Frequency of Renewable Energy Keywords Based on Locational Analysis

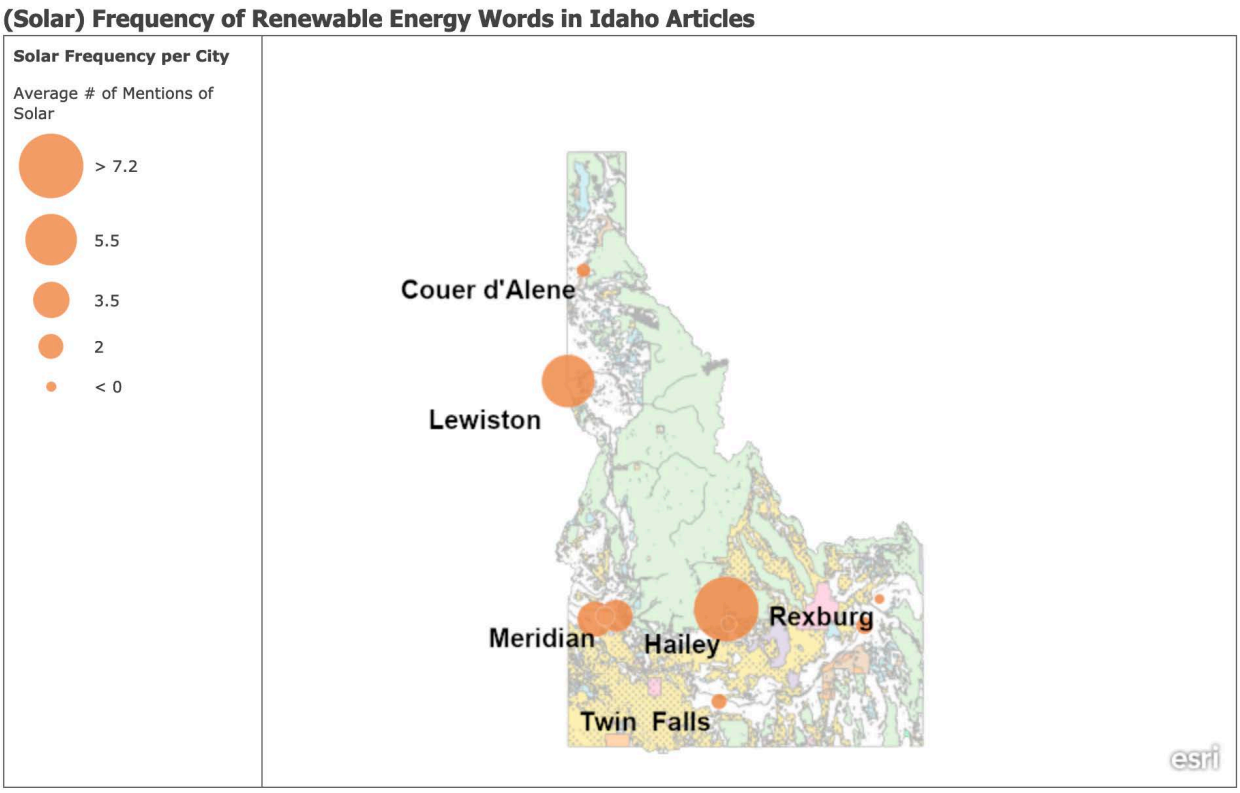

Figure 1: Spatial Representations of the average number of times the word "solar" was mentioned in each cities set of articles. This figure was generated with ArcGIS. Labels for each city are to the bottom left. If labels overlap, the city with the highest values' label is displayed

