Environmental Assessments

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Environmental Assessments

I. Geothermal Systems
II. Solar Energy Systems
III. Wind Power
IV. Questions

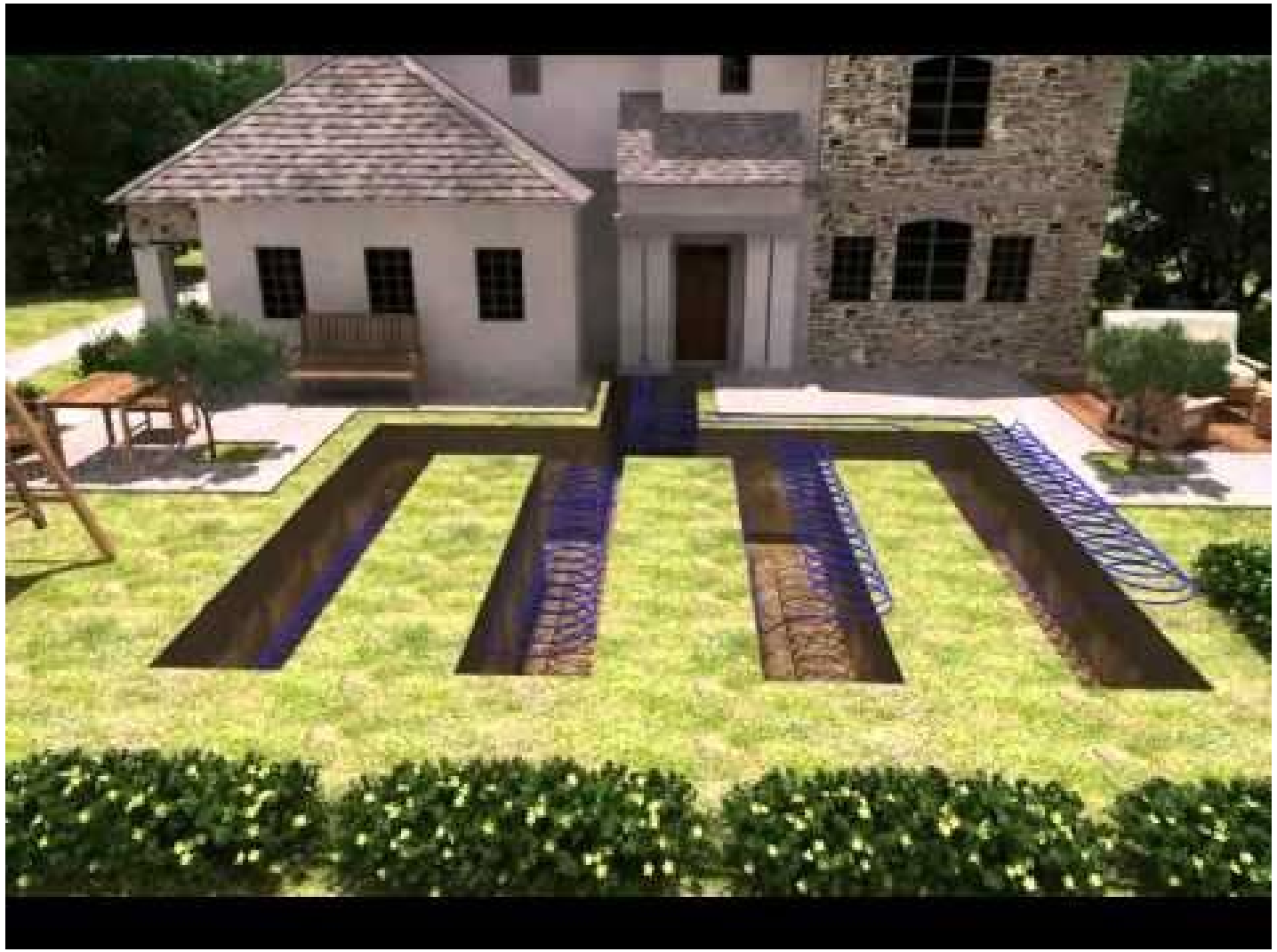
Environmental Assessments

I. Geothermal Systems

- Heating systems that use the Earth's stored heat or ground water to heat and cool dwellings.
- Can be independent or combined (a.k.a. split system) with existing fossil fuel heat source.
- Are able to be deducted from assessed value if certified by the Indiana Department of Environmental Management (IDEM) and file necessary paperwork (Form SES/WPD).
- The "no heat" adjustment for geothermal heating does not apply for a split system.

