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Unresolved Judicial Conflict and Critical Infrastructure

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ARTICLE

**UNRESOLVED JUDICIAL CONFLICT AND
CRITICAL INFRASTRUCTURE**

*By: Steven Ferrey**

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I. JUDICIAL CONFUSION AND CHAOS THEORY

Chaos theory, “[w]hen the present determines the future, but the approximate present does not approximately determine the future,”¹ is now undermining the legal precedent controlling the second most important invention in human history.² Courts cannot determine how to legally adjudicate electricity, which has a transacted value in the U.S. of approximately \$390 billion annually,³ exceeding the total amount of corporate income taxes collected in the U.S.⁴ In four basic areas of law, how courts characterize electricity makes a critical outcome-determinative distinction on individual rights and legal remedies:

1. Christopher M. Danforth, *Chaos in an Atmosphere Hanging on a Wall*, MATHEMATICS PLANET EARTH, <http://mpe.dimacs.rutgers.edu/2013/03/17/chaos-in-an-atmosphere-hanging-on-a-wall/> [<https://perma.cc/23N5-9UZR>] (crediting the statement to Edward N. Lorenz); see also Edward N. Lorenz, *Deterministic Non-Periodic Flow*, 20 J. ATMOSPHERIC SCIS. 130 (1963). Chaos theory refers to systems whose future behavior is fully determined by their initial conditions, with no random elements involved. Electricity is a constant element in the U.S. economy, with no significant random elements. However, with chaos theory, the deterministic nature of these systems does not make them predictable. And judicial determinations about electricity have been neither predictable nor consistent, as set forth below in this Article.

2. James Fallows, *The Fifty Greatest Breakthroughs Since the Wheel*, ATLANTIC MONTHLY, Nov. 2013, at 56.

3. See U.S. ENERGY INFO. ADMIN., ELECTRIC POWER ANNUAL 2014 tbl. 2.3 (Feb. 2016), <http://www.eia.gov/electricity/annual/pdf/epa.pdf>.

4. *Historical Amount of Revenue by Source*, TAX POL’Y CTR (Feb. 4, 2015), <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=203> [<https://perma.cc/9JYH-KELL>].

- In contract law: Whether electricity is a “good” governed by the Uniform Commercial Code (U.C.C.) or a service governed by different distinct rules under varying state common law. This is increasingly important with seventeen states now deregulating power in favor of contract law.⁵
- In tort law: Whether electricity is a “product” governed by strict products liability law, or a service not subject to strict liability when there is injury.
- In bankruptcy law: Whether creditors of the bankrupt party can recover their money first as a preferential administrative claim because electricity is deemed a “good” rather than a service.
- In antitrust law: Controlling when electricity is a “commodity” rather than a service, anticompetitive behavior is punished under the Clayton Act and Robinson-Patman Act. The distinction controls U.S. commerce.

Choice of law affects legal outcomes at the core of Anglo-American law. This Article analyzes what electricity is, how the law regards it, and concludes by examining the confusion and inconsistency created by many courts. Even finishing second among the most important inventions in history (second behind only the movable type printing press)⁶ highlights the essential role of electricity in the American economy: Among the most important inventions in human history, electricity is the only one which also is essential and irreplaceable to operate seven other of the “top 50” inventions of all time: the Internet, computers, air-conditioning, radio, television, the telephone, and semiconductors.⁷

The importance of the law for electricity is now amplified in the twenty-first century: Recent electric sector deregulation and competition in which state common law contract replaces systematized government regulation is now adopted in 40% of the states and by the Federal Energy Regulatory Commission (“FERC” or “the Commission”). The thirteen states deregulating electric power entirely and the seven other states allowing some limited choice are shown below in Figure 1.⁸ Independent market participants in electric power increasingly sell their power under common law contract where rules of common law increasingly are critical.⁹