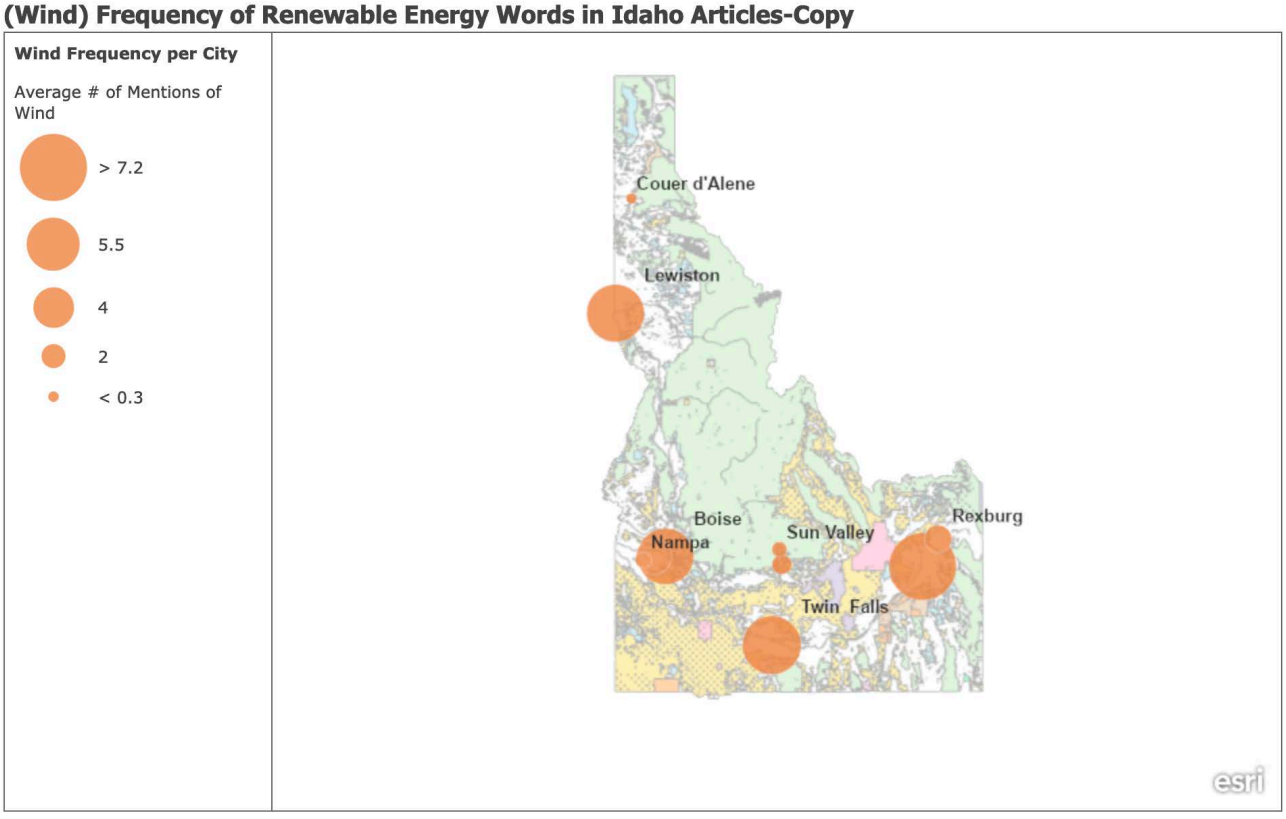

Figure 2: Spatial Representations of the average number of times the word "wind" was mentioned in each cities set of articles. This figure was generated with ArcGIS. Labels for each city are to the top right. If labels overlap, the city with the highest values' label is displayed

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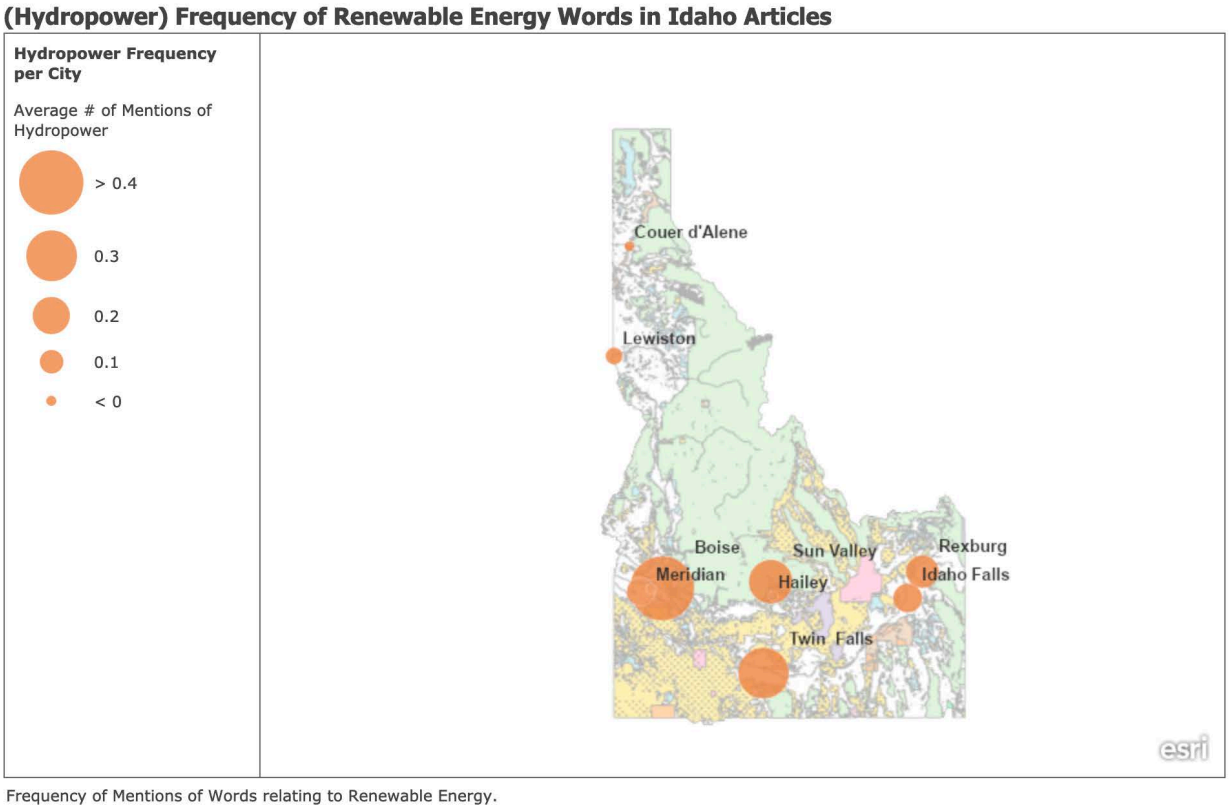

