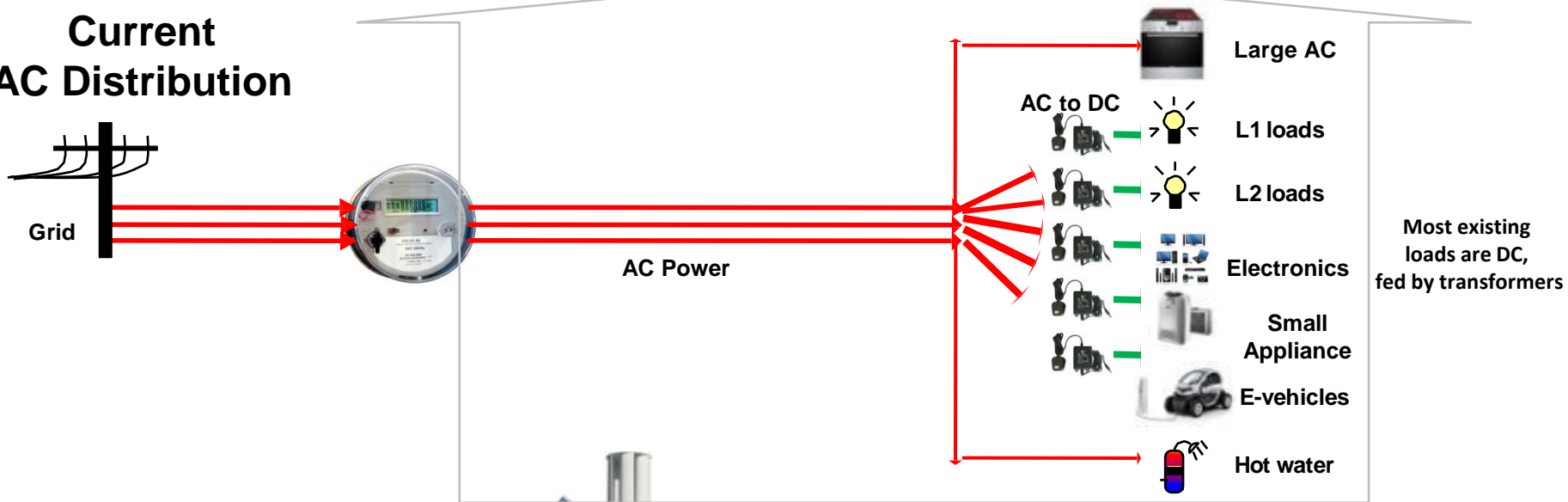
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