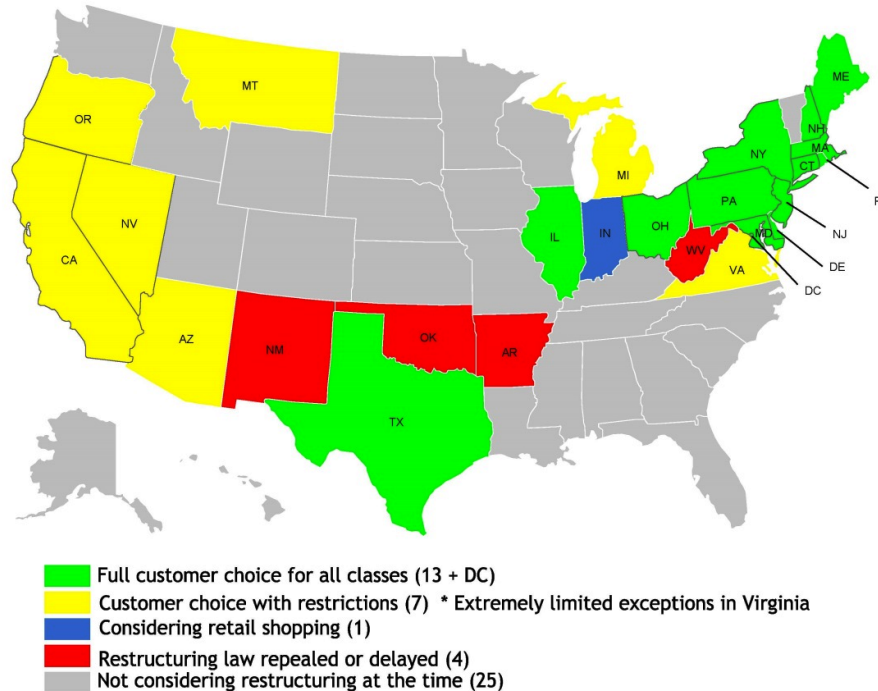
5. See *infra* Figure 1.

6. *Id.*

7. *Id.*

8. See Steven Ferrey, *Sale of Electricity*, in *THE LAW OF CLEAN ENERGY: EFFICIENCY AND RENEWABLES* 218–19 (Michael B. Gerrard ed., 2011).

9. *Pub. Util. Dist. No. 1 of Snohomish Cty. v. F.E.R.C.*, 471 F.3d 1053, 1066–67 (9th Cir. 2006), *aff'd in part and rev'd in part sub nom. Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty.*, 554 U.S. 527 (2008).

FIGURE 1: RETAIL ELECTRICITY MARKETS¹⁰

There is inconsistent precedent and jurisprudential confusion in four key areas of law between states, within states, between state and federal regulators, and between judges within the same state. California court determinations, for example, exhibit judicial inconsistency and confusion:

- Electricity is personal property.¹¹
- Electricity is a product (for tort products liability) and may also be a good.¹²
- Electricity is a service until it is metered.¹³
- Electricity is an intangible service.¹⁴

Judicial confusion extends to other states:

10. *Retail Electricity Markets*, COMPETE COALITION, <http://www.competecoalition.com/files/Retail%20Electricity%20Markets.pdf>.

11. *Hill v. Pac. Gas & Elec. Co.*, 136 P. 492 (Cal. Ct. App. 1913).

12. *Pierce v. Pac. Gas & Elec. Co.*, 166 Cal. App. 3d 68, 82 (1985).

13. *Mancuso v. S. Cal. Edison Co.*, 232 Cal. App. 3d 88, 101 (1991).

14. *Appeal of PacifiCorp.*, California State Board of Equalization, No. 90027, Sept. 12, 2002 (“[T]he sales of electricity here are sales of services that essentially consisted of appellant’s setting and keeping in motion, through its generation and transmission facilities, electrically charged particles. Also as in *Otte*, we further conclude that the basic reason the generation and transmission process employed by appellant is appropriately characterized as a service is that the process does not result in either (1) the “creation” in its generation facilities of any such arguably tangible particles or (2) the “injection” of those particles into its transmission facilities.”).