Figure 3: Spatial Representations of the average number of times the word "hydro" was mentioned in each cities set of articles. This figure was generated with ArcGIS. Labels for each city are to the top right. If labels overlap, the city with the highest values' label is displayed

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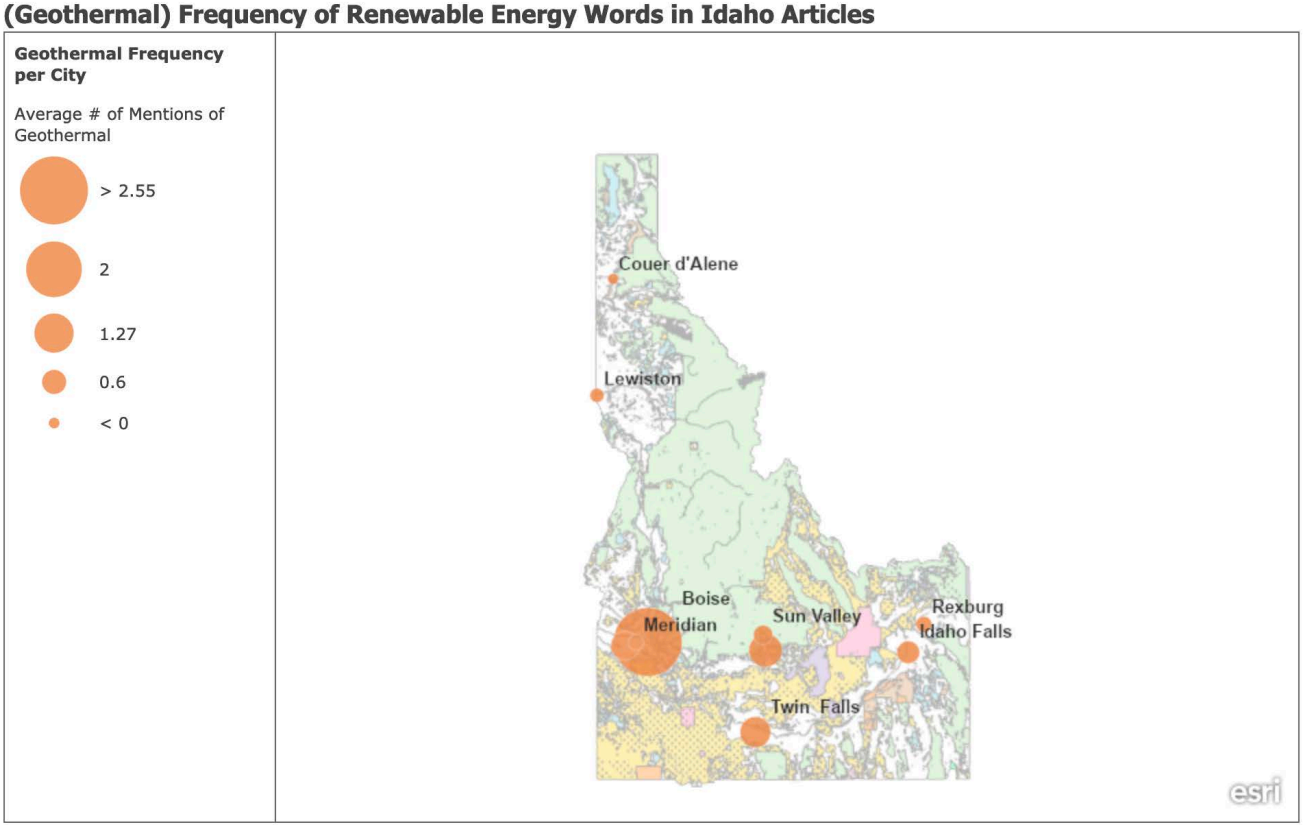