Real Property Assessment Guidelines – Chapter 3, Page 64-69

Environmental Assessments



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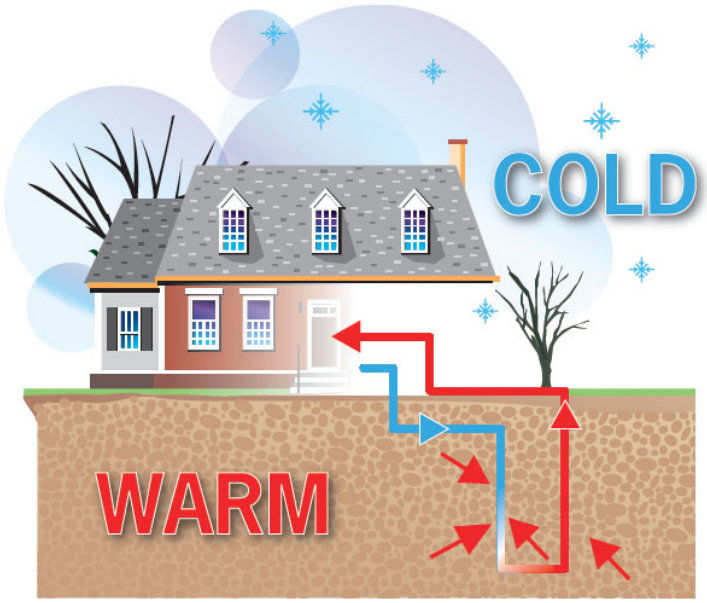
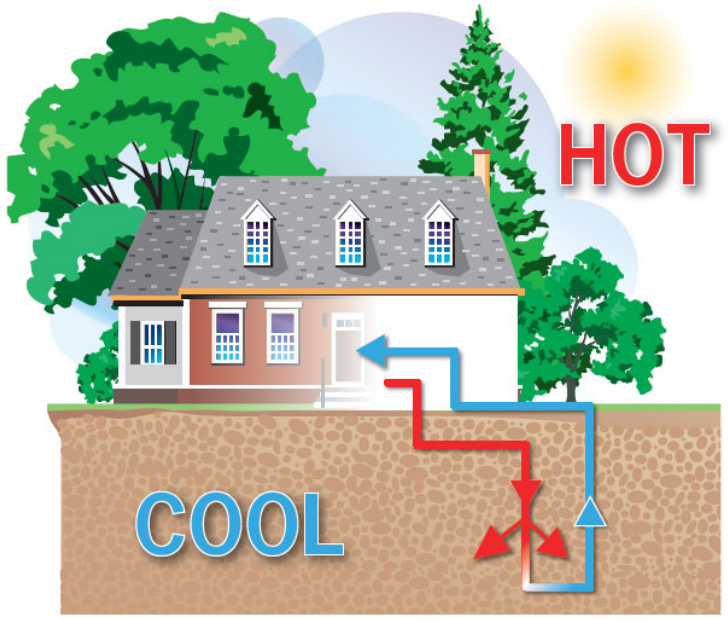


Heating

In the winter, water circulating inside a sealed loop system absorbs heat from the earth and carries it to the heat exchanger. Here, the water is compressed to a higher temperature and is sent as warm air to your indoor system for distribution throughout your home.



Cooling

In the summer, the system reverses and expels heat from your home to the cooler earth via the same closed loop system. This heat exchange system is not only a natural process but is a highly efficient way to create a comfortable climate in your home.

