# FW: Important issue about storage of renewably sourced electrical energy

Climate <Climate@montgomerycountymd.gov>
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**To:** [redacted]

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**From:** Dick Stoner [redacted]
**Sent:** Wednesday, December 16, 2020 12:20 PM
**To:** Climate <Climate@montgomerycountymd.gov>
**Subject:** Important issue about storage of renewably sourced electrical energy

**[EXTERNAL EMAIL]**

Hello,

Please add to this report ( Draft review public meeting was last night) that once renewable sources climb to over 50% of total electrical generation, then temporary storage becomes an important issue. This is because neither wind nor solar can generate 24/7 like coal, oil and natural gas.

An extensive amount of research is being done on how to most effectively store power from peak generation to peak usage periods. There is a lot of engineering being done, and this report will be remiss if it does not mention this subject. In fact, past 50% the storage factor becomes very important, and by 80% it becomes almost impractical to provide electricity 24/7 without brownouts or blackouts to some users. Please reference this study/review in video form, for the final report;

https://gef.stanford.edu/events/steven-chu-lessons-past-and-energy-storage-deeprenewables-adoption

## Steven Chu: Lessons from the Past and Energy Storage for Deep Renewables Adoption | Global Energy Forum - Stanford University

Nobel Prize-winning professor of Physics at Stanford University and twelfth U.S. Secretary of Energy Steven Chu explores the lessons learned from the 2009 American Recovery and Reinvestment Act, and how to achieve deep renewables penetration.

gef.stanford.edu



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Because it is not obvious to all members of the public and it is also in normal human nature to conclude that " WE need 100% renewable energy" -- this educational component should be included in the report to educate and inform the public, the staff and the elected officials within Montgomery County before any goals are declared. In fact the state of Maryland's 2050 goal seems to acknowledge this.

For reference, see the Riverside California effort to store energy by pumping water into an abandoned salt mine from which it can be pumped up to a higher elevation when solar and wind power are plentiful, and then used to generate electricity via a normal hydroelectric dam when demand is greater and generation is lower.

It is very important to educate those you might be inclined to declare goals over 50% renewable sourced electricity on the matter of storage. I think most rational people will agree that fossil fuels should not be 100% phased out, but reduced and therefore be a smaller part of our electrical energy generation than they are now.

Thanks for including a reference to storage in the Draft plan,

Dick Stoner
Rockville, MD