

EXHIBIT 1

UL 2735

Electric Utility Meter Safety Standard and Conformity Assessment

UL LLC

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Agenda



Accelerating adoption

UL2735 Development Timeline

Research activities

UL2735 Requirements

Conformity Assessment Options

UL Conformity Assessment Findings

Helping to accelerate adoption



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Press Releases

UL Announces New Safety Programs to Facilitate Adoption of Smart Meters

UL offers Smart Meter safety services for manufacturers and users

NORTHBROOK, Ill., Jan. 27, 2014 - UL (Underwriters Laboratories) a global safety science leader, announced today the launch of two new safety services designed to facilitate and accelerate the adoption of smart meters. In cooperation with leading US utilities and smart meter manufacturers, and in response to numerous smart meter safety concerns from consumers and regulators, UL has established both product safety certification services for smart meter manufacturers and product safety testing services for smart meter users.

Earlier this year, UL published the Standard for Safety for Electric Utility Meters, UL2735. This standard contains requirements for the electric shock, fire, mechanical and radio-frequency (RF) emissions safety aspects of all electric utility

UL2735 Standard
Product Safety Testing Program
Product Safety Certification Program

Developing UL 2735 Requirements

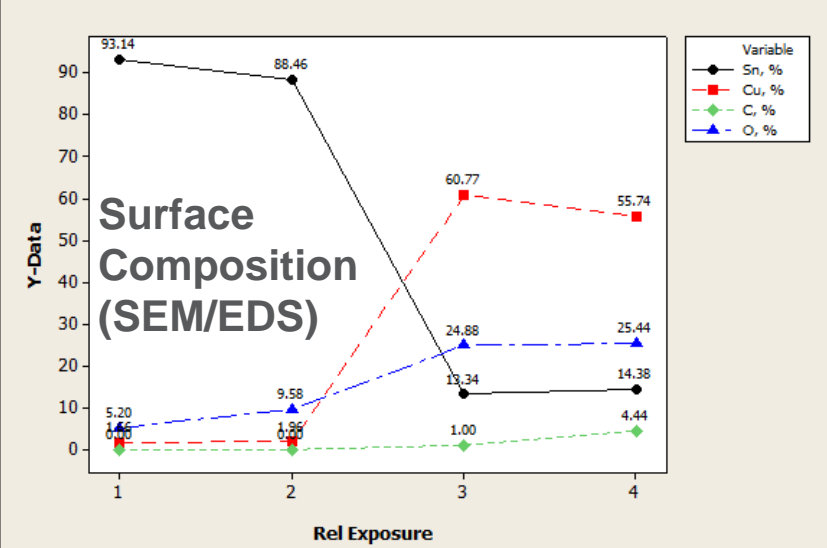
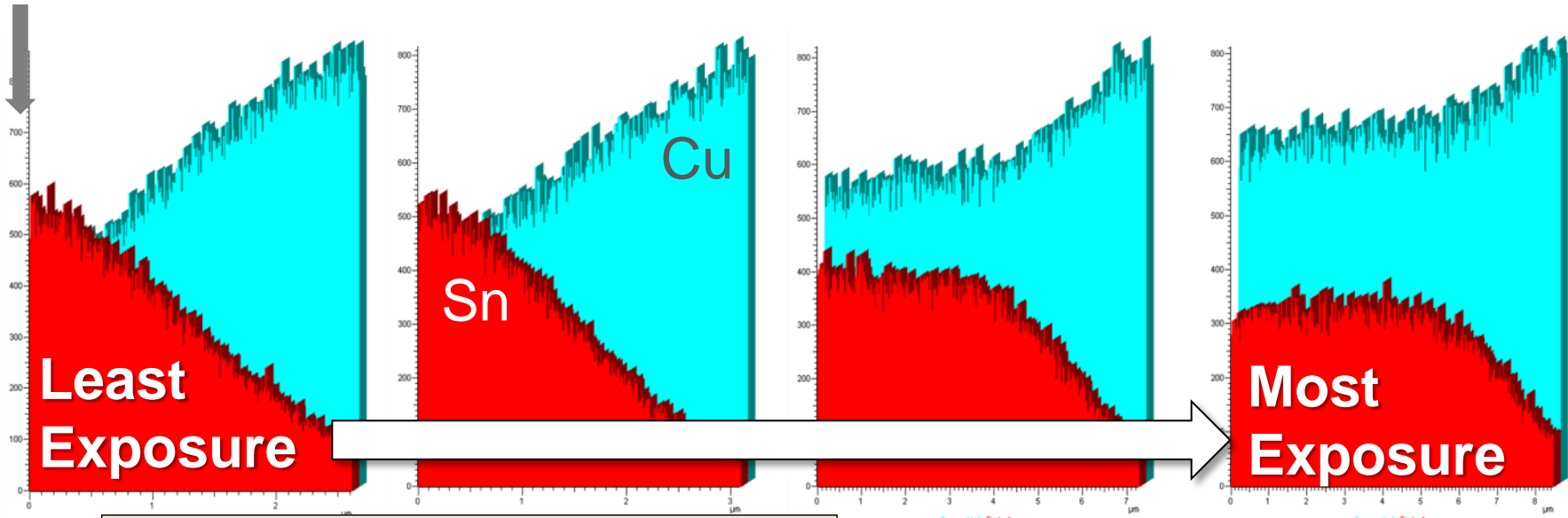