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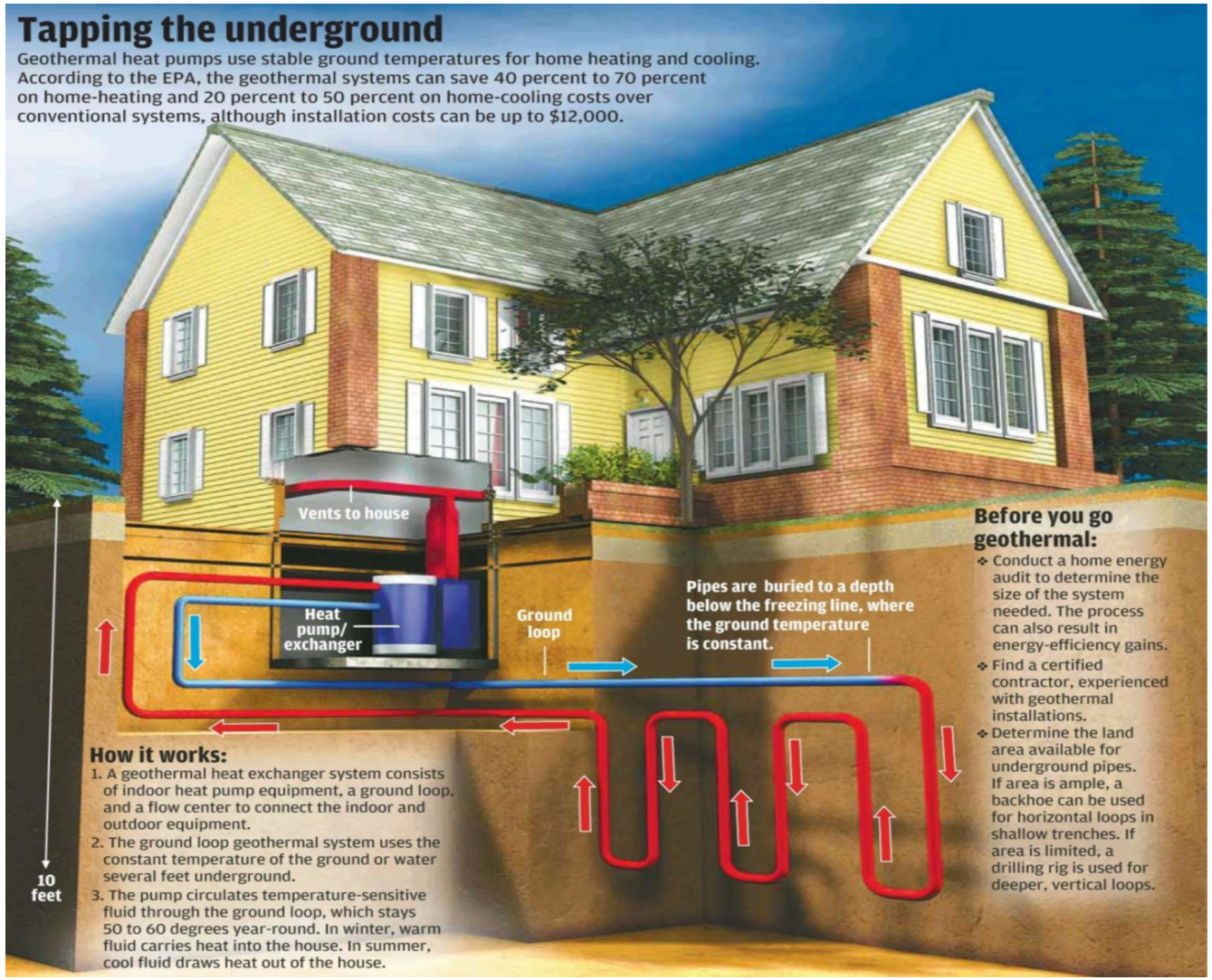
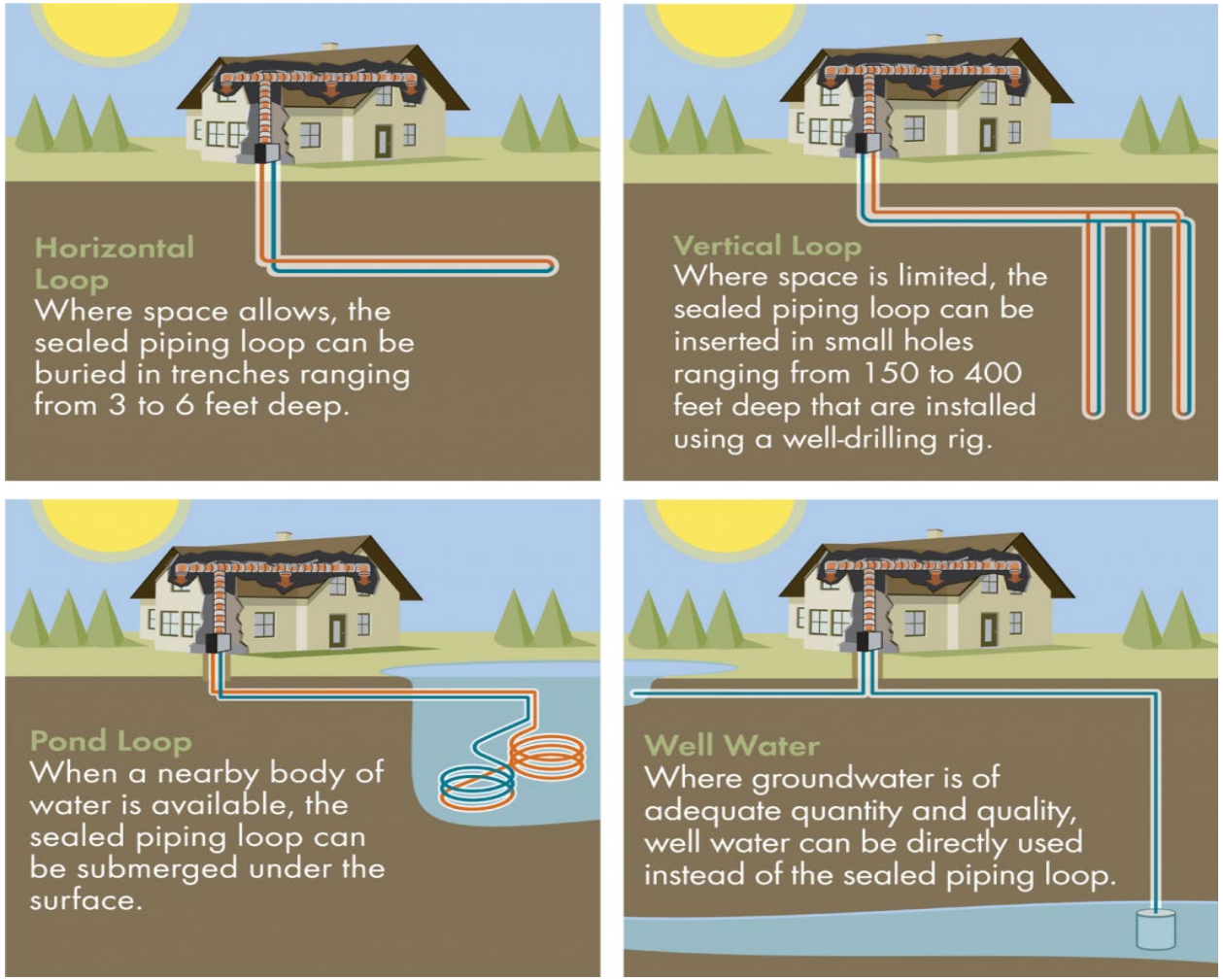


Environmental Assessments



Environmental Assessments

Environmental Assessments

A basement mechanical area is ideal for geothermal system components—equipment is protected and secure.

Environmental Assessments

Geothermal Heating and Cooling Systems

- "This section provides instructions for identifying and valuing geothermal heating and cooling systems that are valued as real property improvements. Any qualifying geothermal heating and cooling system valued from Appendix C in this book and Appendix G in Book 2 is eligible for an assessed valuation deduction as prescribed in IC 6-1.1-12-34. To qualify for a deduction under IC 6-1.1-12-34, a geothermal heating and cooling device must be certified by the Indiana Department of Environmental Management as prescribed in IC 6-1.1-12-35.5. "

Real Property Assessment Guidelines – Chapter 3, Page 64

Environmental Assessments

Geothermal Heating and Cooling System Definitions

- The following definitions are associated with geothermal systems:
  - **"Closed loop system"** means a geothermal heat pump system that uses a continuous sealed loop of buried plastic pipe as the heat exchanger. Loops can be buried horizontally or vertically.

Real Property Assessment Guidelines – Chapter 3, Page 64

Environmental Assessments

- **“Geothermal heat pump”** means an electrically powered device that uses the natural heat storage ability of the earth or the earth’s ground water to heat or cool a structure.

- **“Geothermal heating and cooling device”** means a device that was installed after December 31, 1981, and designed to use the natural heat cooling device from the earth to provide hot water, produce electricity, or generate heating and cooling.

Real Property Assessment Guidelines – Chapter 3, Page 64-65

Environmental Assessments

- **“Heat exchanger”** means a device designed to transfer heat between two (2) physically separated fluids or mediums of different temperatures.

- **“Liquid medium”** means ground water or an acceptable antifreeze solution.