Figure 4: Spatial Representations of the average number of times the word "geothermal" was mentioned in each cities set of articles. This figure was generated with ArcGIS. Labels for each city are to the top right. If labels overlap, the city with the highest values' label is displayed

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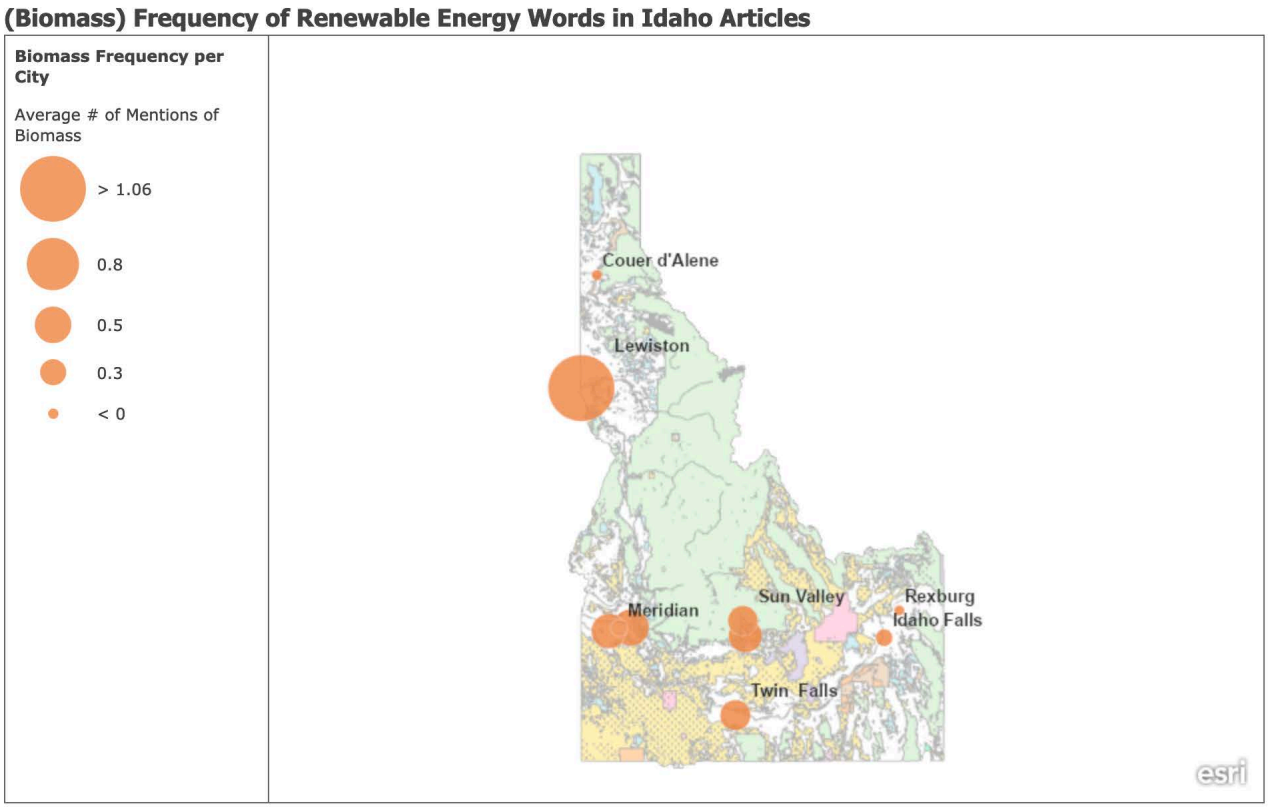

Figure 5: Spatial Representations of the average number of times the word "biomass" was mentioned in each cities set of articles. This figure was generated with ArcGIS. Labels for each city are to the top right. If labels overlap, the city with the highest values' label is displayed

Reflection

The first part of my research project using influence maximization will give us a sample answer into what cities to target to allow for the spread of renewable energy adoption. I wanted to use ArcGIS to in order to answer for my set of cities, what form of renewable energy is most popular. I modified a piece of my code to get the different word frequencies, and then used ArcGIS to map the frequency based on location. The number that represents the size of the circle is the total number of mentions of that word divided by the number of articles for that city.

Obviously this has problems in that it does not give much context. However, I am hoping that in-conjuction with my network analysis, this will give me a good sense of where to try and incentivize renewable energy projects, and what those projects will look like. There were some problems formatting where cities close to each other did not display the labels properly. I will hopefully fix this before my final project.

I also ran this on the corpus of articles, not the corpus of legislation. Though legislation may provide more details about each city's actual policies, I felt it better to use the corpus I was using in my network analysis.

These images are obviously static, but if you would like to interact a little more with each city or energy form, there is an interactive presentation here: https://bowdoincollege.maps.arcgis.com/apps/presentation/index.html?webmap=313f740e46a843dc81f22b265e35179d