Janice K. Brewer
Governor

## John A. Greene Director

## PRIVATE TAXPAYER RULING LR12-001

February 13, 2012

The Department issues this private taxpayer ruling in response to your letters of August 18, 2011 and October 5, 2011, requesting a ruling on behalf of . . . ("Taxpayer"). Specifically, you request a ruling on the application of Arizona's transaction privilege tax ("TPT") to Taxpayer's construction of a solar powered electric generating facility ("solar power plant") in . . . ("County"). Taxpayer requests a ruling regarding whether the portion of the gross proceeds of sales or gross income derived by Taxpayer from providing and installing a solar energy power plant is deductible from the TPT base as a "solar energy device" under Arizona Revised Statutes ("A.R.S.") § 42-5075(B)(14). Pursuant to A.R.S. § 42-2101, the Department may issue private taxpayer rulings to taxpayers and potential taxpayers on request.

## **Statement of Facts:**

The following are facts excerpted from your August 18, 2011 letter:

. . .

## II. DESCRIPTION OF THE [SOLAR POWER PLANT]

## A. Taxpayer's business

. . .

[Taxpayer] provides engineering, procurement, and construction ("EPC") services . . .

#### B. Facts relating to the [solar power plant]

[Taxpayer] is developing a solar power plant near [County]. The [solar power plant] will be located exclusively in . . . [County] known as . . . (the "Site") and will not be located within an Arizona incorporated city or town. The Site is owned by a wholly owned special purpose entity . . . ("Entity"). . . . [Entity] will enter into an EPC contract with [Taxpayer], pursuant to which [Taxpayer] will provide engineering services, procure equipment, and will construct the [solar power plant].

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## [Solar power plant] overview:

The [solar power plant] will consist of a . . . solar field consisting of . . . rows of . . . solar panels. . . . [I]ndividual panels will be strung together into . . . units with each such "string" generating . . . direct current ("DC") electricity. Strings will be attached to each other by wire harnesses. At the end of each row, the energy will then be carried by an underground DC wire, called a whip, and fed into a combiner box. . . . The DC voltage from each combiner box will then run through inverters and transformers at . . . [Unit 1]. The inverters will convert each unit of . . . DC current into . . . alternating current ("AC"). Transformers will then step-up the power . . .

The power coming out of each . . . [Unit 1] will be sent via . . . wires (AC feeders) and aggregated through . . . switchgear, each of which are referred to as . . . [Unit 2]. From [Unit 2], the . . . power . . . is then sent via larger capacity . . . wires to a single substation located within the [solar power plant]. The on-site substation will step-up the power . . . From the substation, the power will be sent by an . . . switchyard line to a switchyard that is being constructed on the Site by . . . [Utility]. . . . The power will then enter the transmission grid for transmission by [Utility].

# <u>Detailed description of the [solar power plant's] equipment and installation process:</u>

Site Preparation. Prior to the installation of the [solar power plant], the Taxpayer first clears and grades the Site, builds exterior fences, connects utilities, lays roads, and completes other necessary pre-construction tasks.

Solar Tables. . . . Together, the main posts, tilt bracket, table frame (including . . . [Clip 1]), solar modules, and hardware (e.g. nuts and bolts . . . [Clip 2], . . . [Clip 3]) constitute a "solar table."

The solar table is not designed simply to hold the solar energy generating modules in place. The solar table as a unit is engineered to maximize energy generation by optimizing sunlight exposure . . .

- - -

DC electrical components. DC electrical components include DC wiring, harnesses, jumpers, whips and combiner boxes that connect, aggregate, and facilitate the flow of energy from each individual solar module

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into . . . units. Groups of . . . these . . . units will be fed through . . . whip lines into a combiner box located above ground. . . . The combiner boxes, in turn, will run current into . . . DC feeder lines. The DC feeders will then carry the current into [Unit 1] for processing described below.

[Unit 1]. . . .

Inverters within [Unit 1] will convert the solar generated DC into AC power. . . . An external transformer will then step-up the AC current . . . Additionally, within . . . [1:A] is a computer device referred to as a . . . [Computer System]. . . The [Computer System] is a critical electric generation component which allows for remote monitoring, maintenance and control of the current which runs through [Unit 1].