Real Property Assessment Guidelines – Chapter 3, Page 65

Environmental Assessments

- **“Open loop system”** means a geothermal heat pump system that uses ground water from a conventional water well as the heat source for the system. The water is returned to the environment as either open discharge or a return well.

Real Property Assessment Guidelines – Chapter 3, Page 65

Environmental Assessments

Geothermal Heating and Cooling System Types

The geothermal heating and cooling system cost schedules contain rates for both closed loop and open loop geothermal systems:

- **"Closed loop"** system is a geothermal heating and cooling system that uses a continuous loop of special pipe that is buried in the ground or sunken into a pond or river. This pipe, that contains a liquid medium of a pressurized antifreeze solution, is connected to the indoor geothermal heat pump to form a sealed, underground loop. The antifreeze solution is circulated throughout the loop where low temperature heat is transferred from the ground or water to the antifreeze solution. This low temperature heat is used by the geothermal heat pump to warm the refrigerant within the unit. The two (2) variations of a closed loop system are:

Real Property Assessment Guidelines – Chapter 3, Page 65

Environmental Assessments

- **Horizontal** loop systems consist of a series of trenches that are dug throughout the land surrounding the structure. These trenches are normally four (4) to six (6) feet deep and up to four hundred (400) feet long, depending upon how many pipes are located within the trench. The normal placement of pipe within the trench is to install a run of pipe at the five (5) foot level and cover it up with dirt. At the three (3) foot level of the trench, a second run of pipe is looped back over the first run and another layer of soil is added to fill-in the trench. This overlapping method allows more length of pipe to be used per linear foot of excavated trench. As a general rule for horizontal loop systems, it requires approximately five hundred (500) to six hundred (600) linear feet of underground piping to service one (1) ton of system capacity.

Real Property Assessment Guidelines – Chapter 3, Page 65

Environmental Assessments

- **"Vertical"** loop systems are similar to horizontal loop systems except that the loop is installed downward instead of horizontally throughout the yard. In a vertical loop, holes are bored into the ground and U-shaped loops of pipes are inserted into the holes. After the installation of the system is complete, the created holes are backfilled with a sealing solution. As a general rule for vertical loop systems, it requires approximately one hundred twenty five (125) to one hundred fifty (150) linear feet of underground piping to service one (1) ton of system capacity.

Real Property Assessment Guidelines – Chapter 3, Page 65-66

Environmental Assessments

- **Open loop** system is a geothermal heating and cooling system that uses ground water from a conventional well as the heat source for the system. The water is pumped into the geothermal heat pump unit where heat is extracted. The extracted heat is used by the heat exchanger to warm the refrigerant with the unit. This extracted heat is used by the heat exchanger to warm the refrigerant within the unit. After the water has passed through the geothermal heat pump unit, it is discharged in one (1) of the following ways:
  - The **open discharge system** simply involves releasing the water into a river, stream, pond, ditch, or drainage tile.
  - The **return well system** involves the drilling of a second well that is used to return the ground water to the ground aquifer.

Many geothermal heat pump units are equipped with an internal auxiliary electric heat plant to ensure that the heat is sufficient during periods of repair or extremely cold weather. The unit is designed as an integral part of a geothermal heating and cooling system, and the presence of this small auxiliary heat plant within the geothermal heat pump unit does not alter the qualifications for a deduction as a geothermal heating and cooling device.

Real Property Assessment Guidelines – Chapter 3, Page 66

Environmental Assessments

Certain types of geothermal heat pump units are installed in conjunction with existing fossil fuel furnaces located within a structure. These types of configurations are commonly referred to as split systems. The geothermal heat pump unit uses the existing furnace's distribution system to distribute hot and cold air throughout the structure. The geothermal portion of a split system may qualify for the geothermal deduction under IC 6-1.1-12-34. However, the structure's base furnace and its distribution system shall be valued and assessed as part of the real property assessment. The "no heat" adjustment for geothermal heating described in Chapter 3 does not apply for a split system. If a split system exists in a particular structure, the applicable rates to value the geothermal portion of the system are taken from the cost schedules labeled "without distribution system".

Real Property Assessment Guidelines – Chapter 3, Page 66

Environmental Assessments

Table 3-14. Data Collection Codes for Geothermal Systems

This code	Indicates
HCLSWD	A horizontal closed loop system with a distribution system.
HCLSWOD	A horizontal closed loop system without a distribution system.
VCLSWD	A vertical closed loop system with a distribution system.
VCLSWOD	A vertical closed loop system without a distribution system.
ODOLSWD	An open discharge open loop system with a distribution system.
ODOLSWOD	An open discharge open loop system without a distribution system.
RWOLSWD	A return well open loop system with a distribution system.
RWOLSWOD	A return well open loop system without a distribution system.

Real Property Assessment Guidelines – Chapter 3, Page 67

Environmental Assessments

Collecting Data for Geothermal Systems

- "The technology associated with a geothermal heating and cooling system is based on the same principles as a standard air heat pump furnace. Both types of systems rely on a process of elevating the low temperature heat acquired from the environment and transferring it indoors through a cycle of evaporation, compression, condensation, and expansion of a refrigerant gas contained within the heat pump unit."

Real Property Assessment Guidelines – Chapter 3, Page 66

Environmental Assessments

- “The geothermal heating cycle begins as a cold, liquid refrigerant that passes through the heat exchanger and absorbs heat from the low temperature liquid medium. The refrigerant evaporates into a gas as heat is absorbed, and the gaseous refrigerant passes through a compressor that pressurizes it.”
- “Pressurization of the refrigerant raises its temperature in excess of one hundred eighty (180) degrees and the hot gas is circulated through a refrigerant-to-air heat exchanger where the heat is removed and pumped into the structure.”

