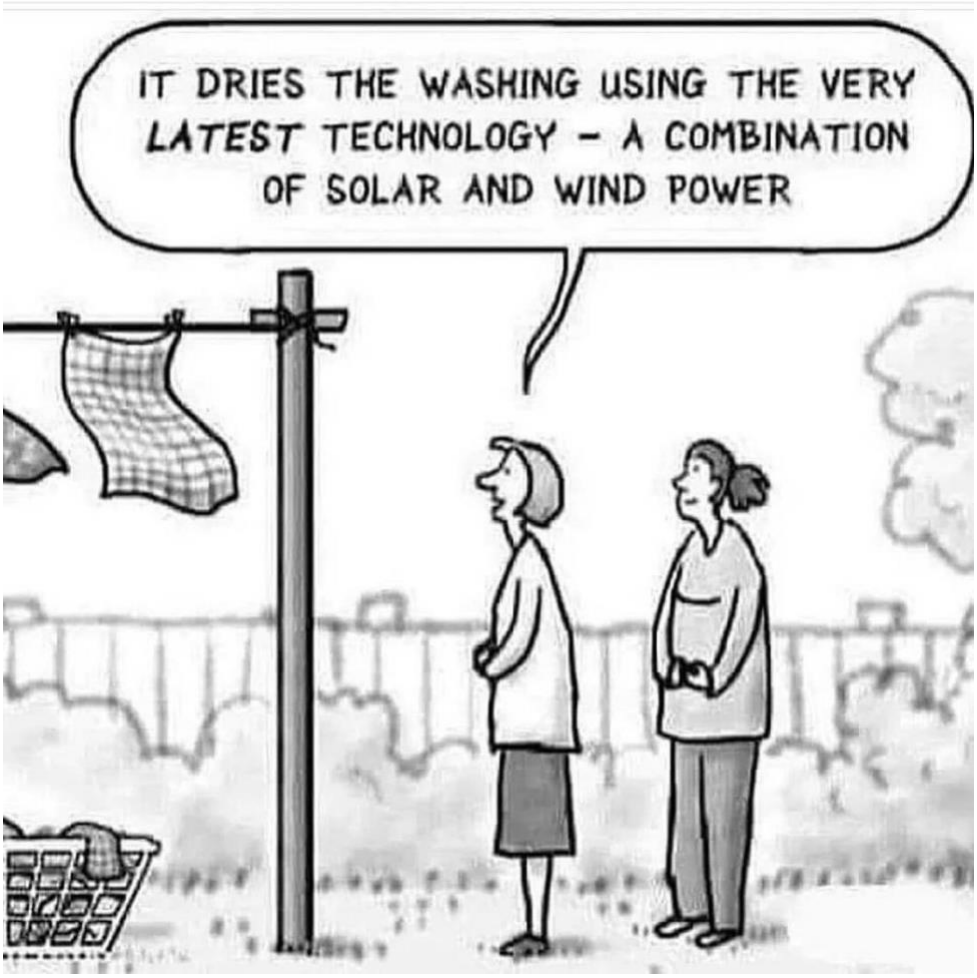

Green Notes: Weekly updates from First UMC's Green Team

How Can We Save More Electricity?

First UMC's recent application for a NorthWestern Energy E+ grant to help fund our solar panel project included a section detailing the environmental benefits of the proposed 66-panel array.

We thought you'd be interested in some of the calculations made by Ralph Walters, general manager at Missoula's SBS Solar, who helped prepare our application for the $46,322 grant.

Here's the introduction to the environmental benefits section:

This project directly contributes to Missoula city and county governments' pledge of 100 percent clean electricity by 2030. It also coincides with NorthWestern Energy's commitment to achieve carbon neutrality in its electric and natural gas operations by 2050.

With this installation, First UMC's CO2 emissions will be reduced by 53,121 lbs. per year, or 1,328,025 lbs. over 25 years, if all conventional electricity were generated via coal-powered combustion power plant. These calculations utilize 2.0 lbs. of CO2 per kWh.

So how much is 53,121 lbs. of carbon dioxide? What does that look like? Walters provided several useful comparisons. Every year, our solar panels would prevent CO2 emissions equivalent to those produced by a gasoline-powered passenger car driving 59,809 miles. Or to the emissions created by burning 36,659 lbs. of coal.

To eliminate a similar quantity of emissions by recycling, you'd need to stop 8.3 tons of waste from going to Missoula's landfill – every year that the sun provided our church building's electricity.

And don't forget: Because this solar project provides 80 percent of our electricity, it also reduces our electric bills by 80 percent. Every month, those 66 sun-loving panels will essentially "write a check" to our congregation!

Here's the question First UMC's Green Team is asking now: Are there places in our building where we can achieve additional energy conservation measures? Can we increase the percentage of our electric usage provided by the solar installation?

We already achieved significant conservation measures during our building's recent renovation. Forty single-pane windows were replaced with double-pane windows. Storm panes were fitted behind the stained-glass windows. We installed new high-efficiency toilets, auto shut-off sinks in the restrooms, motion-sensed and auto-off lights, and six solatubes for passive lighting. The old unzoned steam boiler was replaced with a hot water system that is zoned and includes a second "pony boiler" for low-demand periods.

Most recently, a crew of volunteers replaced all 180 lightbulbs in the sanctuary with new-generation LEDs – the most energy efficient bulbs on the market. These bulbs provide the equivalent of 100 watts of illumination, but only burn 13.5 watts of electricity.

Where else can we save energy in our building? Send your ideas to Sherry Devlin at sherrydevlin@gmail.com or Kathie Snodgrass at kathiewearsgreen@yahoo.com. Better yet, join First UMC's Green Team by contacting co-chairman Jim Gillison at james.gillison@msn.com.