- Massachusetts determined that the same electricity is a “good”¹⁵ in bankruptcy and a service in contract law.¹⁶
- Texas, flipping the Massachusetts jurisprudence on its head, determined that electricity is a service rather than a “good” in bankruptcy,¹⁷ and the same electricity in contract law is a “good” rather than a service.¹⁸

After a century of such judicial inconsistency regarding exactly identical electricity, there is a pattern of significant legal confusion and inconsistency among the states and even within leading states. Chaos theory¹⁹ is hard-wired in the electricity jurisprudence: Some courts are not engaged in analyzing what electricity is, and thus which set of very different legal rules must govern its commerce, use, and impacts. The confusion exists at both federal and state levels, and in judicial and executive/administrative branch adjudications.

Analyzing both the science and the law, this Article charts where states are on legal jurisprudence in four cornerstone areas of law and builds from there to a consistent solution for this unresolved legal issue. To lay the core foundation, Part II examines the physics of electricity to determine what it is, its unique role in modern society, and how it should be viewed by the law. Part III analyzes key inconsistent court precedent deeming electricity to be covered by contract law as a tangible “good” or an intangible service, as well as the respective dissonant consequences. Part IV analyzes the confusion when state law interchangeably treats electricity inconsistently as either a service or a product for application of tort products liability law. Parts V and VI analyze the inconsistent legal treatment of electricity in bankruptcy and anti-trust matters. These four sections comprehensively chart the scope of the confusion in four core areas of the law.

Inconsistent legal decisions about the same thing—electricity—in the same state, creates unresolved confusion in four fundamental areas of the law. However, while dissonance can be overcome on minor aspects of law, as examined in this Article, it creates confusion and chaos when applied to the second most important invention of all time. Choice of law matters. Electricity particularly matters in the twenty-first century. There is no area of legal confusion that has a more fundamental impact on modern society. The concluding Part of this Article provides the scope of resolution for this existing judicial conflict and chaos.

15. See *In re Erving Indus., Inc.*, 432 B.R. 354, 374 (Bankr. D. Mass. 2010).

16. See *New Balance Athletic Shoe, Inc. v. Bos. Edison Co.*, No. 95-5321-E, 1996 WL 406673 (Mass. Super. Ct. Mar. 26, 1996).

17. See *In re Pilgrim’s Pride Corp.*, 421 B.R. 231 (Bankr. N.D. Tex. 2009).

18. See *Hous. Lighting & Power Co. v. Reynolds*, 712 S.W.2d 761 (Tex. App.—Houston [1st Dist.] 1986), *rev’d on other grounds*, 765 S.W.2d 784 (Tex. 1988) (“We agree with the better reasoned opinions of other jurisdictions which hold electricity to be a product.” *Id.* at 785.).

19. See Fallows, *supra* note 2.

We start with the science and physics—the facts are critical here for the law.

II. WHAT'S THE BUZZ? LAW MUST BE CONSISTENT WITH THE PHYSICS OF THE UNIVERSE

From the moment that electricity was first harnessed,²⁰ the most prominent scientists of the era who formulated the basic laws of electricity and magnetism stated that while a physical *force*, it was not a physical *substance* that could be categorized as an article similar to any other physical substance in commerce:

While admitting electricity, as we have now done, to the rank of a physical quantity, we must not too hastily assume that it is, or is not, a substance, or that it is, or is not, a form of energy, or that it belongs to any known category of physical quantities.²¹

For the last century, if not during the first quarter-century after its harnessing, electricity has not changed as a uniform thing in American commerce.²² It is still the energized electrical-magnetic force transmitted in a nationwide transmission and distribution system. It is identical in every state at every moment: An energy field transmitted as alternating current at 60 Hz and cycles per second.²³ While its voltage is transformed on different lines, its critical status and movement are constant in every state, in every transaction, and at every moment. It is never anything else.

The electromagnetic force is one of the four known primary forces in the universe. The so-called weak force and the electromagnetic force are united in quantum field theory, and both are associated with ripples in the fabric of space-time.²⁴ An invisible force is not typically considered a product or “good.”