. . . [C]urrent will flow from [Unit 1] through . . . AC feeder cables into [Unit 2] described below.

[Unit 2]. [Unit 2] is similar to [Unit 1] . . .; however, the above-ground portion of [Unit 2] consists of switchgear equipment. . . . The functions of [Unit 2] are threefold: (1) aggregating the AC current received from a number of [Unit 1s] . . . , (2) providing a digital meter to manage and monitor output, and (3) providing individual feeder and master shut-off switches through a series of switchgears. . . . Power will exit [Unit 2] . . . and run through . . . AC aggregation power lines, supported by line poles, to the on-site substation. Most of the line poles are wooden, . . . A number of supporting AC aggregation line poles are steel and attached to in-ground concrete anchors.

Substation. A single substation will run the [solar power plant's] aggregated AC current through a substation transformer that will step-up the current . . . for transfer via a switchyard line to the adjacently located [Utility] switchyard. . . .

Additionally, the substation will contain a . . . [Control System]. The [Control System] will be linked via fiber optic cable to each of the Site's [Computer Systems].

Other Assets. Other ancillary equipment and assets at the [solar power plant] include fencing, roads, land improvements such as landscaping and parking lots, and an operations and maintenance ("O&M") building.

<sup>1</sup> Other electrical components include a ground grid connected to all modules that is not a part of this ruling request. The ground grid is buried copper wire that prevents shock (from touching units) in case of a short.

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Pursuant to the EPC contract, the Taxpayer will derive proceeds related to the procurement and installation of the [solar power plant] equipment. For purposes of this Private Taxpayer Ruling request, the following list identifies and categorizes each item of equipment with respect to which a ruling is requested regarding the applicability of § 42-5075(B)(14) to the portion of gross proceeds related to the procurement and installation of such items (collectively, the "Solar Energy Devices"):<sup>2</sup>

## **Solar Energy Devices:**

- a. Solar Tables:
  - i. main posts
  - ii. tilt brackets
  - iii. table frames (including [Clip 1])
  - iv. hardware (including nuts, bolts, washers, [Clip 2], [Clip 3])
  - v. solar modules
- b. DC Electrical:
  - i. module wiring
  - ii. harnesses
  - iii. jumpers
  - iv. whips
  - v. combiner boxes
  - vi. DC feeders
- c. [Unit 1]
  - i. [1:A]
  - ii. [1:B]
  - iii. inverters
  - iv. transformers
  - v. [Computer System]
  - vi. AC feeders

<sup>2</sup> Importantly, on December 2, 2011, Taxpayer clarified that the solar power plant represents a single solar energy system or device. The solar energy device begins with the post and ends with the substation. . . . The overall [solar power plant] is made up of many parts. While groups of these parts may be referred to as components they are not solar energy devices in and of themselves. Taxpayer chose to bucket the various parts of the [solar power plant] into five areas of components within its PTR request. Taxpayer bucketed these items to simplify the explanation of the [solar power plant] rather than because these so-called components represent separate and distinct assets or separate and distinct devices.

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## d. [Unit 2]

- i. switchgear
- ii. [2:A]
- iii. digital meter
- iv. AC aggregation lines
- v. AC aggregation line poles

#### e. Substation

- i. transformers
- ii. [Control System]
- iii. [Control System] fiber optic cable

. . .

The following additional facts are excerpted from your October 5, 2011 letter:

- ... A "string" and a "unit" refer to the same thing. A "string" is the term used to describe a number of panels connected ... in series. ... A string is made up of ... solar panels. ... Strings do not necessarily make up a row. A "row" refers to the end of a row of connected solar tables. ...