Real Property Assessment Guidelines – Chapter 3, Page 67

Environmental Assessments

- “As a result of this interaction, the gas begins to cool which causes it to liquefy and the heating cycle begins again. The cooling cycle is the reverse of the heating cycle where the structure’s heat is transferred to the liquid medium and the cold refrigerant passes through the refrigerant-to-air exchanger that provides cool air.”

Real Property Assessment Guidelines – Chapter 3, Page 67

Environmental Assessments

Tonnage Ratings for Geothermal Systems

- “In addition to collecting data about the type of geothermal system installed in a particular structure, the assessor also must collect data about the rated tonnage of the system.”
- “Tonnage is the accepted measure for size used throughout the heating and cooling industry. The specific tonnage rating of a system indicates the system is capable of efficiently heating and cooling a certain amount of square foot area. The larger the amount of square footage to be heated and cooled in a structure dictates a larger tonnage amount required for the system.”

Real Property Assessment Guidelines – Chapter 3, Page 67

Environmental Assessments

- As a general guideline, one (1) ton of geothermal heating and cooling is needed to service approximately six hundred (600) to seven hundred (700) square feet of structure. This general guideline is dependent on the individual structure, and it's history of measured heat loss and gain before the installation of the geothermal system. The cost schedules in Appendix C include the following tonnage ratings:

Real Property Assessment Guidelines – Chapter 3, Page 67-68

Environmental Assessments

- two (2) tons
- two and five-tenths (2.5) tons
- three tons (3)
- three and five-tenths (3.5) tons
- four (4) tons
- five (5) tons
- six (6) tons

Real Property Assessment Guidelines – Chapter 3, Page 68

Environmental Assessments

Structures With Two or More Geothermal Systems

- In certain instances, a structure could contain two (2) or more separate geothermal heating and cooling systems. This normally occurs when a structure contains a very large amount of square footage or there is a limited amount of yard area to support a complex closed loop geothermal system. The data collection procedures are as follows:

Real Property Assessment Guidelines – Chapter 3, Page 68

Environmental Assessments

- “If a structure contains two (2) or more separate geothermal heating and cooling systems and shares the same distribution system throughout the structure, record the largest rated tonnage system as having the distribution system and the remaining system or systems as having no distribution system.”

Real Property Assessment Guidelines – Chapter 3, Page 68

Environmental Assessments

- **EXAMPLE:** A structure has two (2) separate horizontal closed loop geothermal systems. The first system is rated at four (4) tons and the second is rated at two (2) tons. When collecting data, the assessor must list the four (4) ton system as a horizontal closed loop system with distribution, —HCLSWD, and the second system as a horizontal closed loop system without distribution, —HCLSWOD.

Real Property Assessment Guidelines – Chapter 3, Page 68

Environmental Assessments

- For structures that contain two (2) or more separate geothermal heating and cooling systems with their own distribution systems, list both systems separately as having distribution systems.
  - **EXAMPLE:** There are two (2) separate horizontal closed loop systems. Both systems are rated at three (3) tons. The assessor must list both systems separately as a horizontal closed loop system with distribution, —HCLSWD.

Real Property Assessment Guidelines – Chapter 3, Page 68

Environmental Assessments

- **NOTE:** Data for geothermal heating and cooling systems used in commercial structures must be collected and priced in the same manner as comparable residential systems.

Real Property Assessment Guidelines – Chapter 3, Page 68

Environmental Assessments

Pricing Geothermal Systems

- The cost schedules for pricing geothermal heating and cooling systems in Appendix C are formatted by type of system, tonnage rating of the system, and whether the system maintains a separate distribution system.
- The correct system pricing is obtained by selecting the geothermal system type as either horizontal closed loop, vertical closed loop, open discharge open loop, or return well open loop, selecting the system's rated tonnage size, and selecting the appropriate base rate (adjusted for location) from either the —w/ distribution column or the —w/o distribution column.

Real Property Assessment Guidelines – Chapter 3, Page 68-69

Environmental Assessments

Depreciating Geothermal Systems

- *Depreciating Residential Geothermal Systems*
  - Use the Residential Dwelling Depreciation Table for the appropriate grade found in Appendix B to adjust the replacement cost of geothermal heating and cooling systems. These depreciation tables rely on the variables of age and condition.

Real Property Assessment Guidelines – Chapter 3, Page 69

Environmental Assessments

- The age of the system will be unique for each separate system.
  - Age is determined by finding the difference between the year of construction of the geothermal system and the depreciation date as defined earlier in this section.
  - Condition is the same as the dwelling it serves.

Real Property Assessment Guidelines – Chapter 3, Page 69

Environmental Assessments

- *Depreciating Commercial Geothermal Systems*
  - Use Chart 3 found in Appendix F to adjust the replacement cost of a commercial geothermal heating and cooling system. This table combines age and condition to determine the normal depreciation percentage for the system. The condition ratings and age variables of the system are determined in the same manner as for general geothermal heating and cooling systems, described earlier.

Real Property Assessment Guidelines – Chapter 3, Page 69

Environmental Assessments

SCHEDULE G.1 (continued)
Residential Yard Improvements

Geothermal Heating and Cooling System Base Rates

HORIZONTAL CLOSED LOOP SYSTEMS

System Tonnage	HCLSWD w/distribution	HCLSWOD w/o distribution
2 Ton	10700	9400
2.5 Ton	13700	11500
3 Ton	16800	14000
3.5 Ton	19600	16400
4 Ton	22600	18600
5 Ton	28000	23200
6 Ton	33300	27800

VERTICAL CLOSED LOOP SYSTEMS

System Tonnage	VCLSWD w/distribution	VCLSWOD w/o distribution
2 Ton	12800	11200
2.5 Ton	16100	14100
3 Ton	21000	18100
3.5 Ton	23200	19600
4 Ton	27800	24300
5 Ton	33100	28200
6 Ton	39500	33900