A. Quantum Fields

Electric circuits are the physical means for conveying energy in a force field to different places, but always within the line or attachments to it.²⁵ Current flows through electric circuits. Current is the

20. See STEVEN FERREY, *THE NEW RULES: A GUIDE TO ELECTRIC MARKET REGULATION* 260–61 (Pennwell Publishers 2000).

21. JAMES CLARK MAXWELL, *A TREATISE ON ELECTRICITY AND MAGNETISM* § 35 (Oxford: Clarendon Press, 3d ed. 1904).

22. For a history of electric power, see STEVEN FERREY, *supra* note 20, at Appendix A. Until the early twentieth century, electricity was supplied at different voltages ranging from 100–600 volts and 40–133 cycles per second, by different suppliers. For the past century, it is standardized throughout the United States at a set frequency of alternating current.

23. WORLD ELECTRICITY STANDARDS, <http://www.quantumbalancing.com/worldelectricity/electricityif.htm> [<https://perma.cc/Z6QA-FKKH>].

24. BRIAN GREENE, *THE ELEGANT UNIVERSE* 197 (1999).

25. HUGH D. YOUNG & ROGER A. FREEDMAN, *UNIVERSITY PHYSICS* 799 (9th ed. 1996).

rate of flow of electric charge from one place to another.²⁶ As the charged particles move within a circuit, electrical potential energy is transferred from a source to a device in which that energy is stored or converted into another form or work.²⁷

When a conductor, such as copper or aluminum wire, is not energized by a generator and is at rest, negatively charged electrons in the copper atoms are free to move randomly in all directions thermally in the conductor, in close orbit around their nuclei, similar to molecules in a gas moving in random motion. Because the motion of the electrons is random, there is not a net flow of charge in any direction inside the copper wire.²⁸ Since there is no net flow of charge, there is no current.²⁹

This changes when an electric field is applied to the copper wire by a power generation facility; with controlled moving charges becoming current in a wire.³⁰ In metal conductors, the moving charges are always negatively charged electrons; in an ionized gas or ionic solution, the moving charges include both positively and negatively charged ions.³¹ The copper atoms in the wire are comprised of electrons circling the protons and neutrons in the copper atom nucleus,³² in close orbit when no electric generation is present.³³ It is the movement of

26. *Id.*

27. *Id.*

28. *Id.* at 800.

29. *Id.*

30. *Id.* The effect on the copper wire is that in addition to the random motion of the charges within the conductor there is also a very slow motion of the moving charges in the direction of the force of the electric field. This electric field does work on the moving charges.

31. *Id.* at 808.

32. The electron is negatively charged at a value equal to the positive charge of the proton. In a conductor, like copper, the electrons are weakly attracted to the atom and are easily forced away to neighboring atoms. VAN VALKENBURGH NOOGER & NEVILLE, INC., BASIC ELECTRICITY 1-7 (1992).

33. Unless the wire is conducting current, there are just as many electrons going forward as backward in the wire, the electrons have frequent collisions with the other electrons and with atoms in the wire, and they transport no charge. When current flows through a wire to transmit power, there are slightly more electrons with velocities in the current direction than opposite it. There will be an average drift velocity that is very much smaller than the Fermi velocity. Consider a typical American household circuit that can carry $I=15$ amps of current before blowing out a fuse. The diameter of the wire is about 0.1 cm so its cross section is about $A=0.0079$ cm². The density of electrons in copper is approximately $N=8.5 \times 10^{22}$ cm⁻³ (one electron per copper atom), and the electron charge is $e=1.6 \times 10^{-19}$ C. So one can find the drift velocity from the formula $I=eNvA$, or $v=I/(eNA) = 0.14$ cm/sec. This is a miniscule velocity compared to the random Fermi velocity. An electron moving at the drift velocity would take more than three minutes to move one foot down the wire. At the same time, the electric and magnetic fields that transmit the electrical power are moving down the wires at nearly the speed of light. The field velocity is slowed down slightly by a few tenths of a percent by the "dielectric" effects of the electrical insulation. Email from Dr. Will Happer, Professor, Princeton University Department of Physics, to Steven Ferrey, Professor of Law, Suffolk University Law School (Apr. 24, 2003) (on file with author).

copper electrons from copper atom to atom within the electrical field that is electricity.³⁴ Electricity is the potential difference in electrical charge between two atoms.³⁵ Their energy content is constant and remains unchanged before, during, and after electricity is “generated.”³⁶

