



In partial fulfillment of the requirements for the degree of

Doctor of Philosophy
Leah C. Kunkel

will defend her prospectus

**Commitments to 100% Renewable Energy:
Adoption, Implementation, and Impacts**

Tuesday, January 12, 2021
1:00 PM (MST)

<https://asu.zoom.us/j/81232965709>

Faculty, students, and the public are invited.

Supervisory Committee:
Dr. Hanna Breetz, Chair
Dr. Nathan Parker, Member
Dr. Deborah Salon, Member

Abstract

US cities do not have a history of action on energy policy. This trend is beginning to change, however, due to a lack of federal action. As a new policy area, urban energy policy is understudied in academia and requires thorough analysis. Specifically, in the last few years, over 150 US cities have now committed to transitioning to 100% renewable energy (100RE). This dissertation will use three papers to examine the adoption, implementation, and impacts of these policies, respectively, using mixed methods and a progressively expanding scope. The first paper will use a small-n, qualitative case study approach to understand how 100RE policies were adopted in cities without a history of sustainability action. This will use Pueblo, CO as an initial case, with several shadow cases to confirm external validity of results. Next, implementation will be examined through a medium-n, mixed methods case study of California cities using Community Choice Aggregation (CCAs) to fulfill their 100RE commitments. Finally, the likely impacts of 100RE policies will be examined through a large-n, quantitative analysis of the Western US through the Switch model. This will be used to forecast the optimal renewable energy deployment to meet stated, nested commitment timelines at the city, county, state, and electric utility levels.