Date	Activity
2009	<ul style="list-style-type: none">• UL begins evaluation of requirements for smart meter electric, fire, mechanical and emissions safety testing
2010	<ul style="list-style-type: none">• UL develops Outline of Investigation UL Subject 2735 to evaluate electrical, fire, mechanical and emissions hazards of Type S and A utility meters
2012	<ul style="list-style-type: none">• UL was contacted by several utilities to conduct safety testing of smart meters• UL conducts safety tests on smart meters utilizing UL Subject 2735 test plan• Consumers begin contacting UL to inquire about UL mark and safety testing on smart meters• Research begins on meter installation overheating
2013	<ul style="list-style-type: none">• After limited industry review and comment UL publishes UL2735 safety standard for electric utility meters• Standards Technical Panel (STP) is formed and begins ANSI consensus process for UL2735• Several utilities adopt UL conformity assessment programs for smart meter safety• Major US meter manufacture successfully achieves UL certification on numerous smart meter models

Smart Meter Research



Surface



Understand changes in meter/meter socket interface to understand “hot socket” phenomenon

Early research confirmed physical changes in contacts

Leverage knowledge to develop standards and/or services to mitigate hazards due to hot socket issues

UL2735 Requirements - Scope



These requirements cover the **electrical safety of electric utility (revenue) meters rated up to 600 V**, which measure, monitor, record, transmit, or receive electrical energy generation or consumption information.

Meters covered by this standard **may be provided with one or two-way communication capabilities**, by means of carrier signals, telephone, cable, wireless communication, or other methods.

These meters **may additionally provide signals**, either by direct connection or wirelessly, **for the control of electrical loads or electrical power generation equipment** in response to signals received from the utility or local communication networks

These requirements cover **socket mounted plug-in (Type S) utility meters, and non-socket mounted, bottom connected (Type A) utility meters**, intended for installation in ordinary (non-classified) locations. These may or may not be intended to be under the exclusive control of the serving utility.

These requirements **also cover revenue meters that are not socket mounted (Type S) or bottom connected (Type A) meters**, including those that are intended for factory installation as components within the enclosure of complete equipment.

These requirements **do not cover** equipment intended as **test equipment or equipment intended to make measurements for analysis in a laboratory or industrial setting**.

UL2735 Requirements – Construction



Components	Electrical	Fire	Mechanical
<ul style="list-style-type: none"> • Compliance with relevant component standards • Used within their recognized ratings • Plastics, printed circuit boards, MOV's, wire, transformers, etc. 	<ul style="list-style-type: none"> • Accessibility of hazardous live parts • Electrical spacings over-surface and through-air • Isolation of current transformer secondary 	<ul style="list-style-type: none"> • Polymeric enclosure flammability • Battery protection, charging, placement and replacement 	<ul style="list-style-type: none"> • Environmental considerations of enclosure • Strength and rigidity of enclosure • Access panels • Form/size per ANSI C12

UL2735 Requirements – Performance



Electrical	Fire	Mechanical	ANSI C12.1
<ul style="list-style-type: none"> • Endurance of load control switch • Single component fault 	<ul style="list-style-type: none"> • Polymeric enclosure flammability • Single component fault 	<ul style="list-style-type: none"> • Static • Impact • Drop 	<ul style="list-style-type: none"> • Temperature rise* • Insulation resistance • HV Line Surges • Temporary Overload* • Fast Transient/Burst • RF interference • RF Conducted/Radiated Emissions • Electrostatic Discharge*





*modified in UL2735

UL2735 Requirements – Markings



UL2735 Conformity Assessment Options



	<i>Specified Requirements</i>	<i>Initial Validation</i>	<i>Ongoing Production Validation</i>	<i>Component Substitution Validation</i>
1st Party Self-Declaration	UL2735	Meter manufacturer	?	?
2nd Party Verification	UL2735	Utility	?	?
3rd Party Verification	UL2735		?	?
3rd Party Certification	UL2735			

UL 2735 Conformity Assessment Findings



Enclosure flammability – sustained burning/molten and flaming dripping

Single component failures – ejections/flames/accessibility to live parts

Endurance of service switches – welded contacts

Deficient electrical spacings

Supply chain control of safety critical components – compliance of production



THANK YOU.



Questions?

EXHIBIT 2

INTERNAL REVENUE SERVICE
NATIONAL OFFICE TECHNICAL ADVICE MEMORANDUM

September 16, 2011

Number: **201244015**
Release Date: 11/2/2012

Third Party Communication: None
Date of Communication: Not Applicable

Index (UIL) No.: 168.20-00
CASE-MIS No.: TAM-112103-11

Taxpayer's Name:
Taxpayer's Address:

Taxpayer's Identification No:
Year(s) Involved:
Date of Conference:

LEGEND:

Taxpayer	=
Parent	=
Regulatory Body	=
Year 1	=
Year 2	=
<u>A</u>	=
<u>B</u>	=
<u>C</u>	=
<u>D</u>	=
<u>E</u>	=
<u>F</u>	=
<u>G</u>	=
<u>H</u>	=
<u>I</u>	=

J =
Meter 1 =
Meter 2 =
Model A =
Model B =
Computer =

ISSUE:

For purposes of § 168 of the Internal Revenue Code, are Meter 2, a smart electric meter, and associated equipment placed in service by Taxpayer after October 3, 2008, classified as qualified smart electric meters under § 168(e)(3)(D)(iii) or are Meter 2 and associated equipment placed in service by Taxpayer during the year at issue classified as qualified technological equipment under § 168(e)(3)(B)(iv) or in asset class 00.12, Information Systems, of Rev. Proc. 87-56, 1987-2 C.B. 674, as clarified and modified by Rev. Proc. 88-22, 1988-1 C.B. 785?

