(b) Geothermal Wells.

[1] All geothermal wells shall be designed and constructed to the standards outlined in Chapter 17 of the Montgomery County Public Health Code relating to Individual Water Supply, Irrigation Well, and Geothermal Well System Regulations. The applicant shall demonstrate compliance with all applicable regulations of Chapter 17 of the Montgomery County Public Health Code relating to Individual Water Supply, Irrigation Well, and Geothermal Well System Regulations.

[2] Only closed loop geothermal well systems designed for and using only nontoxic, biodegradable circulating fluids such as food grade propylene glycol, or standing column geothermal well systems shall be permitted.

[3] Open loop geothermal well systems, except for standing column well systems, shall be prohibited. Separate supply and reinjection wells shall be prohibited.

[4] Isolation Distances. The minimum required isolation distances as set forth in Chapter 17 of the Montgomery County Public Health Code relating to Individual Water Supply, Irrigation Well, and Geothermal Well System Regulations shall be maintained.

(c) See Article 5 of this Chapter relating to *Permitted Accessory Use or Structure Setback and Yard Exemptions/Modifications* in *Lot and Structure Regulations and Exemptions/Modifications (§ 208-507.B.(5))* for specific setback and yard modifications for above ground facilities not regulated by the MCHD as part of minimum required isolation distances.

(2) Solar Energy Systems.

(a) The design and installation of solar energy systems shall conform to applicable industry standards, including those of the ANSI, UL, ASTM, or other similar certifying organizations. The manufacturer specifications shall be submitted as part of the application.

(b) All on-site utility and transmission lines for solar energy systems shall be placed underground.

(c) See Article 5 of this Chapter relating to *Permitted Accessory Use or Structure Setback and Yard Exemptions/Modifications* in *Lot and Structure Regulations and Exemptions/Modifications (§ 208-507.B.(5))* for specific setback and yard modifications.

(d) Roof-mounted or wall-mounted solar energy systems shall be sited in accordance with the following:

[1] Solar energy systems located on a pitched roof of any building shall not extend vertically above the highest point (peak) of the pitched roof of the building, as viewed from the street line or lot line.

[2] Solar energy systems located on a roof of any building should be the same slope as, or parallel to, the pitched roof.

[3] Roof-Mounted Solar Energy System Setbacks from Roof Features. Roof-mounted solar energy systems shall be setback from specific roof features for fire and safety access. See Table 5-2.2 in the subsection below for the minimum required setback distances for roof-mounted solar energy systems from specific roof features:

TABLE 5-2.2
MINIMUM REQUIRED SETBACK –
ROOFED-MOUNTED SOLAR ENERGY SYSTEMS FROM
SPECIFIC ROOF FEATURES

BUILDING CONDITIONS	MINIMUM REQUIRED SETBACK
Residential Building	3 ft. from Roof Edge
Non-Residential or Mixed Use Building	6 ft. from Roof Edge
All Buildings	3 ft. from Roof Ridgeline
All Buildings where solar panels are installed on both sides of the roof hip or valley	1.5 ft. from all Roof Hips or Valleys

(e) If it is demonstrated that the solar energy system is unable to be located on a roof or a wall of a building as is preferred due to lack of solar access or insufficient structural load capacity, then placement of ground mounted, freestanding solar energy systems shall be provided in accordance with the following regulations:

[1] On a lot with less than twenty-one thousand seven hundred eighty (21,780) square feet and in residential use, no ground mounted, freestanding solar energy system shall be permitted.

[2] For purposes of determining the maximum area of all ground mounted, freestanding solar energy systems, the maximum area shall be considered the total area of the cumulative solar panels; where two (2) or more panels are grouped together, the total dimensions (length and width) of each panel shall be the cumulative dimension of the panels.

[3] The total area of ground mounted, freestanding solar energy systems shall count toward maximum permitted building coverage of the lot in the applicable zoning district and such ratio may be increased for any lot in each zoning district by an additional five (5) percent in order to accommodate ground mounted, freestanding solar energy systems.

[4] Stone stormwater infiltration trenches or other stormwater best management practices shall be installed to properly manage stormwater runoff from the solar panels in accordance with Chapter 172 of the LMT Codified Ordinances relating to Stormwater Management and Grading.

(f) All applications for solar energy systems shall include the information required for a plot/site plan approval pursuant to Article 10 of this Chapter relating to *Application for All Zoning Permits* in *Zoning Permits (§ 208-1002.B.)*. In addition, the applicant shall submit:

[1] A completed glare study ensuring that reflective glare is not directed towards nor upon any adjacent properties as well as any street rights-of-way. The glare study shall include:

[a] Angle of the solar collector system panels, arrays, cells, etc., at the location;

[b] A diagram showing the maximum and minimum angles of reflective glare from the solar collector system panels, arrays, cells, etc., at the location and the relationship of that glare to adjacent properties, structures, and rights-of-way; and,

[c] Mitigation plan that limits or eliminates reflective glare on adjacent properties and rights-of-way.

[2] Certification from a qualified, professional architect or engineer licensed and registered to practice in the Commonwealth of Pennsylvania that the proposed installation of the solar energy system will not exceed the structural capacity of the building or other structure, considering wind and other loads associated with any solar energy system, and applicable requirements of the IBC or IRC (as applicable) as referenced in the PA UCC as adopted pursuant to Chapter 82 of the LMT Codified Ordinances relating to Building Construction, as applicable. A certified copy of the structural engineering analysis for the building to which the solar energy system is to be mounted shall also be provided.

[3] Confirmation that the public utility company has been informed of the customer's intent to install an interconnected customer-owned generator and also approves of such connection. Off-grid systems shall be exempt from this requirement.

(3) <u>Wind Energy Systems</u>.

(a) The design and installation of wind energy systems shall conform to applicable industry standards, including those of the ANSI, UL, Det Norske Veritas, Germanischer Lloyd Wind Energies, ASTM, or other similar certifying organizations, or as approved under an emerging technology program such as the California Energy Commission, International Electrotechnical Commission, or any