

PVMapper: A Tool for Energy Siting



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PVMAPPER

Beta Version Release: An Open-Source GIS Utility-Scale Solar Siting Tool

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Agenda

- ▶ Project Objectives
- ▶ Potential End Users
- ▶ Software Differentiators
- ▶ Upcoming Project Activities
- ▶ Live Demonstration



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Project Objectives

- ▶ Develop an open source **GIS-based PV project planning** tool;
- ▶ Integrate the appropriate **data sets/layers**;
- ▶ Include **social risk** and public preferences;
- ▶ Provide a demo web site to run the tool, and a means for others to **download the code**; and
- ▶ Provide a **sustainability plan** to ensure future relevance of the tool.



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Potential End-Users

- Utility-Scale Solar Developers
- Utilities
- Authorities Having Jurisdiction (AHJs)
- Data Providers
- Environmental Consultants
- Financiers
- Entrepreneurs



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Wolf Hill Site, NJ - Detail Report

Properties

- Overall [0.00]
 - Energy [205]
 - Environment [272]
 - Endangered Species [35]
 - Cultural Resources [78]
 - Zoning [36]
 - Soil [18]
 - Geology [6]
 - Water [99]
 - Social [80]

Land Management	10	No data for this site
Land Use subtotal:		
Meteorology (2 Tools)		
Direct-Normal Irradiation	10	3.73 kWh/m ² day (0.009 MW)
Global-Horizontal Irradiation	10	3.91 kWh/m ² day (0.010 MW)
Meteorology subtotal:		
Transmission Availability (1 Tool)		
Nearest Transmission Line	10	11.8 km to 230 kV line operated by Jersey Central Power & Light Company 72
Transmission Availability subtotal:		72

CodePlex Project Hosting for Open Source Software

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AppHarbor.sln

Compare with other versions: [Select version](#)

```
Microsoft Visual Studio Solution File, Format Version 12.00
# Visual Studio 2012
Project("{2150E333-8FDC-42A3-9474-1A3956046DE8}") = ".nuget", ".nuget", "{15816071-81AD-4A3C-A68A-C8...}"
ProjectSection(SolutionItems) = preProject
.nuget\NuGet.exe = .nuget\NuGet.exe
.nuget\NuGet.targets = .nuget\NuGet.targets
EndProjectSection
EndProject
Project("{FAE04EC0-301F-11D3-BF4B-00C04F79EFBC}") = "Doe.PVMapper", "Doe.PVMapper\Doe.PVMapper.csproj"
EndProject
Project("{FAE04EC0-301F-11D3-BF4B-00C04F79EFBC}") = "Doe.PVMapper.Tests", "Doe.PVMapper.Tests\Doe.PV...
EndProject
Global
GlobalSection(TeamFoundationVersionControl) = preSolution
    SccNumberOfProjects = 3
    SccEnterpriseProvider = {4CA58AB2-18FA-4F80-95D4-32DDF27D184C}
    SccTeamFoundationServer = https://tfs.codeplex.com/tfs/tfs03
    SccProjectUniqueName0 = Doe.PVMapper.Tests\Doe.PVMapper.Tests.csproj
    SccProjectName0 = Doe.PVMapper.Tests
    SccLocalPath0 = Doe.PVMapper.Tests
    SccProjectUniqueName1 = Doe.PVMapper\Doe.PVMapper.csproj
    SccProjectName1 = Doe.PVMapper
    SccLocalPath1 = Doe.PVMapper
    SccLocalPath2 = .
EndGlobalSection
```



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Future Activities

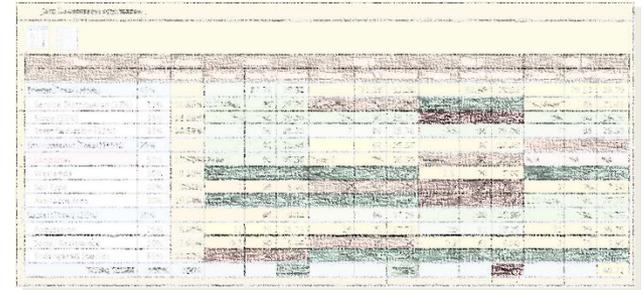
- Booth # 970 “BSU Energy Policy Institute”
- Formal and informal Beta-Testers
- User Advisory Committee





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Live Demo



- Log in securely to PVMapper;
- Create a project;
- Draw potential sites for comparison in the project;
- View the scorecard with the “score” from each site;
- Add and remove map layers;
- Change the weights of variables to match custom needs;
- See how each of these changes affects the values reported on the scorecard;
- and
- Interpret the values on the scorecard.



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Future Development Activities

Near-term (Completion by Nov)

- Import User-owned GIS data layers (e.g., Ventyx, potential site polygons, etc.)
- Complete Metadata for all GIS layers, tools, and scoreboard calculations
- Reporting Tool – print PDF of comparison results, including metadata
- Export to KML

Additional Functionality

- Switch tools On/Off from the Scoreboard
- Save Utility Function and Weight Score Line to database
- Location name search
- Connection with PVWatts/SAM
- Multiple Projects (save, load, etc.) under single login



Thank You for Joining!

Questions?

Please Direct Suggestions, Comments, Feedback, and
other Inquiries to:

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