CONCLUSION:

For purposes of § 168, Meter 2 and associated equipment placed in service by Taxpayer during the year at issue are classified in asset class 00.12 of Rev. Proc. 87-56 and, therefore, have a class life of 6 years. Accordingly, Meter 2 and associated equipment placed in service by Taxpayer after October 3, 2008, are not qualified smart electric meters under § 168(e)(3)(D)(iii).

FACTS:

Taxpayer is the subsidiary of Parent and operates as a utility company subject to regulation by the Regulatory Body.

For decades, Taxpayer has used standard electromechanical meters to measure customers' electrical usage. This longstanding technology uses a small motor to spin a disc, which is connected to gears and a set of dials that record cumulative kilowatt-hours ("KWH") of power that have passed through the meter. Historically, each meter was visited regularly, typically at monthly intervals, by a person who would read the meter and write down in a book the cumulative number of KWH of power shown on the meter, the date and location. That data was then passed to Taxpayer's central billing office. At the central billing office, Taxpayer's personnel would input the data into the mainframe computer, which would calculate the customer's electric usage in KWH since the last reading by subtracting the current reading from the prior reading, multiply the KWH usage times a rate (tariff) to arrive at the amount owed by the customer for the current period usage, and prepare a bill that would be mailed to the customer.

In Year 1, the data collection system was improved when Taxpayer began using portable handheld data log devices that its meter readers used to manually record the monthly readings from the standard meters. At the end of each day, the meter readings recorded on these devices were electronically transferred directly to the central office computers – saving time and labor, and minimizing errors. These devices also were used to record detailed information regarding customer accounts for each route in support of the next day's meter reading activity.

In Year 2, Taxpayer proposed the system-wide installation of a new set of electromechanical meters equipped with an optical scanner and a communication device. Using these meters, Taxpayer proposed to eliminate manual meter reads, saving costs and reducing billing errors. Taxpayer also envisioned operational cost savings through the ability to better locate outages because the meters were designed to be "pinged" to determine whether the meter was receiving power. Pinging involves the sending of a signal to a specific electronic address, which is designed to elicit a response if the meter is then operable (*i.e.*, receiving electricity). These meters, known as Meter 1, utilized Taxpayer's power lines to carry the meter data signal back to substations, where it was gathered and transmitted automatically to Taxpayer's central computers.

The optical scanner and communication device on Meter 1 also gave Taxpayer the capability to implement time of use ("TOU") pricing. The optical scanning device was designed to read the mechanical rotations of a disc within the meter every hour and to send a signal of such usage to Taxpayer's central office every A hours. With its central billing computers and data systems, Taxpayer could then take the hourly usage data received from the meters and calculate customer bills using TOU rates.

While Taxpayer was in the process of installing Meter 1, the technology and capability of meters evolved. Because of the technological advances and the significantly enhanced capability of this new meter technology, Taxpayer decided that it would no longer continue to replace existing meters with Meter 1. Instead, Taxpayer sought and received permission from the Regulatory Body to begin installation of the new technologically advanced meters, known as Meter 2.

Meter 1 and Meter 2 are both approximately the same size and consist of a round dome clear glass cover, on a round base, which has four metal prongs at the bottom that insert into slots in the meter socket. When the meter is inserted into the socket a circuit is completed with half the prongs connecting to a receptacle on the utility side of the meter and the other prongs connecting to a receptacle on the customer's side of the meter, allowing electricity to flow from the power source on the utility's side of the meter into the customer's electric system. Both Meter 1 and Meter 2 are electrically activated and readily removable.

Meter 1 is a variation of an electromechanical induction meter that operates by counting the revolutions of an aluminum disc that is made to rotate by electrical fields at a speed proportional to the energy usage. The aluminum disc is supported by a spindle that has a worm gear that drives an analog register. The register is a series of dials that record the amount of electric energy used and can be viewed through the glass dome. Meter 1 also has an optical scanning device that reads the rotation of the aluminum disc by observing a line on the disc each time it makes a rotation. The observation of disc revolutions is sent back to the utility over the electric lines and is used to measure the electric energy usage.

The internal components of Meter 2 differ from those of Meter 1. Meter 2 measures electric energy usage using a solid state sensor and microprocessor, which then displays electric usage on a digital liquid crystal display screen, rather than through a direct mechanical measurement of energy usage that is registered on an analog dial.

Taxpayer has installed two models of Meter 2: Model A and Model B. Both models can be programmed. From a practical standpoint, these two models have essentially the same metrology components and perform essentially the same functions.

Inside the case of Meter 2 are various components that are designed to accomplish the following four functions:

1. Metrology, which senses and measures electric current, converts that measurement to a signal that goes to a register that records the measurement, and displays the accumulated amount of electricity used. The metrology portion of Meter 2 consists of two major components – a base and electronic module.