Real Property Assessment Guidelines – Appendix C, Page 14

Environmental Assessments

OPEN DISCHARGE OPEN LOOP SYSTEMS

System Tonnage	ODOLSWD w/distribution	ODOLSWOD w/o distribution
2 Ton	9200	7800
2.5 Ton	11600	9600
3 Ton	14200	11400
3.5 Ton	16800	13200
4 Ton	19200	15000
5 Ton	23500	18700
6 Ton	27800	22400

RETURN WELL OPEN LOOP SYSTEMS

System Tonnage	RWOLSWD w/distribution	RWOLSWOD w/o distribution
2 Ton	10000	8800
2.5 Ton	12500	10600
3 Ton	15100	12400
3.5 Ton	17500	14100
4 Ton	20200	15900
5 Ton	24400	19500
6 Ton	28700	23200

Real Property Assessment Guidelines – Appendix C, Page 14

Environmental Assessments

- **How do I determine what kind of geothermal system (tonnage, horizontal or vertical system, distribution) a taxpayer has from the field?**
  - It is quite difficult to get that information while in the field. The most likely place you'll find it in the field is from the taxpayer themselves, however, and the device is in the interior and underground. Tonnage can be estimated by the amount of square footage the dwelling is currently (about 600 – 700 sq. ft. per ton). Checking permits (if the county has a system) would help as well, plus IDEM (Indiana Department of Environmental Management) has information regarding each system if the taxpayer filed for a deduction on the system.

Environmental Assessments

- **How do these improvements appear on the property record card if it is a split system?**
  - The geothermal system should be valued under the Summary of Residential Improvements section of the PRC. It is depreciated similarly to a dwelling with its own effective age, grade, and condition rating (however, condition should reflect the dwelling).

Environmental Assessments

II. Solar Energy Systems

- An energy system that uses the suns rays to provide electricity to a dwelling (for our particular cause, solar heating and cooling).
- Valued similar to geothermal; however, the valuation can be on a independent system basis or component basis.
- Can be deducted using Form SES/WPD; however, the system must have at least a collection unit, storage medium, and a distribution unit plus it must not be a passive system.

Real Property Assessment Guidelines – Chapter 3, Page 59-64

Environmental Assessments

Solar Heating & Cooling System Types

Table 3-13. Solar Heating and Cooling Systems

This type	Indicates
Type A	A solar collection unit of thirty (30) square feet, a storage medium consisting of either a one hundred twenty (120) gallon tank for a liquid system or a storage vessel with a rock surface area of four hundred (400) square feet for an air system, and an elaborate contractor installed distribution unit that requires minimum occupant involvement on a day-to-day basis. This type of system virtually runs itself through the use of sophisticated monitoring equipment. This type of system is normally designed for and incorporated into the structure at the time of construction.

Real Property Assessment Guidelines – Chapter 3, Page 60-61

Environmental Assessments

Type B	A solar collection unit of twenty-five (25) square feet, a storage medium consisting of either an eighty (80) gallon tank for a liquid system or a storage vessel with a rock surface area of three hundred (300) square feet for an air system, and a contractor installed distribution unit that requires limited occupant involvement in the day-to-day operation of the system.

Real Property Assessment Guidelines – Chapter 3, Page 61

Environmental Assessments

Type C	A solar collection unit of twenty (20) square feet, a storage medium consisting of either a sixty (60) gallon tank for a liquid system or a storage vessel with a rock surface area of two hundred (200) square feet for an air system, and a contractor installed distribution unit that relies on the occupant to make internal adjustments within the system during the day-to-day operation of the system.

Real Property Assessment Guidelines – Chapter 3, Page 61

Environmental Assessments

Type D	A homemade solar collection unit of less than twenty (20) square feet and a storage medium of either a forty (40) gallon tank for a liquid system or a storage vessel with a rock surface area of two hundred (200) square feet or less for an air system. The Type D system uses the structure's existing base heating and cooling system as the distribution unit for the system. The Type D distribution unit's cost included in the cost schedules reflect the additional cost incurred to hook-up the solar portion of the system to the base heating system included in the structure's calculation of replacement cost.

Real Property Assessment Guidelines – Chapter 3, Page 61

Environmental Assessments

Residential - Type Solar Heating and Cooling Systems

INDEPENDENT SOLAR SYSTEM (COMPLETE) RATES

Type	Liquid System	Air System
A	14600	17100
B	8900	10600
C	5700	6800
D	1500	1900

COMPONENT COSTS OF INDEPENDENT SOLAR SYSTEM

SOLAR COLLECTION UNITS

Type	SF	Per Unit
A	30	1500
B	25	700
C	20	400
D	minimal	200

Real Property Assessment Guidelines – Appendix C, Page 13

Environmental Assessments

SOLAR STORAGE MEDIUMS

Liquid Storage

Type	Gallons	Per Tank
A	120	400
B	80	200
C	60	100
D	40	100

Rock Storage

Type	Surface SF	Per Container
A	400	3000
B	300	1900
C	200	1100
D	Under 200	500

SOLAR DISTRIBUTION UNITS

(Includes the cost of pipe loops, transfer pumps, heat exchangers, air handlers, blowers, ducts, controls and control panels associated with either a liquid or air system.)

Type	
A	12500
B	8000
C	5200
D (integrated with existing base system.)	1100

Real Property Assessment Guidelines – Appendix C, Page 13

Environmental Assessments

- **How do I determine what kind of solar system a taxpayer has from the field?**
  - Just like geothermal, it can be difficult to discern this information from the field. Most of the information will likely come from three places: the taxpayer, permits, and county auditor applications (SES/WPD). However, components, such as the solar panels) can be easily identified from the exterior so there is some information that can be identified from the field.

Environmental Assessments

- Any qualifying solar energy heating and cooling systems valued from the cost schedules in Appendix C of the Real Property Assessment Guidelines or Appendix G are eligible for an assessed valuation deduction as prescribed in IC 6-1.1-12-26.
- To qualify as a solar energy heating and cooling system, the system must contain a collection unit, a storage medium, and a distribution unit. A passive solar system does not quality as a solar energy heating or cooling system.