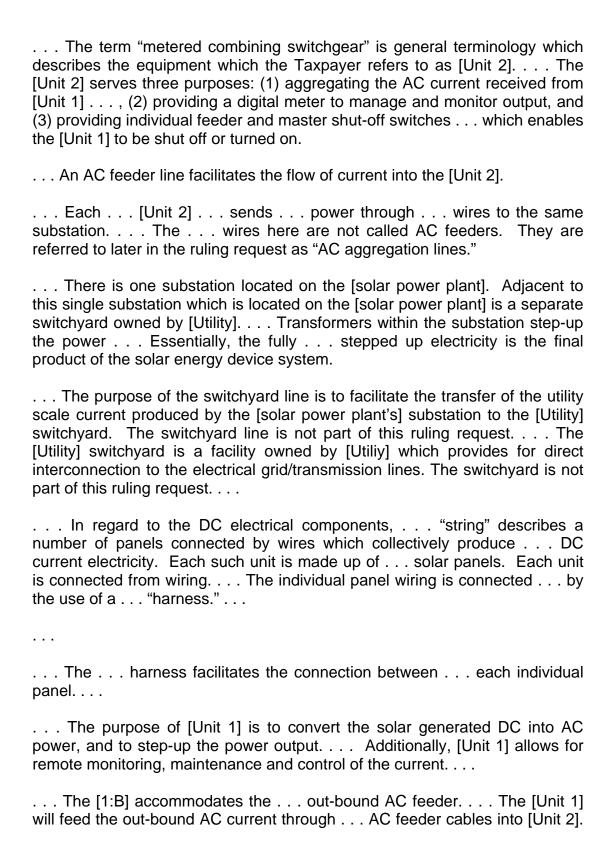
  ... The combiner boxes transfer DC voltage to [Unit 1] via ... DC feeder lines.

  ... In regard to [1:A] ...

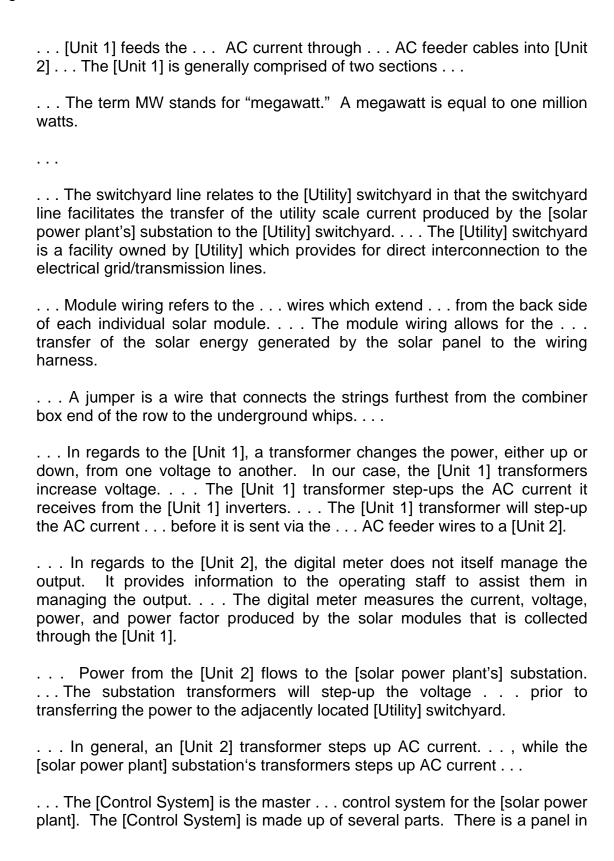
  ... The [Unit 1] provides an ... assembly for the transformer and inverters. The inverters convert the electricity from DC to AC current and then the transformer immediately steps up the power ... Thus, the equipment within [Unit 1] works in tandem to transform the electricity for continued processing within the [solar power plant], and thereby [Unit 1] facilitates the critical functionality between the transformer and inverters. ... The [1:B] facilitates ... in-bound DC and out-bound AC feeder lines, and also supports [1:A] ...

  ... The term "step-up" effectively means "increase." ... The "step-up"
- from . . . AC power . . . is necessary to transmit large amounts of energy from [Unit 1] to the on-site substation via [Unit 2]. At lower voltages there would be higher energy losses.
- . . . In regards to [Unit 2], an AC feeder is not itself a [Unit 2]. An AC feeder line simply facilitates the flow of current into [Unit 2].

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[Unit 1] and the [Control System] collects all the data from the [Unit 1] panels. Together, these form the [Control System].

- . . . In general, AC feeder lines carry AC current while DC feeder lines carry DC current.
- . . . Whips are one type of DC wire. The other types include harnesses and jumpers.