The base includes a precision current transformer that senses the current. The transformer reduces the current (amperage) and voltage to two sensors, which provide separate analog signals of voltage and amperage.

The electronic module has the metering circuitry, including a microcontroller, which enables energy accumulation and contains calibration information. The meter chips contained on the electronic module convert analog signals of current and voltage from the sensors into a digital form. The microcontroller calculates accumulated energy (volts multiplied by amps over time) and maintains the energy consumption for display. It uses non-volatile memory to store the metering data, including energy used, voltage, and amperage. The non-volatile memory does not require a battery to maintain information when power is unavailable. The Model A of Meter 2 contains memory of B bytes and Model B of Meter 2 contains memory of C bytes.

2. An advanced metering initiative (AMI) communications module that provides two-way wireless signal at a radio frequency of D megahertz. The AMI communications module of Meter 2 also is referred to as the local area networking (LAN) part of the

meter. It is electronic circuitry located on the Network Interface Card (NIC) within Meter 2, which is capable of using internet protocols addressing. Taxpayer uses this component to receive frequent usage readings (every few minutes) from the metrology parts of the meter and to send that data automatically to a data gathering system that leads to Taxpayer's central database. The AMI also has the capability, in conjunction with the meter, to control the disconnect switch.

The NIC is integrated with the meter at the factory using "through-pin" and serial port connections. The NIC includes an E processor with a speed of F MHz and contains A MB of flash storage capacity and G MB of random access memory (RAM), which is roughly comparable in terms of processing and storage capacity to early desktop computers, such as a Computer, which had a H MHz processor and similar amounts of storage.

The components of the NIC have the potential to perform some calculations that are now done on central office mainframe computers. For example, the NIC is capable of multiplying electrical usage by the tariff rate to calculate the customer's bill.

3. A Home Area Network (HAN) module to communicate from the meter to the customer's display or computer. It uses a separate radio circuit at I gigahertz frequency. The HAN was not functioning during the year at issue. However, the HAN is designed to be used by customers to access their account online or view their electricity usage data on a digital display or monitor, rather than waiting for a monthly bill.

4. A disconnect switch that can be programmed or directed by Taxpayer's credit collection and billing department to interrupt, initiate, or restore electric service by remote activation by the AMI communication module. The disconnect switch also can be programmed by the AMI communication module to perform a power-limiting function; that is, to shut off the service temporarily if the power usage through the meter exceeds a certain flow rate (amperage). While Meter 2 had the capability to operate the disconnect switch during the year at issue, the disconnect switch was not functioning then because it had not been programmed to do so.

These functions cannot be used and are not accessible for general computing uses in the same way as a personal computer. There is no connection jack, USB or other port, input keypad, computer display monitor, or physical connection with an external monitor. However, Taxpayer can program Meter 2 remotely through the wireless connectivity and internet protocols. This same wireless connectivity and internet protocol could potentially be used to give Meter 2 the capability to send information to display monitors at the customers' locations or Taxpayer's offices, where the information could be viewed. This potential function was not used during the year at issue.

While the above functions are integrated, should the AMI communications module, HAN module, and/or disconnect switch functions fail, Meter 2 would continue to measure the electrical current and store usage information in the memory register.

Meter 2 does not have an independent power source (battery) so that if power is unavailable, the meter cannot function. However, stored information is not lost in the absence of power. Meter 2 records and stores usage data in hourly increments for J days. Meter 2 is designed to continue to perform various functions (e.g., LAN communications), even though the disconnect switch is engaged and no power is flowing to the customer.

As previously mentioned, Taxpayer uses the LAN part of Meter 2 to receive frequent usage readings from the metrology parts of the meter and to send that data automatically to a data gathering system that leads to Taxpayer's central database. The equipment necessary for the automated relay of data between Meter 2 and Taxpayer's central database consists of wireless receiving and relay devices; that is, eBridges, relays, and access points (hereinafter, this equipment is referred collectively to as the "associated equipment"). Every one of these devices has embedded in it a microprocessor, which is the same one used in Meter 2. The associated equipment gathers data from many customers and feeds it to a specialized Meter Data Management (MDM) centralized computer system. Upon receiving the raw data from the Meter 2 system, the MDM checks for errors and then processes and translates the raw data into a form compatible with Taxpayer's existing customer care and billing central database. The other functions of the MDM include the monitoring of the system for meter failures and power outages. The MDM and customer care and billing central database are not dependent upon the type of meter used.

Meter 2 performs additional functions than Meter 1. The LAN part of Meter 2 and its associated equipment is designed to provide real-time usage data and other real-time information on a two-way basis between Meter 2 and Taxpayer's central billing office. Meter 2 also is designed through the HAN module to communicate information and other data to Taxpayer's customers. Finally, Meter 2 also is programmable so that it can be adapted to other information uses as conditions warrant. These capabilities will permit both Taxpayer and the customer to regulate electric usage by integrating customer billing and rate design with new dynamic rate structures and demand response programs.

Meter 2, like Meter 1, can be read remotely to enable more frequent meter reads needed to implement TOU rates. Meter 2, however, has enhanced capacity because it can communicate in real time rather than in hourly intervals. In addition, Meter 2 has the capability to read and record bi-directional power flows when a customer receives power and provides power at different times rather than simply measuring the net of the power flows over a meter reading time segment (e.g., over a segment that consists of several hours). Meter 2 then subtracts any customer-supplied power from Taxpayer-

supplied power thereby converting the bi-directional metering data to net metering data. This capability is available through use of the computerized memory register. The bi-directional metering data also includes detailed time-of-day data that will allow TOU pricing.

