



# Resilient Wisconsin Menu: Energy And Efficiency sub-theme

By Calvin Dee , Shiba Kar

University of Wisconsin - Stevens Point, Center for Land Use Education

## Introduction

The Resilient Wisconsin Menu (RWM) project is an interactive and comprehensive framework for Wisconsin communities to utilize in order to enhance resilience to the impacts associated with disruptions from climate change and other systemic shocks. The RWM is a collaboration of the project team throughout UW-Extension offices and student researchers at UW-Stevens Point. The RWM includes a self-assessment for communities to conduct to identify strengths and gaps in local systems and guides communities to resilience and preparedness concepts and actions. The RWM also includes a menu offering flexible approaches that will allow decision-makers to select strategies to build a customized resilience response that makes sense for their community's unique environment, culture, and economy. Other publications (Tribal Climate Adaptation Menu, 2019) (Wisconsin's Changing Climate: Impacts and Adaptation, 2019) have sought to address this gap in readiness, but none that are so flexible to the needs of each specific Wisconsin community. For this poster, we will present the Energy and efficiency subtheme of the RWM. We have used resources from around the state and nation to create an assessment and compile a menu of possible strategies and supporting materials. We have created the energy and efficiency subtheme around the following topics: energy education, efficiency, generation, integration, and emission reduction. The RWM will be distributed through the UW-Extension system by using in "Train the Trainer" workshops for educators and will be accessible via a website for community use to be more climate resilient.



## Methods

- The first step was finding of the most prevalent energy issues that currently affected a wide range of communities within Wisconsin, and issues that would be exasperated by climate change.
- Next resources to help infuse diversity and equity into climate actions were found.
- Then developing score card questions for the assessment.
- Finally, many resources were included from different individual practices like solar on schools and biogas integration on farms but also included, were multiple resource to help impalement larger initiatives like micro grids and community solar.



## Results

- It was found that climate change has a large effect on how Wisconsin communities will be getting their energy. From an increase in more intense storm affecting energy infrastructure to an increase of temperatures putting an overall strain on energy infrastructure and loss of efficiency in energy production like coal fired power plants.
- Also found that there are multiple best management practices, sources, and tool kits for a community to become resilient to climate change and is shown in (Figure 1).

## Next Steps

- Some next steps for the menu
- additional resources and tool kits to be added to menu
  - feedback from community that used the menu
  - less resources that require online access

More costly	↔	Less costly
<ul style="list-style-type: none"> <li>- Micro grids</li> <li>- Community solar</li> <li>- Multibuilding independent energy grid</li> </ul>		<ul style="list-style-type: none"> <li>- Energy plan</li> <li>- WPS burying power lines</li> <li>- Change of ordinance for easy installation of on home solar</li> <li>- Advanced tree trimming</li> <li>- Improving highly venerable energy infrastructure.</li> <li>- Use of clean energy scoring tool</li> </ul>

## Acknowledgements

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## References

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## Discussion

Micro grids were found to be great way for communities to be more resiliency against the effects of climate change. Other less resource intensive solutions were found too. Some solutions only require action from the community or homeowner itself. For example, WPS offers powerlines from the transformer to the home to be buried at no cost to the homeowner, allowing for protection against falling trees. Of course, fixes like these allow for small gains in terms of resilience. After looking though many solutions it seems that a change to our energy systems is best when considering a cost benefit ratio as loss of power for extended periods of time may over weigh the cost of implementing some solutions.