Appendix I – Visualization Presentation

Sustainable Energy Parks

GIS Modeling

Conceptual Visualizations

- Site Identification
- Site Analysis

Energy Park Visualizations

Geographic Information Systems: State-Wide

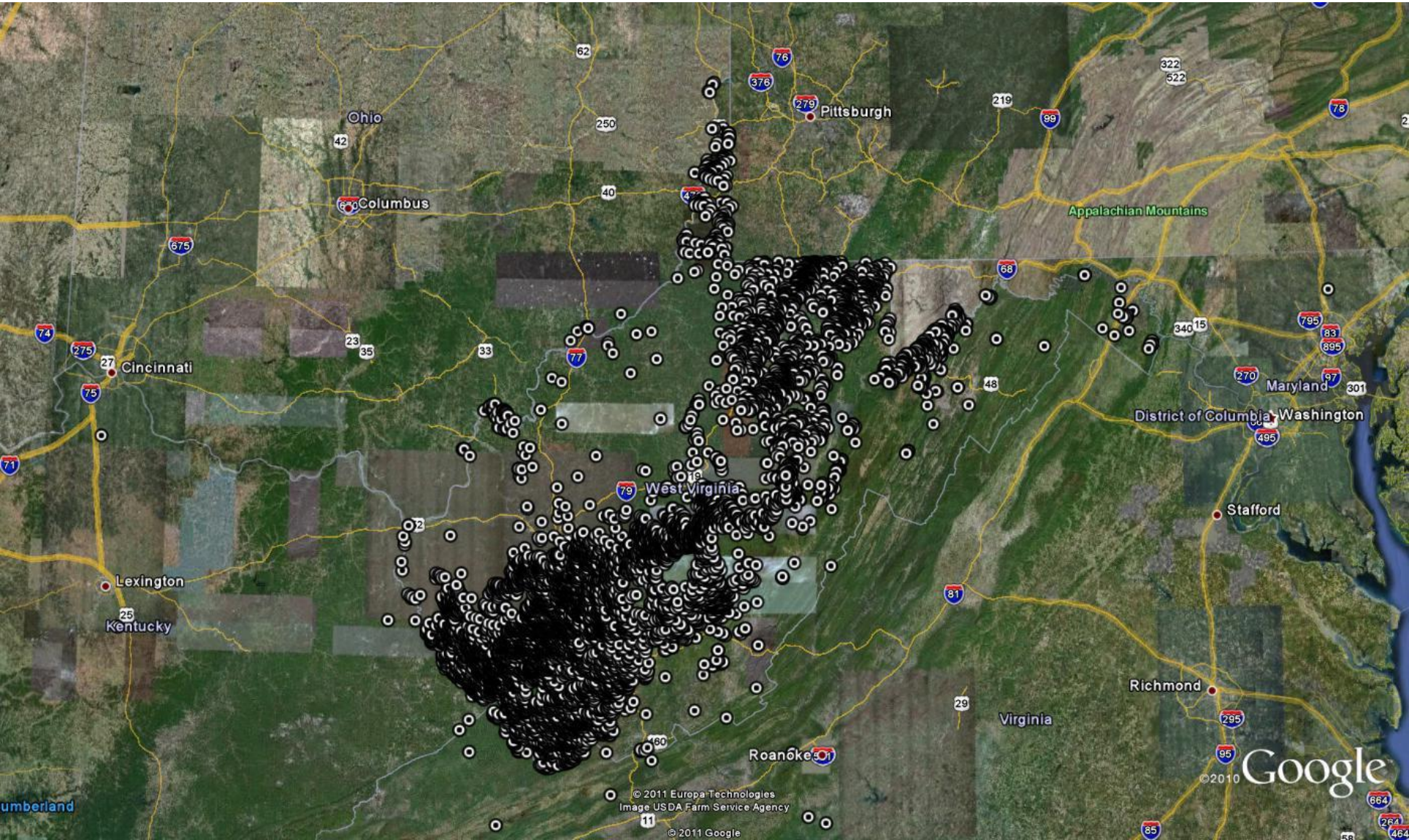
Identifying Site Suitability for Alternative Energy Generation

Types of Alternative Energy: Wind/Biomass/Solar/Geothermal

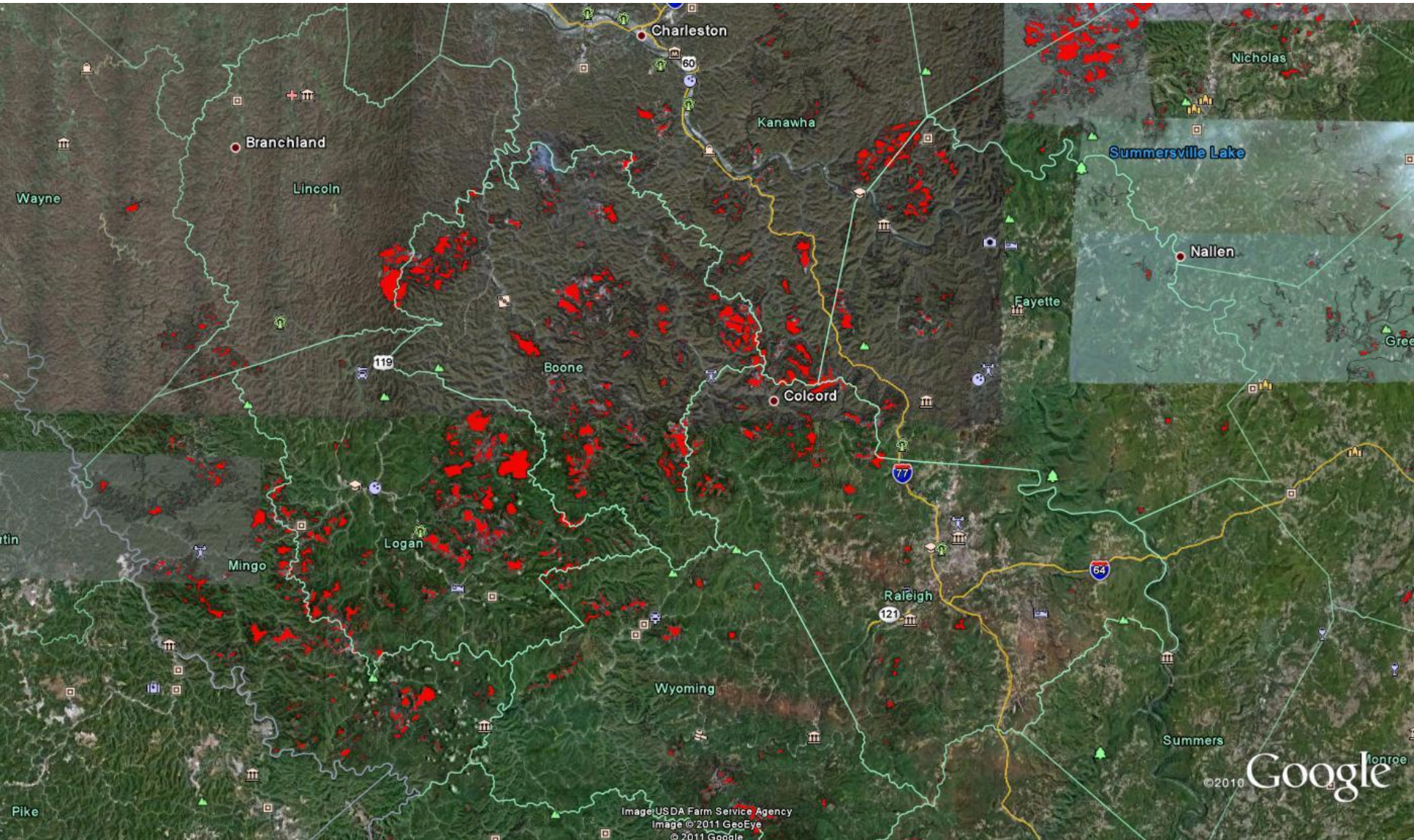
- WV DEP Mine Permit Site Data Layer
- Total of 35 criteria derived from GIS layers
- Some criteria used with more than one resource type