LAW AND ANALYSIS:

Section 167(a) provides that there shall be allowed as a depreciation deduction a reasonable allowance for the exhaustion, wear and tear (including a reasonable allowance for obsolescence) of property used in a taxpayer's trade or business.

The depreciation deduction provided by § 167(a) for tangible property placed in service after 1986 generally is determined under § 168. This section prescribes two methods of accounting for determining depreciation allowances. One method is the general depreciation system in § 168(a) and the other method is the alternative depreciation system in § 168(g). Under either depreciation system, the depreciation deduction is computed by using a prescribed depreciation method, recovery period, and convention.

For purposes of either § 168(a) or § 168(g), the applicable recovery period is determined by reference to class life or by statute. Section 168(i)(1) defines the term "class life" as meaning the class life (if any) that would be applicable with respect to any property as of January 1, 1986, under § 167(m) (determined without regard to § 167(m)(4) and as if the taxpayer had made an election under § 167(m)) as in effect on the day before the date of enactment of the Revenue Reconciliation Act of 1990. Former § 167(m) provided that in the case of a taxpayer who elected the Class Life Asset Depreciation Range system of depreciation, the depreciation allowance was based on the class life prescribed by the Secretary that reasonably reflected the anticipated useful life of that class of property to the industry or other group.

Section 1.167(a)-11(b)(4)(iii)(b) of the Income Tax Regulations provides rules for classifying property under former § 167(m). Under § 1.167(a)-11(b)(4)(iii)(b), property is classified according to primary use even though the activity in which such property is primarily used is insubstantial in relation to all the taxpayer's activity.

Rev. Proc. 87-56 sets forth the class lives of property subject to depreciation under § 168. This revenue procedure establishes two broad categories of depreciable assets: (1) asset classes 00.11 through 00.4 that consist of specific depreciable assets used in all business activities; and (2) asset classes 01.1 through 80.0 that consist of depreciable assets used in specific business activities. An asset that falls within both an asset group (that is, asset classes 00.11 through 00.4) and an activity group (that is, asset classes 01.1 through 80.0) would be classified in the asset group. See *Norwest Corp. & Subs. v. Commissioner*, 111 T.C. 105, 156-64 (1998).

Asset class 00.12, Information Systems, of Rev. Proc. 87-56 includes computers and their peripheral equipment used in administering normal business transactions and the maintenance of business records, their retrieval and analysis. Assets included in this asset class have a 6-year class life. Asset class 00.12 defines information systems as:

1) Computers: A computer is a programmable electronically activated device capable of accepting information, applying prescribed processes to the information, and supplying the results of these processes with or without human intervention. It usually consists of a central processing unit containing extensive storage, logic, arithmetic, and control capabilities. Adding machines, electronic desk calculators, etc., and other equipment described in asset class 00.13 are excluded from this category.

2) Peripheral equipment consists of the auxiliary machines which are designed to be placed under control of the central processing unit. Nonlimiting examples are: card readers, card punches, magnetic feed tapes, high speed printers, optical character readers, teleprinters, terminals, tape drives, disc drives, disc files, disc packs, visual image projector tubes, card sorters, plotters, and collators. Peripheral equipment may be used on-line or off-line.

Asset class 00.12 does not include equipment that is an integral part of other capital equipment that is included in other classes of economic activity, i.e., computers used primarily for process or production control, switching, channeling, and automating distributive trades and services such as point of sale computer systems. Asset class 00.12 also does not include equipment of a kind used primarily for amusement or entertainment of the user.

Asset class 49.14, Electric Utility Transmission and Distribution Plant, of Rev. Proc. 87-56, includes assets used in the transmission and distribution of electricity for sale and related land improvements. Assets included in this asset class have a 30-year class life.

Several appellate decisions discuss the "primary use" standard for asset classification under § 1.167(a)-11(b)(4)(ii)(b). See, e.g., Clajon Gas Co, L.P. v. Commissioner, 354 F. 3d 786 (8th Cir. 2004). Courts have concluded that the actual purpose and function of an asset determines its asset class (a use-driven functional standard) rather than the terminology used to describe an asset by its owners or others.

The Tax Court in PPL Corporation v. Commissioner, 135 T.C. 176 (2010), concluded that street light assets are not assets used in the distribution of electricity and, thus, not included in asset class 49.14 of Rev. Proc. 87-56. In reaching its conclusion, the Court looked at the definition of the word "distribution" as well as the primary use of the street light assets. The parties stipulated that distribution meant "the delivery of electric energy to customers" and "the final utility step in the provision of electric service to customers." The Court found this definition to be consistent with a standard definition of

distribution. 135 T.C. at 183. The Court also stated that the “distribution of electricity seems to us to be the process by which electricity (the commodity) gets to final consumers.” *Id.* The Court found that street light assets could be disconnected from the distribution system without effecting electrical distribution to customers and they are distinct from distribution assets because they have a different purpose and function. On this last point, the Court found that distribution assets get final consumers electricity, service drops are the final part of the distribution of electricity to final consumers, and street light assets are not part of the service to get electricity to final consumers.

