

Team Econauts

Almut Schoffers, Bryan Elsenbeck, Chris Sioufi,
Daniel Barfield, David Chin
EAS 3110: Energy, Environment, and Society



Introduction

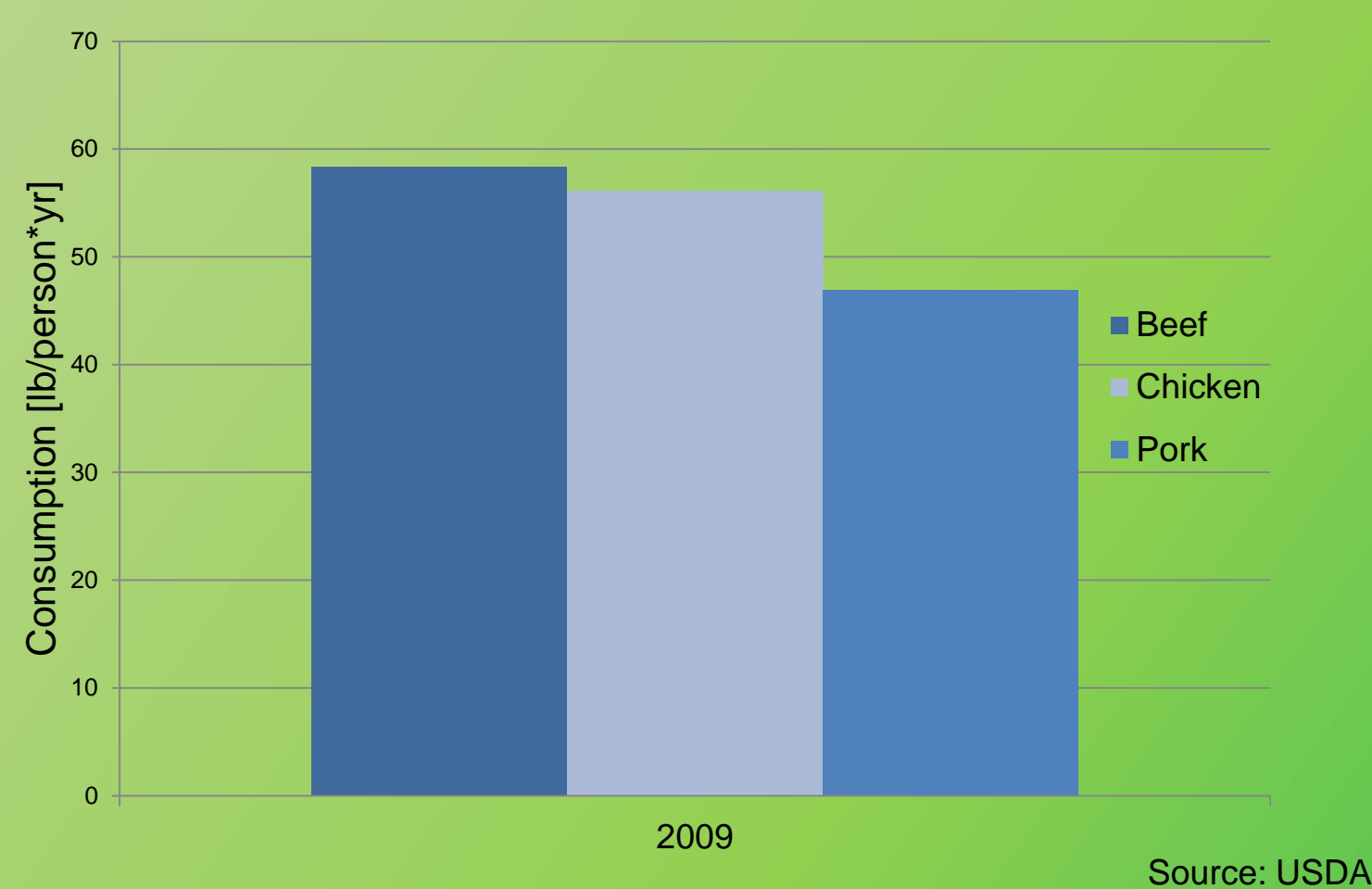
Concerns of global warming have brought on the necessity to lower carbon emissions. A viable approach to accomplish this task is through offsets not directly related to the production of energy. "The carbon Reduction Challenge" was a semester long project in which students competed to reduce CO₂ emissions by at least 10,000 lbs. Our group accomplished this by recruiting individuals to reduce their red meat consumption and thereby offset the carbon emissions associated with red meat consumption.