Examples of Data: Slope, Slope Aspect, Distance to Utilities, Distance to Railways, Distance to Highways, Distance to Population Centers, Surface Area, Existing Infrastructure, Etc…

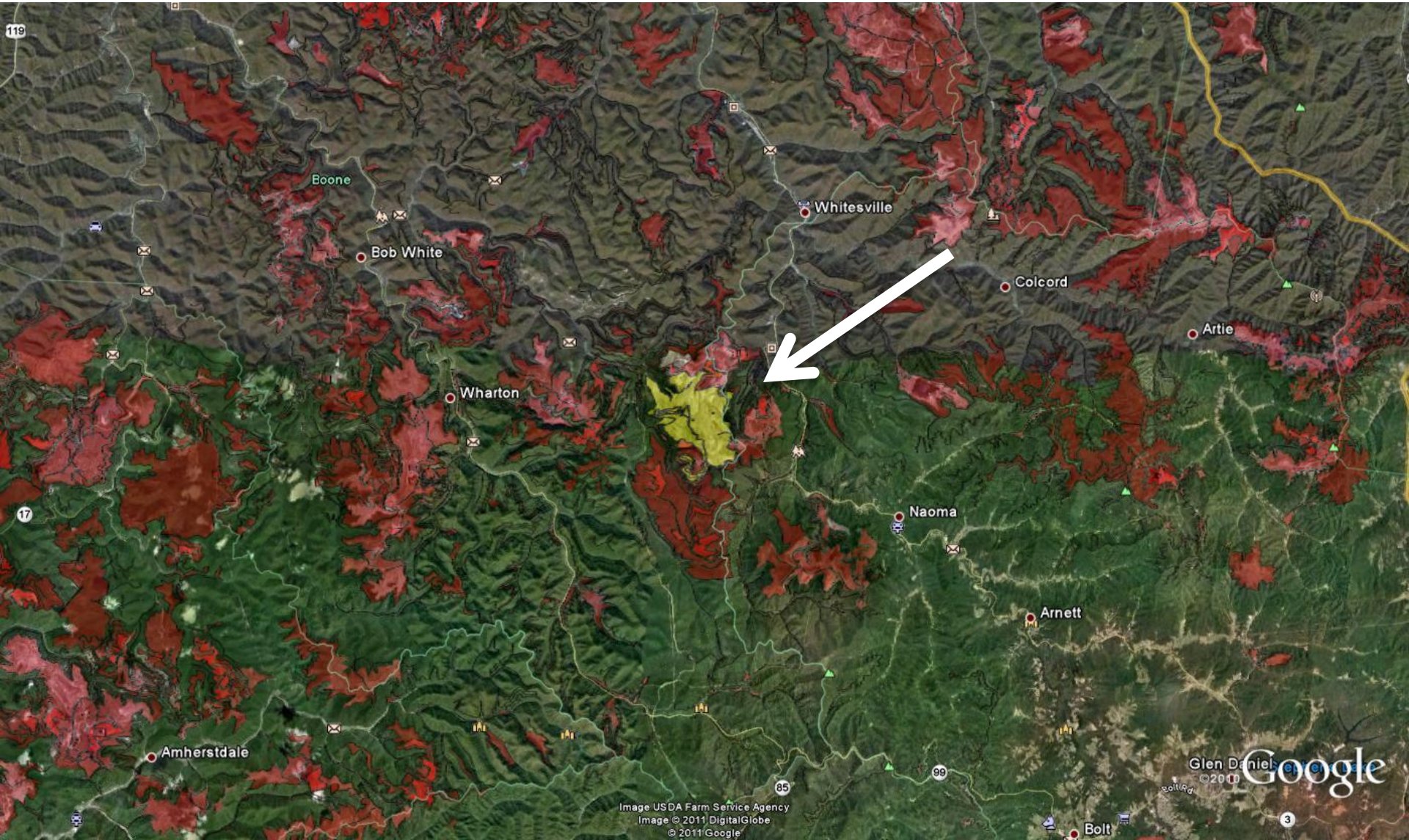
WV DEP Mine Permit Locations: points