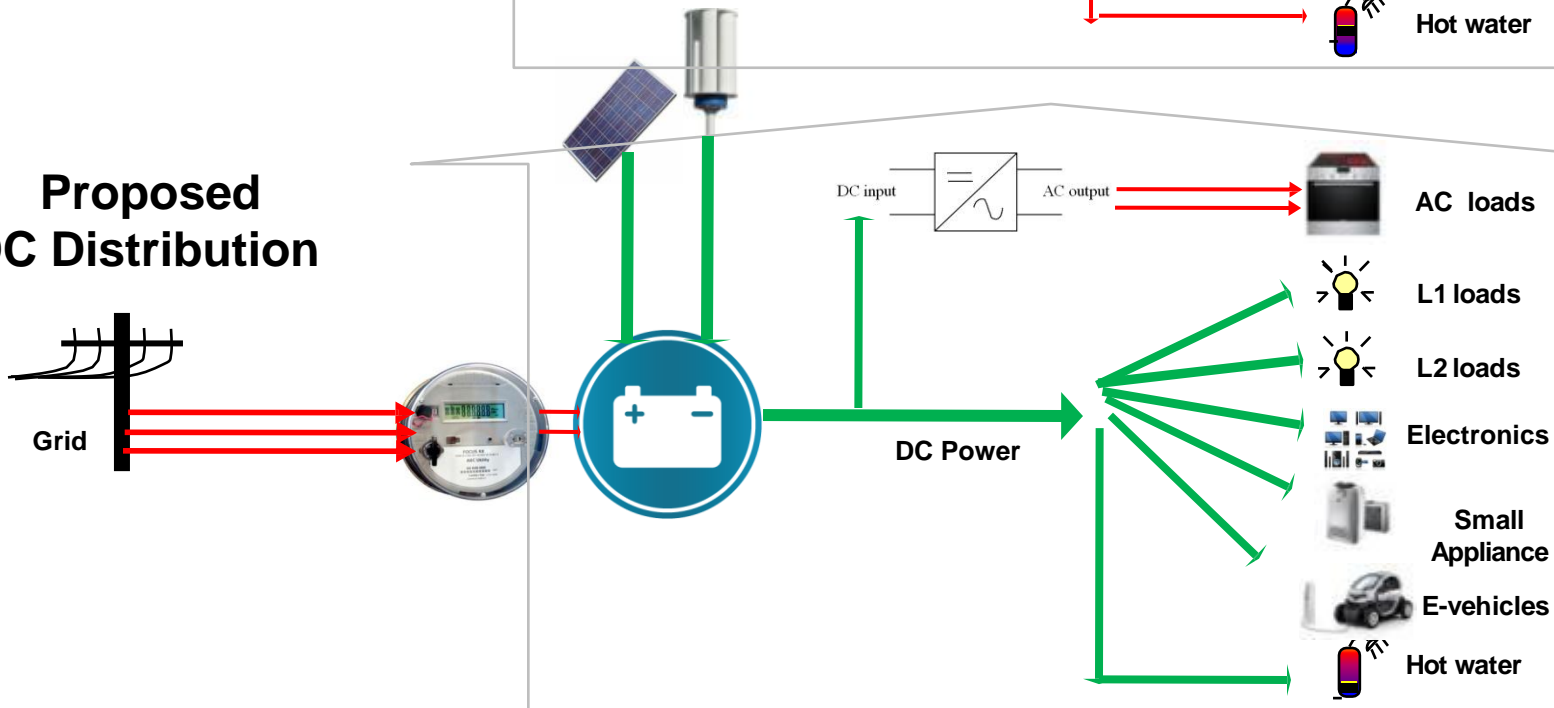