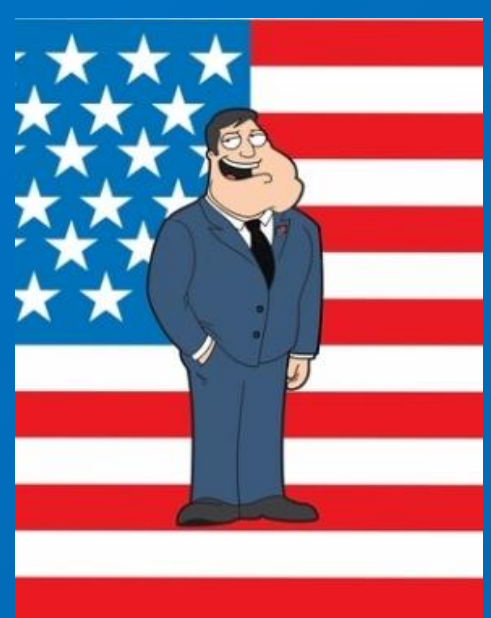
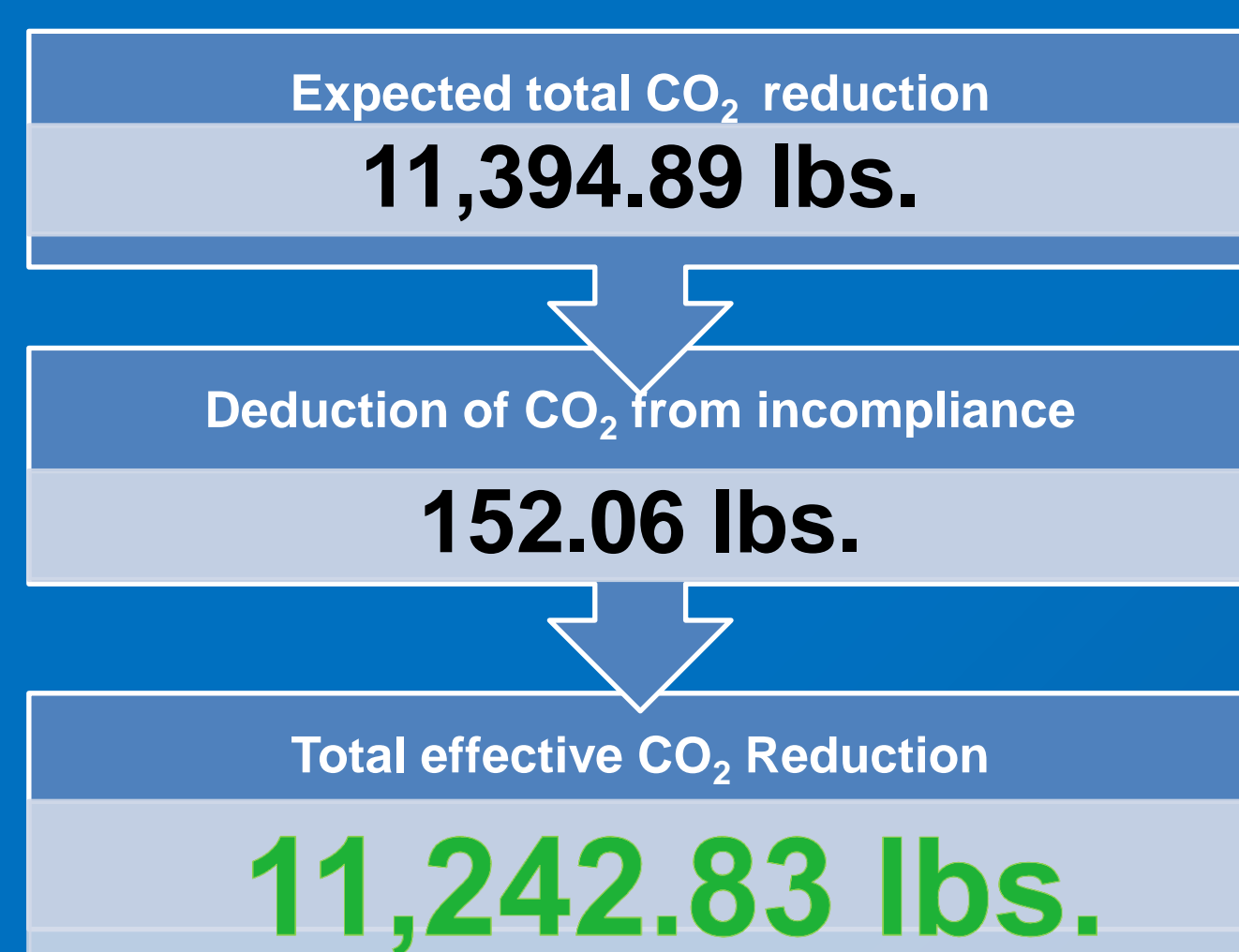
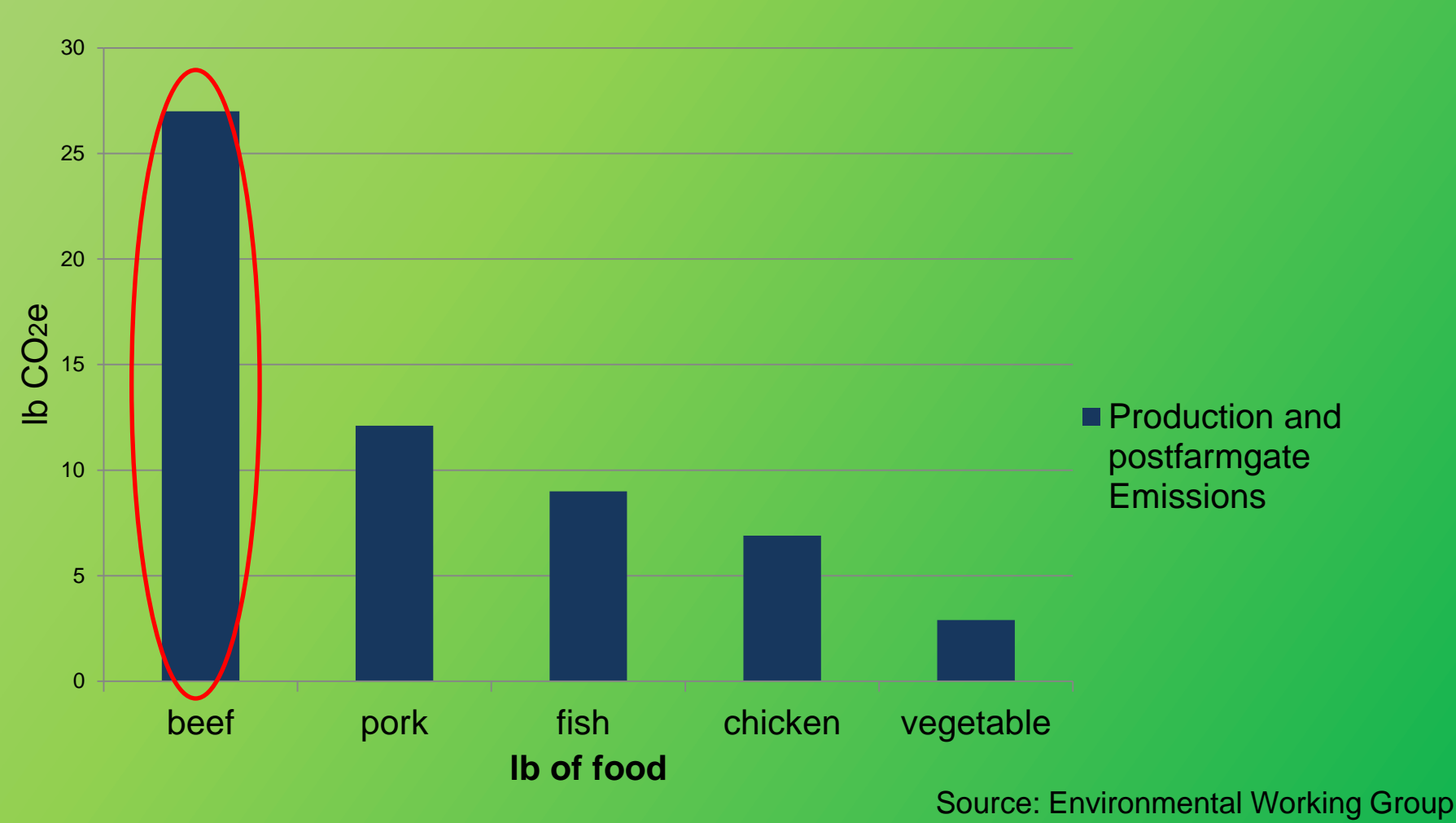
Background

