

STAR Rating System and Energy Action Plan for Fayetteville Using Peer City Analysis

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Introduction

Peer City Project Selections

Fayetteville Comparison

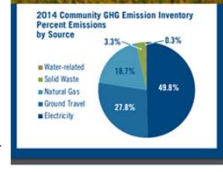
What Is STAR?

STAR Community Rating System is a framework and certification program that evaluates different aspects of sustainability in a community. It considers economic, environmental, and social sectors of sustainability. Currently, Fayetteville holds 3 out of 5 stars and hopes to gain a fourth star when the city reapplies this year.

Host summer and winter “Bike to Work Days” for city employees and use city government website to publish city-wide carbon footprint data and green living tips.



Left: Bike to Work advertisement
Right: Pie chart published on city website of greenhouse gas emissions by sector



Possible Adaptations for Fayetteville:

- Host a Bike to Work event for non-city employees as well

After conducting peer city analysis, it was apparent that Fayetteville is already implementing similar sustainability, energy, and climate goals including:

- Conducting greenhouse gas inventories
- Using sustainable purchasing guides for city use
- Installing public use alternative fueling stations
- Tracking government energy use
- Setting greenhouse gas benchmark targets
- Implementing a climate or energy action plan

The Scope

While seeking STAR credit, the City of Fayetteville is also currently working on drafting an Energy Action Plan. To assist in the process along with seeking credits for STAR certification, they have narrowed down what sections of STAR should be used for the plan. Specifically, the City is focusing on greenhouse gas mitigation, greening the energy supply, energy efficiency, and the local government greenhouse gas footprint which are all part of the Climate and Energy section of the rating system.

Organize an Earth Day parade celebration and build solar powered hot water installations for correctional facility use.

Possible Adaptations for Fayetteville:

- Utilize solar energy to power more areas of correctional facilities

Lawrence, Kansas



Left: Citizens participate in 2014 Earth Day parade
Right: Owner of Solar Heat Exchange Manufacturing installs PV panels on jail



Peer Cities

When considering the first steps to creating an Energy Action Plan and how to receive STAR credit, it was apparent that a peer city analysis would be needed. Peer cities were chosen based on if they were a college town like Fayetteville, had a similar population to Fayetteville, and if they were in the same region. The chosen peer cities include Fort Collins, Lawrence, Evanston, Columbia, and Burlington, all of which have STAR accreditation.

Implement an all-housing recycling program and require all new commercial and municipal buildings over 10,000 square feet to be LEED Silver certified.



Left: LEED logo
Right: Recycling bins outside small apartment building



Possible Adaptations for Fayetteville:

- Consider a lower square footage to require LEED certification on new commercial buildings

Our Project

Using out peer city data, together we chose two projects from each city that we would like to see Fayetteville implement. Projects were chosen based on feasibility, prioritization, and what we as University students would like to see happen in Fayetteville.

Install solar panels on the roofs of public schools and require city employees to earn National Environmental, Safety, and Health Training Association certification (NESHTA).

Possible Adaptations for Fayetteville:

- Offer incentives for businesses to earn EHS certification as well

Columbia, Missouri



Left: solar panel installation on public school
Right: NESHTA logo

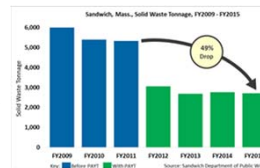


Burlington, Vermont

Explore a residential “Pay As You Throw” program and implement photovoltaic panels on City owned buildings.



Left: City airport with solar PV panels on roof
Right: Pay As You Throw program effect on waste tonnage



Possible Adaptations for Fayetteville:

- Discounts for people who recycle
- Solar panels on University housing

Conclusion

Our project relates to all sectors of sustainability. It relates to natural systems because we chose projects that will help decrease greenhouse gas emissions in the atmosphere; it relates to social systems because we realize how much compromising must be done between people in power and the community to achieve these goals; it relates to managed systems because proper management and business sense will be vital in accomplishing the projects; and finally it relates to built systems because some of these projects stem from the goal to make existing and new buildings more sustainable. In all, we believe our project to be encompassing in all the areas of sustainability and believe it could benefit the City of Fayetteville as they draft an Energy Action Plan, apply for STAR credit, and set future goals for the City.