# Distribution System Evolution

## Current AC Distribution



## Proposed DC Distribution





# INNOVATE



**FortZED seeks to develop an energy project portfolio that addresses prototyping AND real world testing in:**

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Electricity



Behavior Systems



Heating and Cooling



Financial Systems



Alternative Transportation  
Fuels and Systems



Business Models

**FortZED pilot projects will meet the following criteria:**

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Cutting edge application or  
leadership quality



Advances the sustainability  
goals of the community



Involves at least two partners



Strong replicability and  
scalability



Establishes understandable  
metrics for success



Ability to implement based on  
resources/systems





**FortZED seeks to EMPOWER residents, businesses and organizations to take specific, achievable actions that:**

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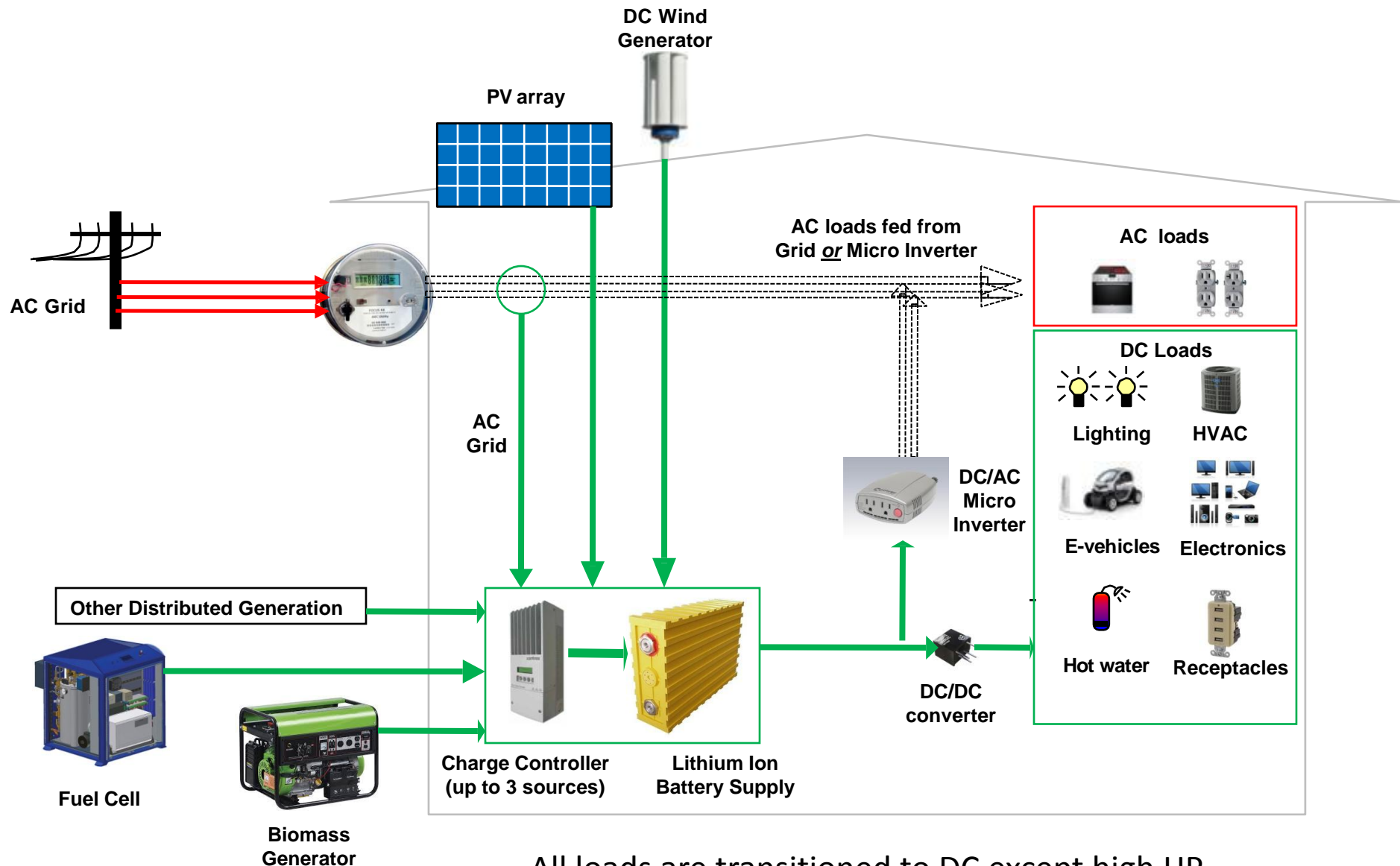
- ↔ Bridge the gap between highly technical systems and behaviors of citizens
- ♥ Are achievable, significantly improve energy sustainability, and maintain our exceptional quality of life
- 🏆 Help people track their progress, see real-world results, and earn recognition for their efforts

**FortZED will engage all stakeholders in efforts to:**

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- ☑ Pilot AND implement innovative approaches that help achieve the City's Climate Action Plan goals
- ☑ Mobilize the community in the Plan's implementation
- ☑ Catalyze change and progress towards a better energy future

# DC Based Distribution System



All loads are transitioned to DC except high HP motor loads and AC convenience outlets



## Image title


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**With innovation as the core of our character, Fort Collins is the ideal city to pioneer a better energy future by:**

 Increasing renewable energy production


 Reducing greenhouse gas emissions


 Improving energy efficiency


 Transitioning to cleaner transportation fuels


 Managing peak energy usage

**By doing so, Fort Collins will:**

 Protect and improve our economic health

 Provide prosperity for our residents

 Attract and retain top companies and the skilled workers they need

 Help lead the U.S. to a clean and secure energy future



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## FortZED's Goal

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To advance the development of energy projects that accelerate Fort Collins' path to a zero emissions community.







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- Third bullet item







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