#### Issue:

Based on the facts presented in your request, Taxpayer raises the following issue:

1. What portion of the gross proceeds of sales or gross income derived by Taxpayer from providing and installing a solar energy power plant is deductible from the transaction privilege tax base as a "solar energy device" under ARS § 42-5075(B)(14)?

## **Your Position:**

The entire portion of gross sales proceeds derived by Taxpayer from providing and installing the solar power plant, with the exception of the costs associated with ancillary items such as land clearing and grading, fencing, land improvements including roads, the operations and maintenance building and equipment located after the on-site substation such as the generation tie-line between the substation and the grid, is deductible from TPT under A.R.S. § 42-5075(B)(14) of the prime contracting classification because the solar power plant, which includes the solar tables, DC electrical, Unit 1, Unit 2, and substation, acting in concert, constitute a "system or series of mechanisms designed primarily . . . to produce electrical power," or are part of the "system" which collects and transfers the solar generated energy as described in A.R.S. § 42-5075(B)(14).

## Applicable Law:

Arizona Revised Statutes § 42-5008 levies a transaction privilege tax measured by the amount or volume of business transacted by persons on account of their business activities.

\* \* \*

A.R.S. § 42-5075(A) states, [t]he prime contracting classification is comprised of the business of prime contracting and dealership of manufactured buildings. Sales for resale to another dealership of manufactured buildings are not subject to tax. Sales for resale do not include sales to a lessor of manufactured buildings. The sale of a used manufactured

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building is not taxable under this chapter. The proceeds from alteration and repairs to a used manufactured building are taxable under this section.

\* \* \*

A.R.S. § 42-5075(B) states, [t]he tax base for the prime contracting classification is sixty-five per cent of the gross proceeds of sales or gross income derived from the business. The following amounts shall be deducted from the gross proceeds of sales or gross income before computing the tax base:

. . .

14. For taxable periods beginning from and after December 31, 1996 and ending before January 1, 2017, the gross proceeds of sales or gross income derived from a contract to provide and install a solar energy device. The contractor shall register with the department as a solar energy contractor. By registering, the contractor acknowledges that it will make its books and records relating to sales of solar energy devices available to the department for examination.

\* \* \*

The term "solar energy device" is defined in A.R.S. § 42-5001 to mean:

15. "Solar energy device" means a system or series of mechanisms designed primarily to provide heating, to provide cooling, to produce electrical power, to produce mechanical power, to provide solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means, including wind generator systems that produce electricity. Solar energy systems may also have the capability of storing solar energy for future use. Passive systems shall clearly be designed as a solar energy device, such as a trombe wall, and not merely as a part of a normal structure, such as a window.

\* \* \*

Arizona Administrative Code ("A.A.C.") R15-5-128 in regard to electric power transmission and distribution states:

. . .

C. Machinery and equipment used to facilitate the production of voltage above 34,500 volts shall be categorized as part of a transmission or distribution system based on the following definitions.

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- 1. "Transmission system" means:
  - a. All land, conversion structures, and equipment employed at a primary source of supply to change the voltage or frequency of electricity for the purpose of its more efficient or convenient transmission;
  - b. All land, structures, lines, switching and conversion stations, high tension apparatus and their control and protective equipment between a generating or receiving point and the entrance to a distribution center or wholesale point; and
  - c. All lines and equipment whose primary purpose is to augment, integrate, or tie together the sources of power supply.
- 2. "Distribution system" means all land, structures, conversion equipment, lines, line transformers, and other facilities employed between the primary source of supply and of delivery to customers, which are not includible in a transmission system whether or not such land, structures, and facilities are operated as part of a transmission system or as part of a distribution system. Stations which change electricity from transmission to distribution voltage shall be classified as distribution stations.

. . .

## **Discussion:**

The prime contracting classification, found at Arizona Revised Statutes § 42-5075, imposes transaction privilege tax on the business "of prime contracting and dealership of manufactured buildings." Any deductions, exemptions, or exclusions from TPT must be specifically provided for in statute.<sup>4</sup> Moreover, the deductions, exemptions, and exclusions from one TPT classification are unique to that classification, such that they cannot simply be read into another tax classification in which they are not explicitly provided for in statute.<sup>5</sup>

For taxable periods beginning from and after December 31, 1996 and ending before January 1, 2017, A.R.S. § 42-5075(B)(14) provides a deduction for "the gross proceeds of sales or gross income derived from a contract to provide and install a solar energy device." The term "solar energy device" is defined in A.R.S. § 42-5001(15):

<sup>3</sup> A.R.S. § 42-5075(A).