Section 306 of Division B of the Economic Stabilization Act of 2008, Pub. L. No. 110-343, 122 Stat. 3765 (2008), amended § 168 by adding §§ 168(e)(3)(D)(iii) and 168(i)(18). Both sections are effective for property placed in service after October 3, 2008.

Section 168(e)(3)(D)(iii) provides that the term “10-year property” includes any qualified smart electric meter.

Section 168(i)(18)(A) defines the term “qualified smart electric meter” as meaning any smart electric meter that: (i) is placed in service by a taxpayer who is a supplier of electric energy or a provider of electric energy services; and (ii) does not have a class life (determined without regard to §168(e)) of less than 10 years.

For purposes of § 168(i)(18)(A), § 168(i)(18)(B) defines the term “smart electric meter” as meaning any time-based meter and related communication equipment that is capable of being used by the taxpayer as part of a system that: (i) measures and records electricity usage data on a time-differentiated basis in at least 24 separate time segments per day; (ii) provides for the exchange of information between supplier or provider and the customer’s electric meter in support of time-based rates or other forms of demand response; (iii) provides data to such supplier or provider so that the supplier or provider can provide energy usage information to customers electronically; and (iv) provides net metering.

Section 168(e)(3)(B)(iv) provides that any qualified technological equipment is 5-year property. Section 168(i)(2)(A) and (B)(i) define the term “qualified technological equipment” as meaning, in relevant part, any computer or any related peripheral equipment. Section 168(i)(2)(B)(ii) defines “computer” as meaning a programmable electronically activated device that: (I) is capable of accepting information, applying prescribed processes to the information, and supplying the results of these processes with or without human intervention; and (II) consists of a central processing unit containing extensive storage, logic, arithmetic, and control capabilities.

Section 168(i)(2)(B)(iii) defines “related peripheral equipment” as meaning any auxiliary machine (whether on-line or off-line) that is designed to be placed under the control of the central processing unit of a computer.

However, § 168(i)(2)(B)(iv) provides that the term “computer or peripheral equipment” shall not include, in relevant part, any equipment that is an integral part of other property that is not a computer.

The Tax Court in Broz v. Commissioner, 137 T.C. No. 3 (July 7, 2011), concluded that cell site equipment containing computerized parts, except for the switch, is not a computer under § 168(i)(2)(B)(ii). In reaching its conclusion, the Court determined that the key component of the base station and other cell site equipment was the radio. The Court found that the radio itself did not employ computer processing and did not contain a central processing unit containing extensive storage. The Court also found “compelling that even though the base station contained some of the same software as the switch, which is classified as a computer, the base station did not have the computer system or storage capacity to keep billing records.” Further, the Court stated that the radio technology has functioned for many years without the use of computerized parts, suggesting that those parts are only ancillary.

In this case, the Director and Taxpayer agree that Meter 2 is a smart electric meter under § 168(i)(18)(B). A smart electric meter placed in service after October 3, 2008, is not a qualified smart electric meter under § 168(i)(18)(A) if the meter has a class life of less than 10 years. Thus, at issue in this technical advice memorandum is whether Meter 2 is classified in asset class 00.12 of Rev. Proc. 87-56 or is qualified technological equipment under § 168(i)(2).

Information systems

Meter 2, like Meter 1 and Taxpayer’s electromechanical meters, is used in the distribution of electricity for sale to final consumers. Meter 2 is the device that allows electricity to flow from Taxpayer to its customers and that measures such electricity. Without these functions, Taxpayer would be unable to distribute and sell its electricity. Accordingly, Meter 2 (and Meter 1 and Taxpayer’s electromechanical meters) are included in the activity category of asset class 49.14 of Rev. Proc. 87-56.

However, if an asset is included in both an asset category and an activity category, the asset is classified in the asset category unless it is specifically excluded from the asset category or specifically included in the activity category. See Norwest; Rev. Rul. 2003-81, 2003-2 C.B. 126. Accordingly, if Meter 2 also is included in the asset category of asset class 00.12 of Rev. Proc. 87-56, then Meter 2 is classified in asset class 00.12.

An asset is included in asset class 00.12 if the asset (i) is a computer or peripheral equipment and (ii) is used in administering normal business transactions and the maintenance of business records, their retrieval and analysis.

We first consider whether Meter 2 is used in administering normal business transactions and the maintenance of business records, their retrieval and analysis. During the year at issue, Meter 2 recorded the sale of electricity (the product) to Taxpayer's customers, stored this information for J days, and sent the information automatically to Taxpayer's data gathering system that leads to Taxpayer's customer care and billing central database. Meter 2 also protects Taxpayer from the loss of revenue generated by the sale of electricity. Meter 2 is tamper-resistant thereby preventing some common methods of electricity theft. Based on these uses of Meter 2 during the year at issue, we conclude that Meter 2 is used in administering normal business transactions and the maintenance of business records, their retrieval and analysis during the year at issue.

Next, we consider whether Meter 2 is a computer or peripheral equipment as defined in asset class 00.12 of Rev. Proc. 87-56.