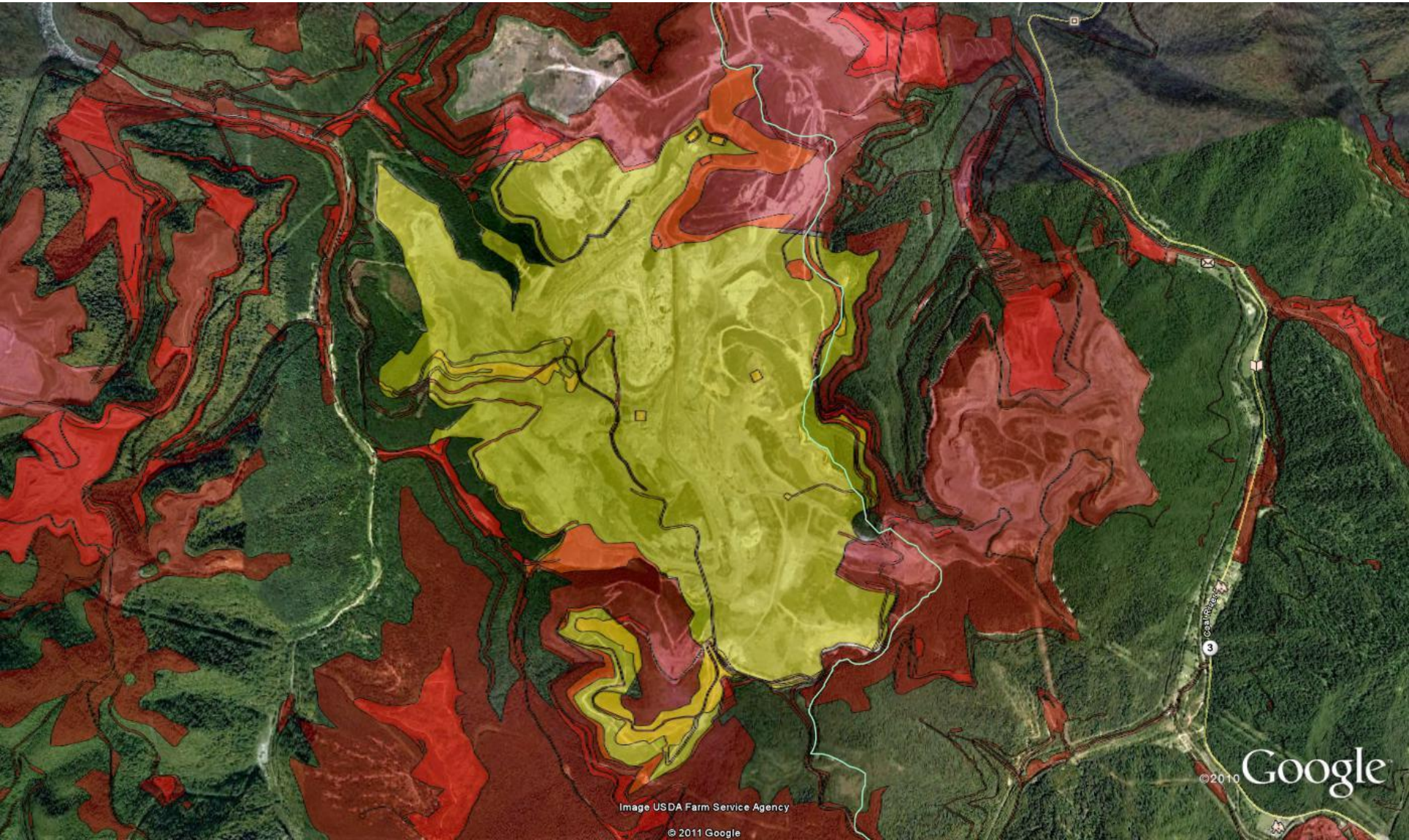
WV DEP Mine Permit Locations: polygons



Conceptual Suitable Site Identification: Local



Conceptual Suitable Site Identification



Site Specific Analysis Criteria

Slope

Slope Aspect

Soils

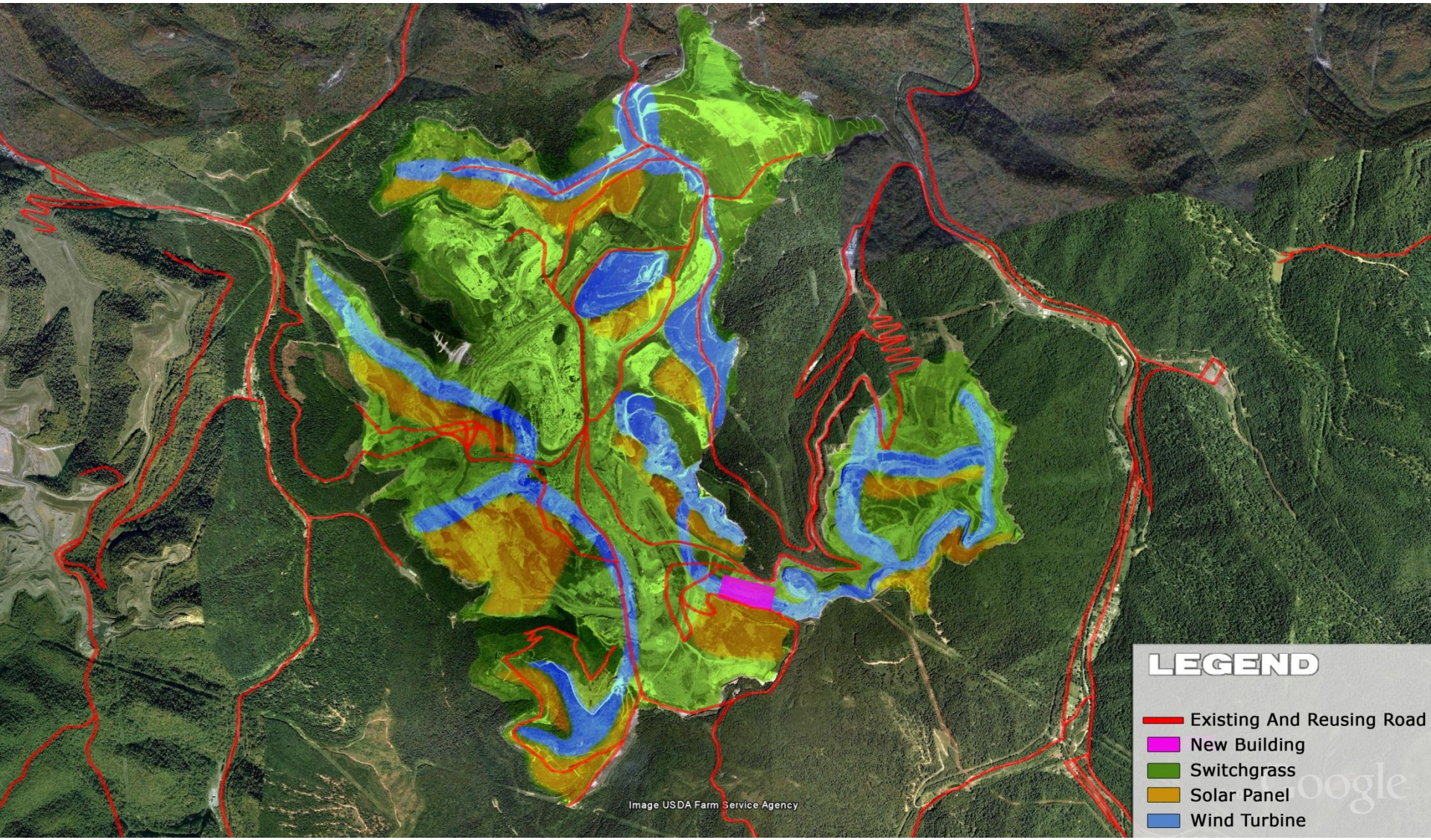
Utilities