<sup>4</sup> ARIZ. CONST. art. IX, § 1 (stating "[t]he power of taxation shall never be surrendered, suspended or contracted away"); Valencia Energy Co. v. Ariz. Dep't of Revenue, 191 Ariz. 565, 570, 959 P.2d 1256, 1261(1998).

<sup>5</sup> See *Brink Elec. Const. Co. v. Ariz. Dep't of Revenue*, 184 Ariz. 354, 359, 909 P.2d 421, 426 (Ct. App. 1995) (noting *Duhame v. State Tax Commission*, 65 Ariz. 268, 179 P.2d 252 (1947) "clearly illustrates that the retail exemptions are available only to retailers as defined by the statute" and not contractors subject to prime contracting TPT).

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"Solar energy device" means, a system or series of mechanisms designed primarily to provide heating, to provide cooling, to produce electrical power, to produce mechanical power, to provide solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means, including wind generator systems that produce electricity. Solar energy systems may also have the capability of storing solar energy for future use. Passive systems shall clearly be designed as a solar energy device, such as a trombe wall, and not merely as a part of a normal structure, such as a window.

The terms "system or series of mechanisms," "produce electrical power," and "collecting and transferring" used in A.R.S. § 42-5001(15) are not defined in statute. Broadly, courts construe a tax statute "as a whole, and consider its context, language, subject matter, historical background, effects and consequences, and its spirit and purpose." As a more specific general rule of construction, courts will consult an established and widely used dictionary to determine the common and ordinary meanings of terms that lack statutory definitions. The analysis is further guided by another general rule of construction, which is that tax exemptions should be strictly construed, as they violate the policy that all taxpayers should share the common burden of taxation.

## "System or series of mechanisms" as used in A.R.S. § 42-5001(15)

In looking at the phrase "system or series of mechanisms," the noun "system" means:

- **I.** An organized or connected group of objects.
- **1. a.** A set or assemblage of things connected, associated, or interdependent, so as to form a complex unity; a whole composed of parts in orderly arrangement according to some scheme or plan; rarely applied to a simple or small assemblage of things (nearly = 'group' or 'set'). 9

\* \* \*

#### The noun "series" means:

<sup>6</sup> State ex rel. Ariz. Dep't of Revenue v. Phoenix Lodge No. 708, Loyal Order of Moose, 187 Ariz. 242, 247, 928 P.2d 666, 671 (Ct. App. 1996).

<sup>7</sup> See, e.g., *Rigel Corp. v. State*, 225 Ariz. 65, 69, 234 P.3d 633, 637 (App. 2010) (court may consider "definitions of respected dictionaries" for words and phrases left undefined by the legislature); *United Dairymen of Ariz. v. Rawlings*, 217 Ariz. 592, 596, 177 P.3d 334, 338 (App. 2008).

<sup>8</sup> See, e.g., Excell Agent Servs., L.L.C. v. Ariz. Dep't of Revenue, 221 Ariz. 56, 57, 209 P.3d 1052, 1053 (App. 2010). 9 "System, n." OED Online (2d ed. 1989).

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- I. General senses.
- **1.** A number or set *of* material things of one kind ranged in a line, either contiguously or at more or less regular intervals; a range or continued spatial succession of similar objects; in early use applied to a row of building.<sup>10</sup>

\* \* \*

The noun "mechanism" means:

- **I.** The structure or operation of a machine or other complex system; a theory or approach relating to this.
- **1. a.** The structure of, or the relationship of the parts in, a machine, or in a construction or process comparable to a machine. (In early use chiefly with reference to natural systems.) Now *rare*.