Real Property Assessment Guidelines – Chapter 3, Page 59

Environmental Assessments

- The following definitions are associated with solar energy heating and cooling systems.
  - **Air system:** A qualifying system that uses various gases as the transfer agent between the solar collection unit and the storage medium. Normally, this type of system uses pebbles and rocks as the storage medium.

Real Property Assessment Guidelines – Chapter 3, Page 59

Environmental Assessments

- **Control devices:** All switches and wiring necessary to operate the solar system.
- **Depreciation date:** March 1, 2011
- **Energy transfer equipment:** The equipment that transfers thermal energy from the collection source to the storage medium.

Real Property Assessment Guidelines – Chapter 3, Page 60

Environmental Assessments

- **Insulated containment vessel:** The apparatus that insulates the storage medium from its surroundings to limit the loss of energy.
- **Liquid system:** A qualifying system that uses a liquid as the transfer agent between the solar collector unit and the storage medium. Normally this type system uses a liquid storage tank as the storage medium.

Real Property Assessment Guidelines – Chapter 3, Page 60

Environmental Assessments

- **Passive solar system:** A greenhouse type enclosure that does not meet the qualification standards of a collection unit, a storage medium, and a distribution unit.
- **Solar collector:** An assembly or structure designed to gather, concentrate, or absorb direct and indirect solar energy.

Real Property Assessment Guidelines – Chapter 3, Page 60

Environmental Assessments

- **Solar distribution unit:** The portion of the solar unit that distributes the final product to its destination. Items normally associated with the solar distribution units are:
  - ductwork
  - fans
  - heat exchangers
  - pumps
  - plumbing necessary to interconnect the solar system.
- **Solar medium:** The material in which energy is stored.

Real Property Assessment Guidelines – Chapter 3, Page 60

Environmental Assessments

Collecting Data for Solar Systems

- The solar heating and cooling system cost schedules contain rates for a collection unit, a distribution unit, and a storage medium. The general reassessment has identified the structures that contain a solar heating and cooling system. The solar cost schedules in Appendix C pertain to the pricing of a solar system that is separate from the base heating system. It is important to remember that structures containing a base or reserve heating system and a separate solar system must be charged for both systems.

Real Property Assessment Guidelines – Chapter 3, Page 61

Environmental Assessments

- A solar heating and cooling system that uses the distribution unit of an existing base heating system is charged for only those components that are necessary to make the system a solar system.
- A qualifying solar heating and cooling system must have a collection unit, a storage medium, and a distribution unit. The basic principle of a solar system is to collect the sun's energy as heat, transfer this heat to a specific medium for storage, and disperse the heat throughout a structure at a future time for the comfort of the occupants. There are two basic types of solar systems:

Real Property Assessment Guidelines – Chapter 3, Page 62

Environmental Assessments

- A **liquid solar system** uses liquid as the transfer agent between the various components of the system. The solar collection unit, normally located on the roof of the structure, is connected to the remainder of the system by a series of pipes. The liquid contained within the system is pumped through the collection unit where heat collected from the sun's rays is transferred to the liquid. This heated liquid is periodically pumped to the storage medium—an insulated storage tank in a liquid system. As the liquid is pumped through a heat exchanger, which removes heat from the liquid, the heat is transferred to air or water for distribution throughout the structure.

Real Property Assessment Guidelines – Chapter 3, Page 62

Environmental Assessments

- A **liquid solar system** uses liquid as the transfer agent between the various components of the system. The solar collection unit, normally located on the roof of the structure, is connected to the remainder of the system by a series of

- An **air system** operates in a similar manner to a liquid system but the transfer agent is warm air and the storage medium is pebbles or rocks. Through the use of a system of pipes, air is blown through the collection unit where heat is transferred to the air. The heated air is blown through a series of pipes to the storage vessel that contains pebbles or rocks. Heat, transferred to the rocks from the circulated air, is stored within the rocks for future use. This heat is then transferred to either air or water by a series of pipes for distribution throughout the structure.

then transferred to either air or water by a series of pipes for distribution throughout the structure.

Real Property Assessment Guidelines – Chapter 3, Page 62

Environmental Assessments

Collecting Data for Residential Solar Energy Systems

- The cost schedules for residential solar systems in Appendix C contain base rates for an independent system and the component costs that make up the independent system. The schedules are arranged to value the system either as a system type or to value the various components when identified by the type of components. When collecting data for a solar heating and cooling system, you must select a valuation method and record the method in the —Summary of Improvements section of the property record card:

Real Property Assessment Guidelines – Chapter 3, Page 62

Environmental Assessments

- *If the solar system is being valued on a **system basis***, record the system type in the —Use column and the type of storage medium in the —Construction column.
- *If the solar system is being valued on an **individual component basis***, record each type of collection unit, distribution unit, and the type of storage medium, including the variables of either liquid or rock, as separate line entries within the section.

Real Property Assessment Guidelines – Chapter 3, Page 62

Environmental Assessments

Collecting Data for Commercial Solar Energy Systems

- For commercial solar energy systems, the principle factor necessary in data collection is the total surface square foot area of the system's collection unit. The applicable square foot rate includes all equipment associated with the system. To identify the system in the "Summary of Improvements" section of the Commercial and Industrial property record card, you must record "Com. solar system" in the "Use" column and the total square foot area of the collection unit in the "Size" column.