Access

Structures

ETC…

Image USDA Farm Service Agency
©2010 Google


LEGEND
Existing And Reusing Road
New Building
Switchgrass
Solar Panel
Wind Turbine
Image USDA Farm Service Agency
Google

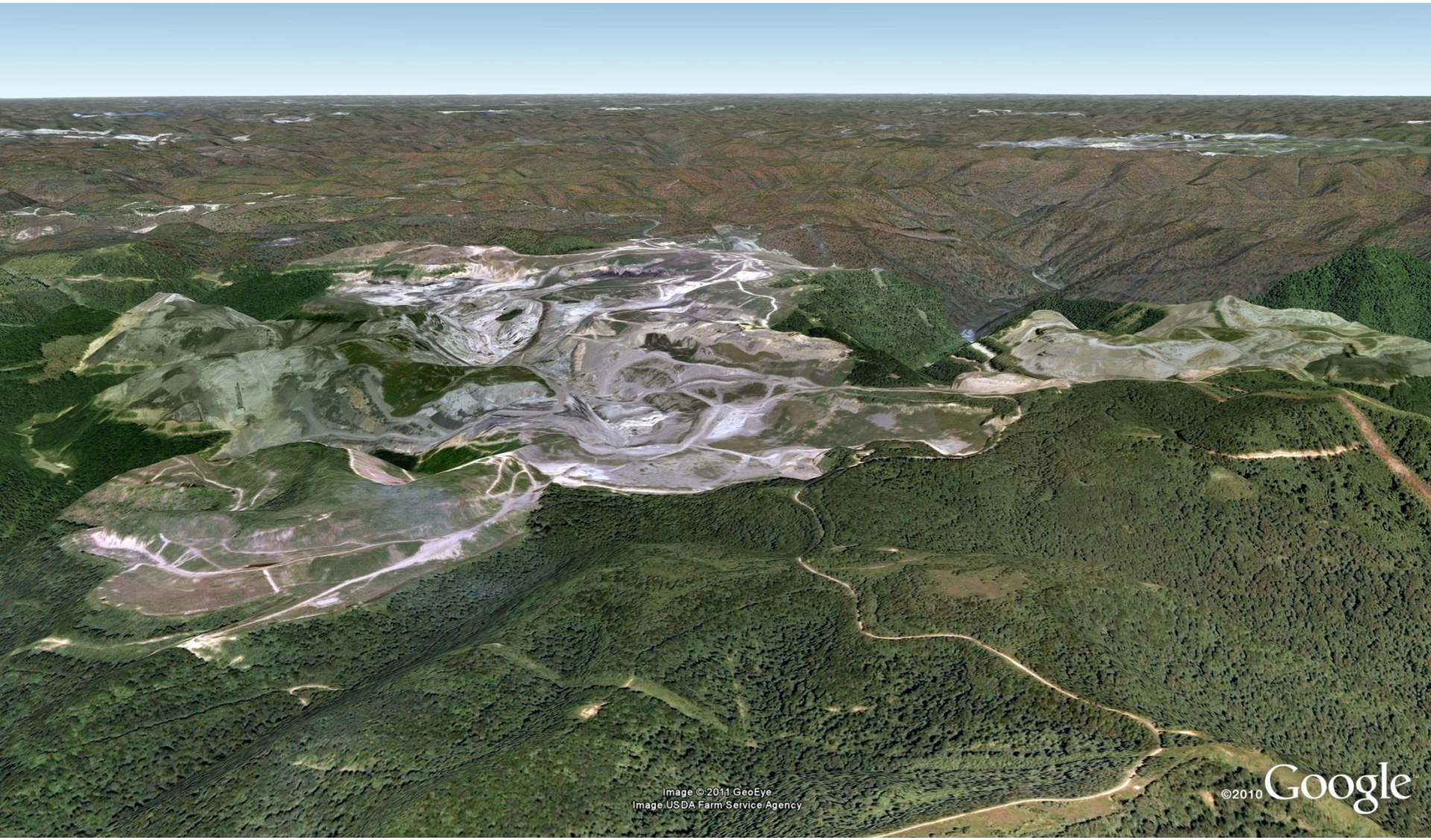
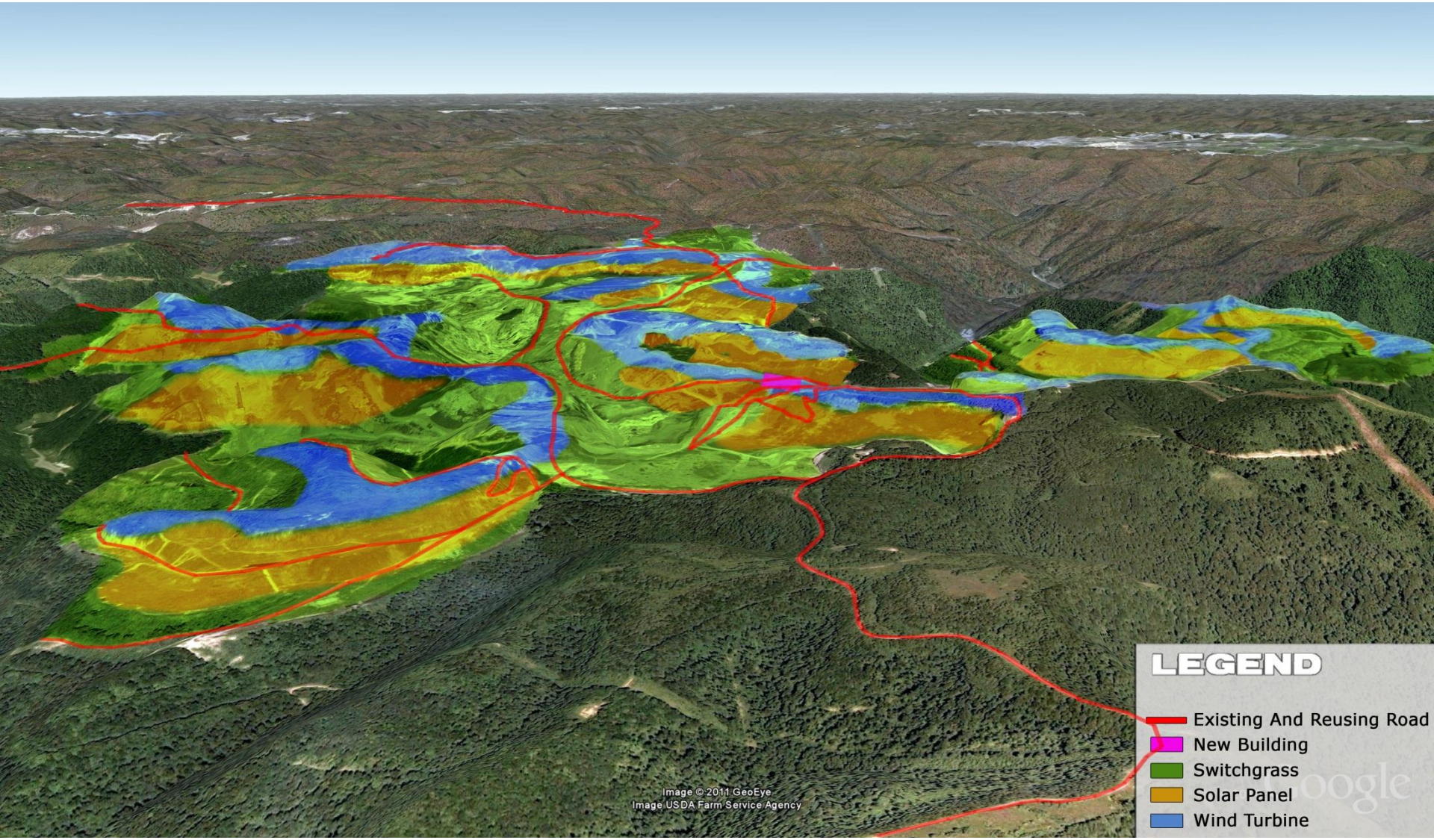