\* \* \*

**b.** More generally: the interconnection of parts in any complex process, pattern, or arrangement. *Obs.* <sup>11</sup>

\* \* \*

## "Produce electrical power" as used in A.R.S. § 42-5001(15)

In looking at the phrase "produce electrical power," the verb "produce" means:

\* \* \*

- **3.** To bring into being or existence.
- a. *trans. gen.* To bring (a thing) into existence from its raw materials or elements, or as the result of a process; to give rise to, bring about, effect, cause, make (an action, condition, etc.).<sup>12</sup>

\* \* \*

<sup>10 &</sup>quot;Series, n." OED Online (2d ed. 1989).

<sup>11 &</sup>quot;Mechanism, n." OED Online (2d ed. 1989).

<sup>12 &</sup>quot;Produce, v." OED Online (2d ed. 1989).

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## "Collecting and transferring" as used in A.R.S. § 42-5001(15)

In looking at the phrase "collecting and transferring," the verb "collect" means:

1. a. trans. To gather together into one place or group; to gather, get together. 13

The verb "transfer" means:

**1. a.** *trans.* To convey or take from one place, person, etc. to another; to transmit, transport; to give or hand over from one to another. <sup>14</sup>

\* \* \*

For purposes of analyzing a solar energy device, there are three separate and distinct stages in "produc[ing] electrical power . . . by means of collecting and transferring solar generated energy into such uses . . ." Specifically, the stages are: (1) production, (2) transmission, and (3) distribution. The end of the production stage is where the solar energy device ends. The beginning of the transmission stage signifies the end of the production stage. Under A.A.C. R15-5-128, "[m]achinery and equipment used to facilitate the production of voltage above 34,500 volts shall be categorized as part of a transmission or distribution system . . ." Applying A.A.C. R15-5-128 to Taxpayer's solar power plant, the voltage reaches a level above 34,500 volts after the substation's transformer steps up the 34.5 kV to . . . The Department determines the transmission stage begins at the switchyard line.

## Ruling:

Based on the facts and documentation provided, the Department rules as follows:

Having considered the definition of "solar energy device" as defined under A.R.S. § 42-5001(15) and applying said definition to only those specific items identified in this ruling request, the Department concludes that the gross proceeds of sales or gross income derived from providing and installing the following specific items may be deducted under § 42-5075(B)(14) as a solar energy device because said items constitute "a system or series of mechanisms designed primarily . . . to produce electrical power. . . by means of collecting and transferring solar generated energy into such uses either by active or passive means . . .":15

<sup>13 &</sup>quot;Collect, v." OED Online (2d ed. 1989).

<sup>14 &</sup>quot;Transfer, v." OED Online (2d ed. 1989).

<sup>15</sup> The costs associated with the ancillary items such as land clearing and grading, fencing, land improvements including roads, the operations and maintenance building and equipment located after the on-site substation such as the generation tie-line between the substation and the grid are not included in this ruling request.

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- 1. The solar tables, including: main posts, tilt brackets, table frames (including Clip 1), hardware (including nuts, bolts, washers, Clip 2, and Clip 3) and solar modules;
- 2. The DC electrical, including: module wiring, harnesses, jumpers, whips, combiner boxes, and DC feeders;
- 3. [Unit 1], including: inverter, 1:A, 1:B, transformers, Computer System, and AC feeders;
- 4. [Unit 2], including: the switchgear, 2:A, digital meter, AC aggregation lines, and AC aggregation line poles; and
- 5. The substation, including: transformers, Control System, and Control System fiber optic cable.

The conclusions in this private taxpayer ruling do not extend beyond the facts presented in your correspondences dated August 18, 2011 and October 5, 2011.

This response is a private taxpayer ruling and the determinations herein are based solely on the facts provided in your request. The determinations are subject to change should the facts prove to be different on audit. If it is determined that undisclosed facts were substantial or material to the department's making of an accurate determination, this private taxpayer ruling shall be null and void. Further, the determination is subject to future change depending on changes in statutes, administrative rules, case law or notification of a different department position.

The determinations in this private taxpayer ruling are only applicable to the taxpayer requesting the ruling and may not be relied upon, cited nor introduced into evidence in any proceeding by a taxpayer other than the taxpayer who has received the private taxpayer ruling. In addition, this private taxpayer ruling only applies to transactions that occur or tax liabilities that accrue from and after the date the taxpayer receives the ruling.

Lrulings/12-001-D