Meter 2 is a computer as defined in asset class 00.12 of Rev. Proc. 87-56. First, it is a programmable electronically activated device. Taxpayer can program Meter 2 remotely through the wireless connectivity and internet protocols. Taxpayer's credit collection and billing department can program the disconnect switch contained in Meter 2 to interrupt, initiate, or restore electric service. The disconnect switch also can be programmed by the AMI communication module to perform a power-limiting function (i.e., shutting off electric service temporarily if the power usage through the meter exceeds a certain amperage). Meter 2 also can be programmed to detect energy tampering or service quality issues and to notify the central billing system when these events occur. Furthermore, Taxpayer can use the remote programming feature to enhance performance and features of Meter 2 (e.g., enhancing the security of Meter 2 and upgrading software programs).

Second, Meter 2 is capable of accepting information, applying prescribed processes to the information, and supplying the results of these processes with or without human intervention. For example, when customer-source power is supplied to the electric grid, Meter 2 does not immediately perform net metering. Instead, Meter 2 is capable of providing bi-directional metering. In this case, Meter 2 separately measures Taxpayer-supplied power and customer-supplied power, and then subtracts any customer-supplied power from Taxpayer-supplied power thereby converting the bi-directional metering data to net metering data. The bi-directional metering data also includes detailed time-of-day data that will allow TOU pricing. Meter 2 also has the capability to multiply electricity usage by the tariff rate to calculate the customer's bill, which is now done on Taxpayer's central office mainframe computers, and through the HAN module has the capability to send this information to display monitors at the customers' locations for viewing. While these functions were not used by Taxpayer during the year at issue, the plain language of asset class 00.12 focuses on the device's capability rather than the device's actual use during the year. Meter 2 also is capable of sending, and was used during the year at issue to send, usage data through Meter 2's LAN and

the associated equipment to the Taxpayer's centralized database, where the data is further processed, checked, and translated.

Finally, Meter 2 contains a central processing unit with extensive storage, logic, arithmetic, and control capabilities. In evaluating this requirement, the Director and Taxpayer had differing views. Taxpayer argues that this determination should be based on what was considered extensive storage in 1984 when the definition of computer in the predecessor of § 168(i)(2)(B) (i.e., former § 168(j)(5)(D)) was enacted. The Director argues that the determination should be based on what is considered extensive storage currently. Given the ever-changing and increasing processing and storage capacities of computers, we do not agree with either position. Using Taxpayer's position will render the term "extensive" meaningless in asset class 00.12. Using the Director's position could potentially cause a device that was considered to have extensive storage, logic, arithmetic, and control capabilities in its placed-in-service year not to have such storage, logic, arithmetic, and control capabilities in a subsequent year during its recovery period. Instead, we believe that the determination should be based on what is considered to be extensive storage, logic, arithmetic, and control capabilities in the placed-in-service year of the device that are needed for the device to perform its actual and potential functions.

Based on the information provided to us to date, we believe that Meter 2 has a central processing unit containing extensive storage, logic, arithmetic, and control capabilities that enables Meter 2 to perform its functions actually used during the year at issue and its potential functions. While Meter 2's processing and storage capacity is comparable to early desktop computers, we believe that Meter 2's processing and storage capacity is sufficiently extensive to perform its actual and potential functions.

The exceptions in asset class 00.12 of Rev. Proc. 87-56 do not apply to Meter 2. Specifically, Meter 2 is not used primarily for process or production control, switching, channeling, and automating distributive trades and services such as point of sale computer systems. While the disconnect switch of Meter 2 can be programmed by the AMI communication module to perform a power-limiting function (i.e., shutting off electric service temporarily if the power usage through the meter exceeds a certain amperage) and Meter 2 can be programmed to detect energy tampering or service quality issues (e.g., pinpoint power outages), these process or production control uses are not the primary uses of Meter 2.

Arguably, Meter 2 is similar to a point of sale computer system. For insight into this question, it is necessary to examine the modifications made by Rev. Proc. 80-15, 1980-1 C.B. 618, to the asset classes in Rev. Proc. 77-10, 1977-1 C.B. 548.

Rev. Proc. 80-15 added the following new asset classes to Rev. Proc. 77-10: 57.0, Distributive Trades and Services, and 57.1, Distributive Trades and Services-Billboard, Service Station Buildings and Petroleum Marketing Land Improvements. These new

asset classes include the assets that were included in asset classes 13.4, 50.0, 50.1, 70.2, and 70.21 of Rev. Proc. 77-10, which were deleted by Rev. Proc. 80-15. Rev. Proc. 80-15 also clarified asset class 00.12 of Rev. Proc. 77-10 by providing that asset class 00.12 does not include computers used primarily for automating distributive trades and services such as point of sale computer systems. Rev. Proc. 80-15 was effective for assets placed in service in taxable years ending on or after April 28, 1980. For taxable years ending prior to April 28, 1980, Rev. Proc. 80-15 provided that distributive trades and services automated equipment such as point of sale computer systems are properly classified in asset class 00.12, 50.0, or 70.2, depending upon which class was selected by the taxpayer on its original return.

Our review of the modifications made by Rev. Proc. 80-15 indicate that the addition of the new asset classes for distributive trades and services and the new exception to asset class 00.12 for computers used primarily for automating distributive trades and services such as point of sale computer systems are linked together. Accordingly, the exception to asset class 00.12 of Rev. Proc. 87-56 for computers used primarily for automating distributive trades and services such as point of sale computer systems is limited to business activities described in the asset classes for distributive trades and services (asset classes 57.0 and 57.1 of Rev. Proc. 87-56).