Average Annual Meat Consumption in the US in 2009

Beef with the highest consumption per capita



CO₂ equivalent emissions of common meats



...is about what a Honda Civic emits per year



... is one third of an American's carbon emissions in an entire year

Implementation

Online Pledge

Social Media



Active Recruitment



The online pledge, made on SurveyMonkey, was used to account for participants' typical meat consumption, gather contact information, and track commitment. We turned to Facebook as a means of recruitment and also recruited participants in person.

Data Collection and Interpretation

Organization of Participant Information

Name	e-mail	beef consumption [d/week]	beef replacement [d/week]	total without beef [d]	replaced with pork	chicken	Vegetable	Fish	CO ₂ reduction [lb]
Almut	-	1	1	= # weeks * # day/week	0	0	1	0	36.68
Bryan	-	6	6	48	0	1	1	0	269.12
Daniel	-	6	6	48	0	1	1	0	269.12
David	-	6	6	48	0	0	1	0	293.48
Chris	-	4	4	32	0	0	1	0	195.65
Giulio	-	2	2	16	0	1	1	0	89.71
Chris	-	5	3	24	0	1	0	0	122.38

Emissions Reduction Equation

→ (days with beef) * (average beef consumption per day in US in lb) * (CO₂ eq. for beef)

Assumptions

→ Intake of replacement is equal in terms of lbs
→ CO₂ eq. based on average of replacement foods

Now imagine...

If every American citizen replaced just one beef meal per week with a vegetarian meal...

1 meal per week



Source: Georgia Power
Source: Science Daily

...they would reduce the CO₂ equivalent of 2.5 times Plant Bowen's emissions in a year

Conclusion

Trying to make a difference for our environment through reducing carbon emissions does not have to end here. We believe we raised awareness of the impact of beef consumption on our climate through this project. Hopefully, we demonstrated how small changes to our daily lifestyles can help resolve this environmental issue.