Image © 2011 GeoEye
Image USDA Farm Service Agency
©2010 Google


LEGEND
Existing And Reusing Road
New Building
Switchgrass
Solar Panel
Wind Turbine
Image © 2011 GeoEye
Image USDA Farm Service Agency

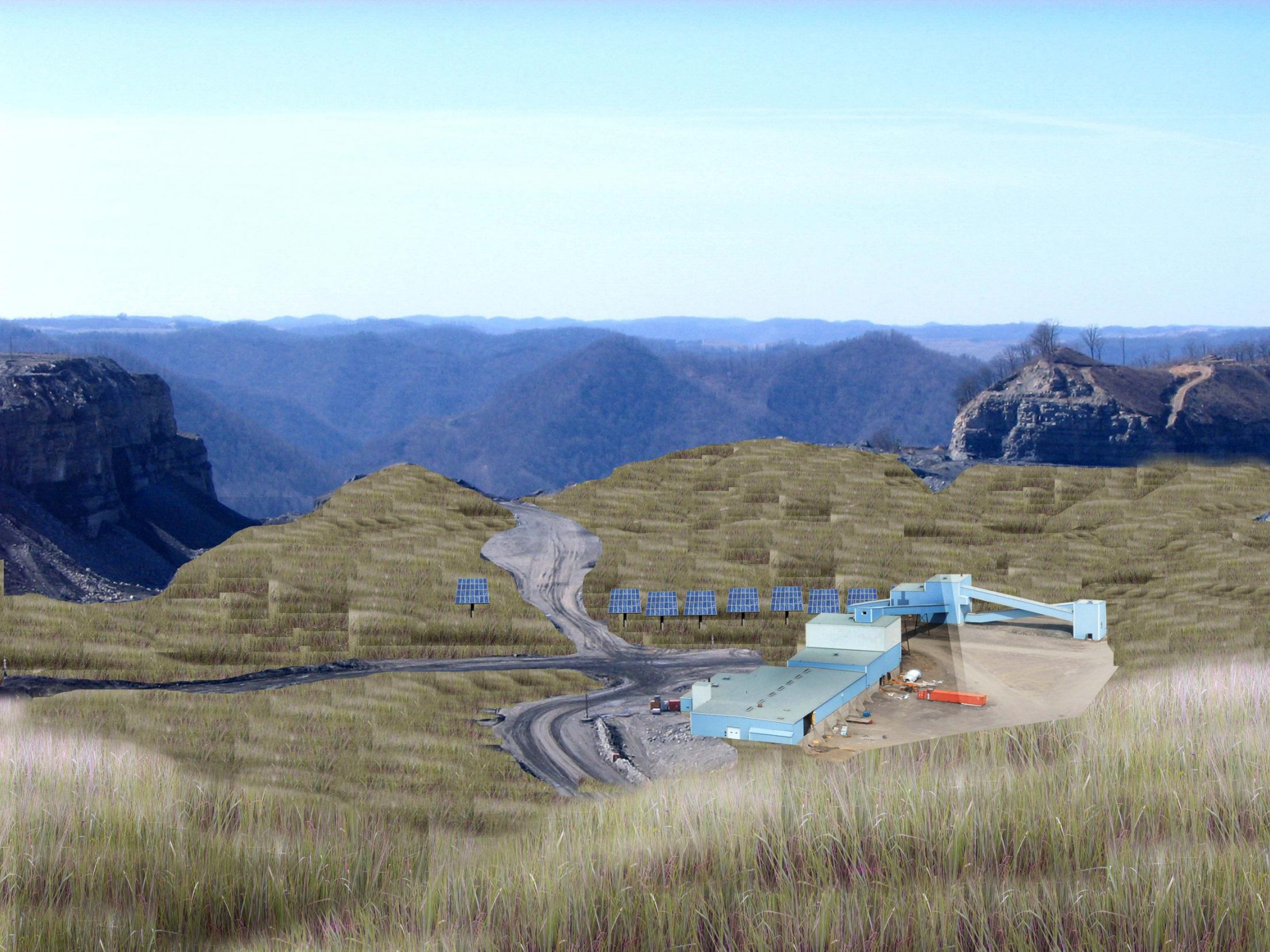
Energy Park Visualizations

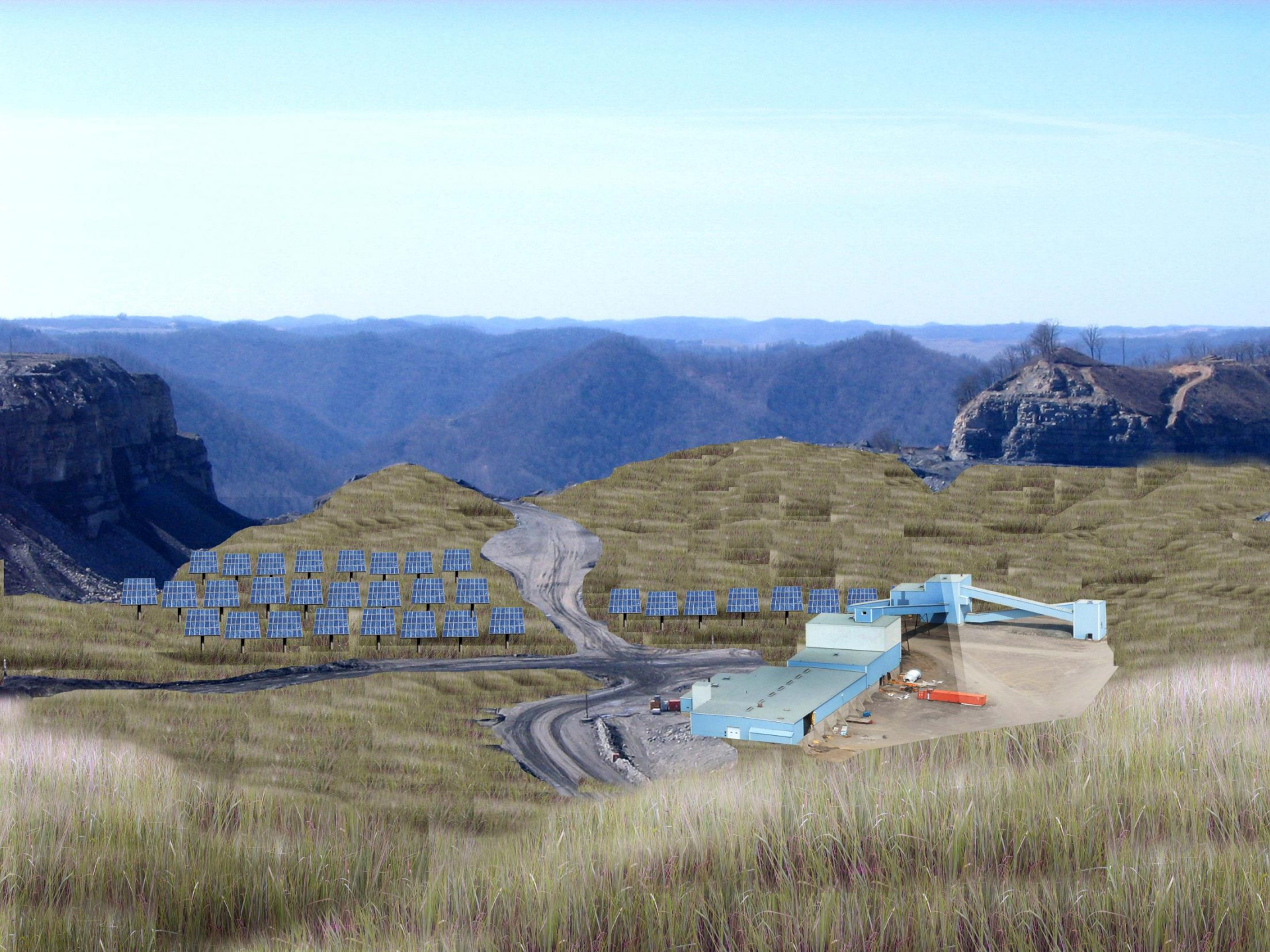
Implementation Planning following Site Suitability Analysis

