Agenda:

- Introductions
- Background
- Questions

Introduction:

- Discussed problem statement
- Explaining why we are speaking to user advocates, and Carol in particular
    - Carol works in the applied space
    - Agreement with FEMA: resilience analysis GIS tool
        - Combines population data and aspects of pop. data that can signify certain populations that might need more attention
        - Climate forecasts: temp. Extremes, changes in heat, heating degree days, cooling degree days
        - People might be priced out of the ability to purchase heating or cooling systems
        - Technical assistance: evacuation and shelter in place, supply chain (restoring flow during power outages)
        - Carol works closest with FEMA, used to work with the CDC
    - More on our problem statement
        - We need to select our audience
        - What problem can we solve? We are trying to figure out which direction to go in
        - What would be data/models/representations that would be helpful for you (Carol)
            - How to better prepare for extreme heat or extreme cold
            - Will be putting out heat index data
                - Vulnerable populations will be affected by the hotter days (affording ACs)
                - Dont have great data about who has ACs and who doesn't but they do look into the populations that are more at risk in extreme heat

Questions:

- Q: What do you see as the most pressing challenges or areas of concern related to energy security and marginalized populations that we should address in our research?
    - After Louisiana hurricane, they lost the power grid for a while
    - People need dialysis, some people had to drive hours to get treatment (what if they don't have vehicles?)
    - These things are stressing the grid, and what happens when people can't afford to keep cool or stay warm?

        - Need to understand who is most vulnerable
            - Look at the parameters that'll help control the situation

- Q: How do policies affect the rapidness of disaster response, and what types of analysis tools are used to design plans of action in a timely manner?
    - Building codes are a huge issue
        - Used to focus on hurricanes
        - More movement on building codes for wildfires
        - Haven't seen building codes for extreme temperatures (heat index is a concern
        - How should we look at building codes in terms of extreme temperatures, how should they change them after considering heat index
    - FEMA is response oriented, keep RAPT available for states to look at vulnerable populations/communities
        - FEMA is not responding right away, local responders are

- Q: Could you give concrete examples of communities which have experienced a rise in resilience and how this came to be? Were there any factors in increasing resilience ever surprising or unexpected to you?
    - Looked across the literature of CIRA methodologies
    - What makes communities more or less resilient
    - Look at variables used to make CRCI
    - None of the methodologies have been compared across disasters (there's recurring disasters like in Louisiana)
    - Q: different types of audiences, could you give us a specific audience that would make our research have an impact
        - We have to decide what aspect of the problem
        - How do we want to focus on looking at future energy security from the perspective of how lower income people and older adults may not be able to afford increasing costs of living in the increasingly cold/hot environments
        - APA for building codes
- Q: introduce RAPT
    - You can look into a specific population
    - Zoom into area of interest
    - Different infrastructure layers, infrastructure where people might be more vulnerable (like wastewater treatment plants, nursing homes)
    - In Philly, there's inspectors to check the temp in nursing homes
    - Can include hazard layers
    - Sample layers
        - Cooling degree days
        - Change in cooling degree days in mid century
        - Utilities look at this from a loading standpoint

        - Our POV might be looking at communities with higher cooling degree days that might not be able to afford these days
    - We might want to look at households by race, not a common indicator for methodologies
    - Populations with disabilities by census tract
        - Urban locations, the darker the color the more challenges they have for resilience
    - Age: older adults could be more susceptible to losing energy
    - Below poverty populations
    - Income inequality
    - Datasets are from American community survey census (updated every year)
    - Look at the data we found relative to RAPT's data sources by putting in the URL
    - Can export the data in RAPT to a csv file
    - Incidence analysis tools
    - RAPT puts everything into one place, **could create a layer as a tool and add it to RAPT**
    - Can look at all the factors in one place

Closing:

- Carol is interested in seeing the tool we create

Reflection:

- Have one spokesperson direct message team members to see if anyone has questions they would like to ask – hand over the floor to that person