



April 22, 2016

Clean Energy Development and Services (CEDs)

## Project Updates from GIS Department

### Interactive Web Map Displaying GIS Results

Using ArcGIS online, GIS layers are exported to an Esri interactive map application. These applications are then imported into a website created and hosted here at the Center for Wind Energy at JMU. The layers on the map are:

- Property Parcels (Extracted from VGIN County Tax records)
- Open areas available for PV on the property (digitally drawn in GIS)
- Roof top area where PV could be installed (digitally drawn in GIS)

The link to the site is: <https://maps.cise.jmu.edu/public/wind/CEDSmap/>

This website is not intended for the general public but to pass on results and information in a visual manner.

The website currently consists of four web pages:

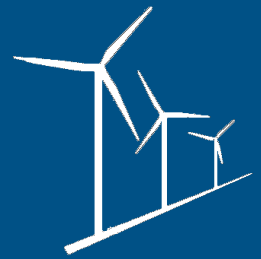
- Home page
- Corrections web map
- Department of military Affairs and State Hospitals web map
- Property information sheets webpage
- Excel Results are also available for download
- GIS Project updates are available for download

The website is designed to be used along with the results spreadsheet to view the properties.

- The corrections map search box is set to search the corrections facility by name. Use the results spreadsheet and type in part of the facility name to zoom to the site.
- The second interactive map displays both the State Hospitals and DOM Armory sites that are suitable for further analysis. There are only a few sites on the map so simply zoom to each facility.
- Each feature on the map has a pop up box displaying pertinent attributes.

### RESULTS

We have compiled [results spreadsheets](#) using Excel, listing the facility parcels and the DGS facilities located within those parcels. We have added the annual kWh values when available and performed calculations on how much PV may be placed in a parcel. These spreadsheets can be accessed by clicking the "Property Information Sheets" link on the home page or either map page and using the drop down boxes to select the item.



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Property information sheets have been created using data from the spreadsheets and includes snapshots of the GIS analysis, Google Earth 3d and Google Map imagery. Estimates for the size of array to meet the parcel demand are included as well as other pertinent site information.

### **Department of Military Property Parcels**

These facilities on the DGS list are National Guard Armories throughout Virginia. Most of these properties do not have enough available land for ground mount systems.

- There were a total of 32 facilities examined.
- Only two properties from the DOM were suitable for solar ground mount.
- Property sheets have been prepared for those properties that have the ability to host a large PV array and have enough of a demand to warrant closer examination.
- Properties that are not suitable for ground-mount solar will not be included in the results at this time. Our plan is to create a document that lists the property attributes and include a snapshot of the GIS to show why we rejected the property.
- If DMME decides a property on the rejected list requires further study, we can easily go back and review it. This may be the case when roof top PV projects are considered.

### **DGS State Hospitals / Department of Mental Health**

The State Hospitals were examined. There were a total of twelve facilities examined in GIS.

- 6 Facilities have the potential to host ground-mount solar PV and property sheets were created to display the appropriate information and are available on the website.
- The remaining 6 hospital properties may be able to utilize roof top PV and can be re-examined at a later date.

### **DMME Selected Properties (4/20/2016)**

DMME submitted a list of properties to be examined for the possibility of roof top mounted solar PV.

- 3 of the properties have already been assessed for the purpose of ground mount systems and property sheets have been edited to reflect the potential for roof top PV at these sites.
- The remaining 2 sites have been examined in GIS and property information sheets have been created outlining the potential for roof PV.
- These results and property sheets will be available for download on the CEDS website in the next few days.

Notes to DMME.

Any questions relating to GIS, interactive web maps, and property sheets should be directed to Philip Sturm at: [sturmpv@jmu.edu](mailto:sturmpv@jmu.edu)

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Please let us know if there is additional information you would like added to the property sheets.