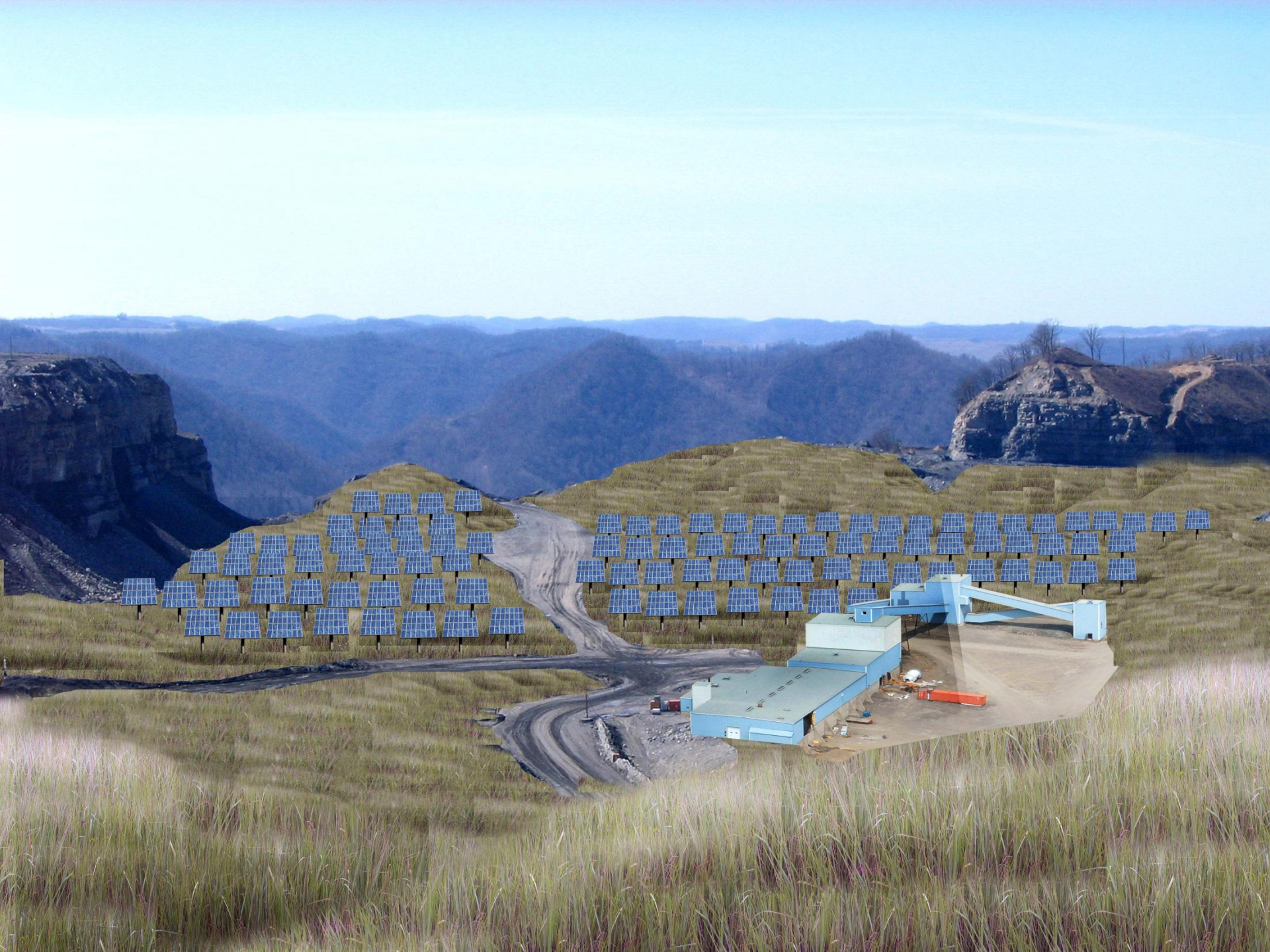
Wind: Turbines Selected Based on Local Suitability Model

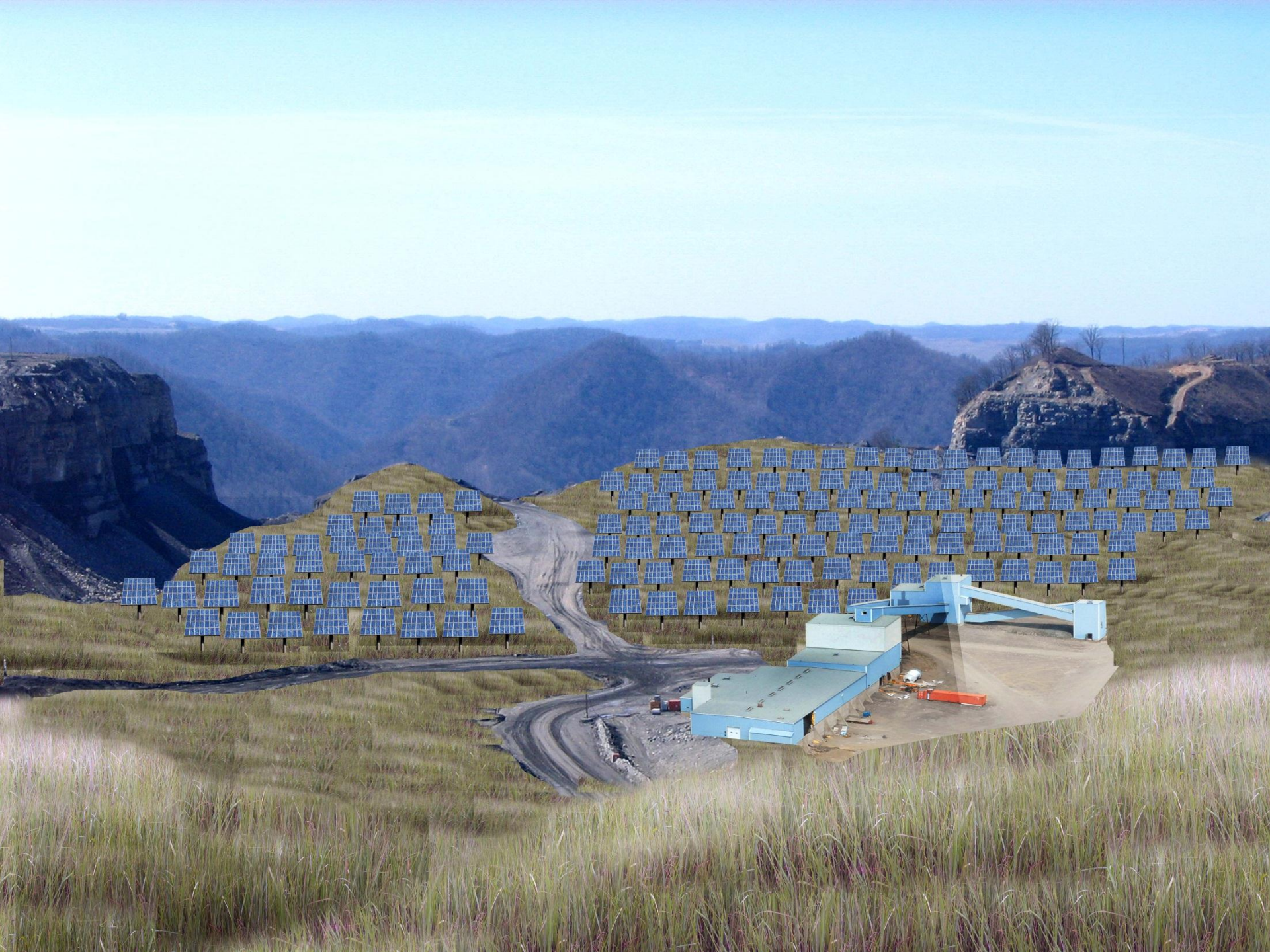
Solar: Selected and Sited Based on Local Suitability