Real Property Assessment Guidelines – Chapter 3, Page 62

Environmental Assessments

Pricing Solar Systems

Pricing of Residential Solar Systems

- A residential solar system or the individual components of a residential solar system must be valued as real property in the “Summary of Improvements” section of the Property Record Card’s “Summary of Improvement” section:

Real Property Assessment Guidelines – Chapter 3, Page 63

Environmental Assessments

- *If the pricing is on a **system basis***, record only the type of system as an individual line entry. For example, record "Type A solar system" in the "Use" column, the codes, "Liq" or "Roc" in the "Construction Type" column, and the corresponding base rate for the type of system identified in the "Base Rate" column. Then multiply the "Base Rate" times the location multiplier and enter the result in the "Adjusted Rate", and "Replacement Cost" columns.

Real Property Assessment Guidelines – Chapter 3, Page 63

Environmental Assessments

- *If the pricing is on a **component basis***, record each type of component as an individual line entry. For example, to record the system components:
  - In the first available row in the “Summary of Improvements” section, record “Type B collector” in the “Use” column with the corresponding component rate appearing in the “Base Rate” column. Then multiply the “Base Rate” times the location multiplier and enter the result in the “Adjusted Rate”, and “Replacement Cost” columns.

Real Property Assessment Guidelines – Chapter 3, Page 63

Environmental Assessments

- In the next row, record “Type C storage medium” in the “Use” column, the codes “Liq” or “Roc” in the “Construction Type” column, and the corresponding rates in the “Base Rate” column. Then multiply the “Base Rate” times the location multiplier and enter the result in the “Adjusted Rate,” and “Replacement Cost” columns.
- In the next row, record “Type C distribution unit” in the “Use” column and the corresponding component rate in the “Base Rate.” Then multiply the “Base Rate” times the location multiplier and enter the result in the “Adjusted Rate,” and “Replacement Cost” columns.

Real Property Assessment Guidelines – Chapter 3, Page 63

Environmental Assessments

Pricing Commercial Solar Systems

- To calculate the value of a commercial solar system, identify the total square footage of the system's collection unit and multiply that square footage by the applicable base rate (adjusted for location) identified in the cost schedule in Appendix G. Select the rate that is closest to the subject's square footage. Do not interpolate between rates.

Real Property Assessment Guidelines – Chapter 3, Page 63

Environmental Assessments

Depreciating Solar Systems

Depreciating Residential Solar Systems

- Use the Residential Dwelling Depreciation Table for the appropriate grade found in Appendix B to adjust the replacement cost of a residential solar system. These depreciation tables are based on age and condition. The age of the system will be unique for each separate system.
  - Age is determined by finding the difference between the year of construction of the solar system and the depreciation date, defined earlier in this section.
  - Condition is the same as the dwelling that it serves.

Real Property Assessment Guidelines – Chapter 3, Page 64

Environmental Assessments

Depreciating Commercial Solar Systems

- Use Chart 3 found in Appendix F to adjust the replacement cost of a commercial solar system. This table combines the variables of age and condition to arrive at the normal depreciation percentage for the system. The condition ratings and age variables of the system are judged in the same manner as for a residential system.

Real Property Assessment Guidelines – Chapter 3, Page 64

Environmental Assessments

Wind Power & Wind Towers

IC 6-1.1-8-9 – Light, heat, or power companies

The fixed property of a light, heat, or power company consists of:

1. automotive and other mobile equipment;
2. office furniture and fixtures;
3. other tangible personal property which is not used as part of the company's production plant, transmission system, or distribution system; and
4. real property which is not part of the company's right-of-ways, transmission system, or distribution system.

Environmental Assessments

- A light, heat, or power company's property which is not described as fixed property (see above) is definite-situs distributable property. This property includes, but is not limited to, turbo-generators, boilers, transformers, transmission lines, distribution lines, and pipe lines.

Ind. Code § 6-1.1-8-9(b)

Environmental Assessments

- A wind power device is defined as a device, such as a windmill or a wind turbine, that is designed to utilize the kinetic energy of moving air to provide mechanical energy or to produce electricity.
  - However, the General Assembly has now specifically excluded from that definition a device that is **owned or operated by a public utility (as defined by IC 8-1-2-1(a)) or another entity that provides electricity at wholesale or retail for consideration**, other than a person who participates in a net metering program offered by an electric utility.

Ind. Code § 6-1.1-12-29

Environmental Assessments

- The Wind Tower, but not the land upon which it rests, is to be assessed as state distributable property.
- The company is required to file an Annual Report (UD-45) with the Department on March 1 (IC 6-1.1-8-19).
- The Department will review the assessment and allocate the value to the appropriate taxing district(s) as reported on the UD-45 by the taxpayer.

Environmental Assessments

- The assessment will be based on federal cost less federal depreciation, at tax basis per 50 IAC 5.1-6-3.
- Specific information can be found at: http://www.in.gov/dlgf/2486.htm

Environmental Assessments

Land Assessments

- The portion of the land used for the Wind Tower is classified as Industrial land.
- The Industrial land rate is county specific. It would be assessed comparable to a cell phone tower.
- Typically, the land area that is utilized for the individual Wind Tower ranges from 0.25 acres to 0.50 acres. This would NOT include any roads used to construct and service the tower.

Environmental Assessments

Land Assessments

- Depending on the parcel and its use, it could be assessed as “Secondary Industrial” land.
- Defined as land used for purposes that are secondary to the primary use of the land.
  - See *http://www.in.gov/dlgf/files/bk1ch2.pdf for guidelines for valuing Commercial and Industrial Acreage*.

Environmental Assessments

- Wind powered companies would most likely be considered state distributable property (see https://www.in.gov/dlgf/2486.htm for more information), but if they are in one taxing district or in a net metering/feed-in-tariff program with another company (regardless of the number of taxing districts they are in) they can file locally.

Environmental Assessments

- State distributable assessments are done on a federal cost less depreciation basis.
  - Hence, a $100,000,000 investment could have a wide range for the assessed value based on depreciation. At a minimum, the 30% floor would apply (i.e. $100,000,000 x 30% = $30,000,000)

Questions

Environmental Assessments

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