Based on Taxpayer's use of Meter 2, the plain language of asset class 00.12 of Rev. Proc. 87-56, and our conclusion that Meter 2 has a central processing unit containing extensive storage, logic, arithmetic, and control capabilities that enables Meter 2 to perform its functions actually used during the year at issue and its potential functions, Taxpayer's Meter 2 is an information system included in asset class 00.12 of Rev. Proc. 87-56.

We also conclude that the associated equipment is peripheral equipment as defined in asset class 00.12 of Rev. Proc. 87-56. The associated equipment is designed to be placed under the control of the central processing unit of Taxpayer's centralized computer system.

In this case, Meter 2 and the associated equipment serve a dual purpose. They are included in asset class 49.14 of Rev. Proc. 87-56, an activity category, and asset class 00.12 of Rev. Proc. 87-56, an asset category. An asset that is included in both an asset category and an activity category is classified in the asset category unless it is specifically excluded from the asset category or specifically included in the activity category. See Norwest; Rev. Rul. 2003-81. Because Meter 2 and the associated equipment are included in both asset class 00.12 and asset class 49.14, and not specifically excluded from asset class 00.12 or specifically included in asset class 49.14, Meter 2 and the associated equipment are classified in asset class 00.12.¹

¹ Meter 1 and Taxpayer's electromechanical meters are not included in asset class 00.12 of Rev. Proc. 87-56. The Director and Taxpayer agree that Meter 1 is not a computer. Based on the information provided to date, we believe

The Director makes several arguments in support of its position that Meter 2 is not included in asset class 00.12 of Rev. Proc. 87-56. First, the Director argues that based on the heading for the “00” asset classes of Rev. Proc. 87-56, Specific Depreciable Assets Used In All Business Activities, Except As Noted, the asset must be of a type used in all business activities to be included in an asset class with a “00” prefix; but Meter 2 can only be used in one specific type of activity, *i.e.*, the sale of electricity by an electric company. We disagree. Under the heading “Specific Depreciable Assets Used in All Business Activities, Except as Noted,” there are 14 asset classes with a “00” prefix and one of them is titled “Information Systems.” For the reasons previously stated, we conclude that Meter 2 is an information system. Further, the asset classes with a “00” prefix prescribe class lives for specific depreciable assets, such as information systems, regardless of the business activity in which they are used.

Second, the Director argues that Meter 2 is not an information system because Taxpayer primarily uses this meter to distribute and measure electricity for sale. We agree that Taxpayer uses Meter 2 in this activity. However, as previously discussed, we conclude that Meter 2 is dual-use property that also is used by Taxpayer as an information system. In such a case, the asset category of asset class 00.12 of Rev. Proc. 87-56 prevails over the activity category of asset class 49.14 of Rev. Proc. 87-56. See *Norwest*; Rev. Rul. 2003-81 (bookcase primarily used in connection with the production of electricity for sale is classified in asset class 00.11 of Rev. Proc. 87-56 even though bookcase also is included in asset class 49.13 of Rev. Proc. 87-56).

The Director also argues that the exception in asset class 00.12 for equipment that is an integral part of other capital equipment that is included in other classes of economic activity should be applied broadly rather than applied only to the listed items. Asset class 00.12 does not include equipment that is an integral part of other capital equipment that is included in other classes of economic activity, *i.e.*, computers used primarily for process or production control, switching, channeling, and automating distributive trades and services such as point of sale computer systems (emphasis added). If the listed items were meant to be examples, then “e.g.” instead of “i.e.” should have been used. Accordingly, the plain language of asset class 00.12 does not support a broader application.

Finally, the Director argues that Meter 2 is not an information system because it is not used by Taxpayer in administering normal business transactions and the maintenance of business records, their retrieval and analysis. For the reasons previously stated, we do not agree with this argument.

Qualified technological equipment

that Meter 1 is not peripheral equipment. Further, Taxpayer’s electromechanical meters clearly are not computers or peripheral equipment.

In light of our conclusion that Meter 2 and the associated equipment have a class life of less than 10 years because these assets are properly includible in asset class 00.12 of Rev. Proc. 87-56, we will not address whether Meter 2 and the associated equipment is qualified technological equipment under § 168(i)(2)(B). We note, however, that the definition of computer or peripheral equipment in § 168(i)(2)(B) is not the same as the definition of such terms in asset class 00.12 of Rev. Proc. 87-56. Specifically, the exception in § 168(i)(2)(B)(iv)(I) is broader than the exception in the last paragraph of asset class 00.12 of Rev. Proc. 87-56.

CAVEAT:

Temporary or final regulations pertaining to one or more of the issues addressed in this memorandum have not yet been adopted. Therefore, this memorandum will be modified or revoked by the adoption of temporary or final regulations to the extent the regulations are inconsistent with any conclusions in the memorandum. See section 13.03 of Rev. Proc. 2011-2, 2011-1 I.R.B. 90, 106 (or any successor). However, a technical advice memorandum that modifies or revokes a letter ruling or another technical advice memorandum generally is not applied retroactively if the taxpayer can demonstrate that the criteria in section 13.02 of Rev. Proc. 2011-2 are satisfied.

A copy of this technical advice memorandum is to be given to the taxpayer. Section 6110(k)(3) of the Code provides that it may not be used or cited as precedent.