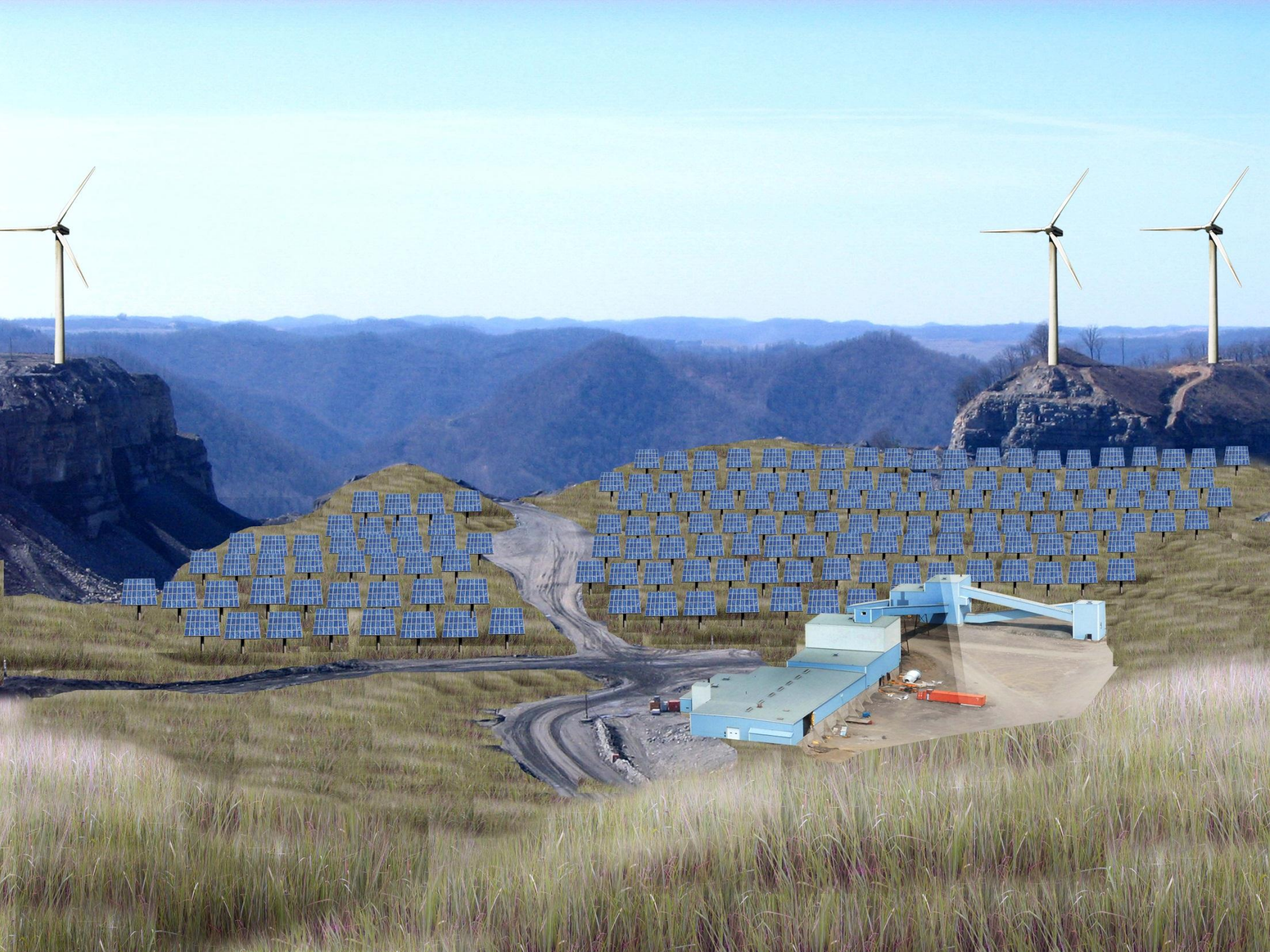
Biomass: Switchgrass (soils) and Pelletization Facilities





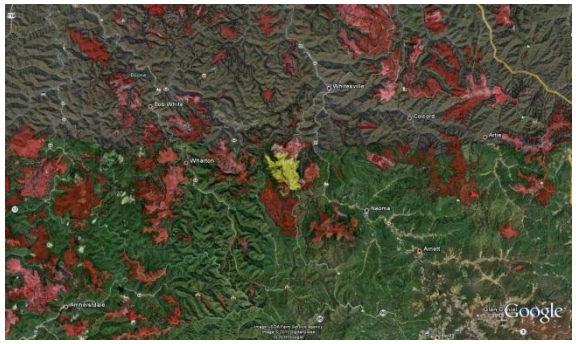






Sustainable Energy Parks

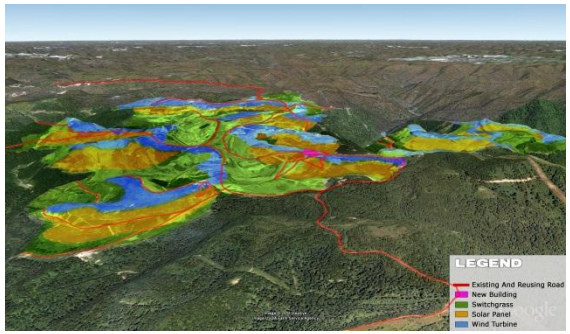
GIS Modeling



Conceptual Visualizations

Site Identification

Site Analysis



Energy Park Visualizations