For a conductor to have steady current, it must be in a closed loop.³⁷ As the current flows through the circuit, the atoms in the metal wire resist that flow and decrease the potential energy carried by the charges.³⁸ The influence that makes current flow from lower potential to a higher potential is called electromotive force.³⁹ The unit of electromotive force is the volt or a joule/coulomb.⁴⁰ A device that provides an electromagnetic field (“EMF”),⁴¹ supplies additional energy to increase the charge’s electric potential so that it can continue around the closed loop repeatedly. There is the same amount of charge at the beginning and at the end of the loop, at varying levels of potential energy.⁴²

In every building, the copper wires running through the walls contain charges that are connected to the electric field in the electric distribution system owned by utilities.⁴³ The electric company supplies customers with a dynamic electric field, which induces the flow of charge in the circuits in the building and to connected appliances. While many attorneys and court decisions assume that the electric utility company is selling its customers electrons, these electrons are not consumed by the customer. Only the energy that they are carrying is consumed by the end-user. For every moving electron that a cus-

34. The kinetic energy of moving electrons is $mv^2/2$, where m is the electron mass. The changes in this kinetic energy are negligibly small compared to the changes of energy associated with the creation or annihilation of electromagnetic-field energy. Almost all of the electrical power is carried by the electric and magnetic fields that race down the wires at nearly the speed of light. *Id.*

35. This potential difference is a “volt.”

36. The light and heat produced have exactly the same energy as has been transported into the device from the electromagnetic fields. The motion of the electrons in transmission lines or appliances is of minor significance compared to the energy transported by the fields. Email from Dr. Will Happer, *supra* note 33.

37. VALKENBURGH NOOGER & NEVILLE, INC., *supra* note 32. When the electric field is applied but there is no closed loop, a current begins to flow with the result of a positive net charge at one end of the conductor and negative net charge at the other end. Then these charges produce an electric field in opposite direction, canceling out each other, and resulting in no net electric field and no current. With a closed circuit, the current will continue to flow.

38. *Id.* When the charges return to their starting point, they are at a lower potential than they were previously at the start because of this resistance.

39. YOUNG & FREEDMAN, *supra* note 25, at 809.

40. A joule is a unit of energy. A coulomb is a unit of charge.

41. For a discussion of EMF, its effects, and resulting legal issues, see STEVEN FERREY, LAW OF INDEPENDENT POWER §§ 8:24–8:27 (39th ed., 2014).

42. YOUNG & FREEDMAN, *supra* note 25, at 809. The charge is not lost or consumed at any point in the circuit.

43. The rotation of a magnetic field around a conductor induces an electric field in the copper wires.

tomers' wires receive from the electric company, the electric company receives an electron back from the customer. The charge is never consumed nor created, and it remains constant in time at the beginning and at the end of any legal transaction.

The electricity in the world is transmitted principally via alternating current, where the current changes direction of flow either 50 or 60 times per second.⁴⁴ With alternating current, electrons do not flow around a uni-directional circuit but instead oscillate in both directions in a confined area of the copper conductor. It is the movement itself, rather than the matter of the electron that is used by consumers.⁴⁵ No additional charges or electrons are created or consumed. What is consumed by a consumer is the movement of intangible energy in an electric field acting to move the electrons already present in customer's electric circuits. What is delivered and sold is electric potential, an electric field.

We measure this intangible as energy transferred per unit time. The usual unit of energy is the kilowatt-hour ("kWh"). One kilowatt is 1,000 watts per second. A watt is a joule per second. So a kilowatt-hour is 3,600,000 joules. One kWh is 1,000 watts for an hour.

B. *Is an Electric Energy Field a Form of Tangible Property?*

Natural gas can be stored efficiently, is traded in a nationwide market as a commodity, and is governed by distinct and different law by FERC pursuant to the Natural Gas Act.⁴⁶ Unlike gas or oil, which are tangible matter, electricity is an invisible wave or force. It is created by the *movement* (not the consumption) of electrons, rather than the sale and permanent transference of title to the electrons themselves. Natural gas is matter that moves from fifteen to twenty-five miles per hour.⁴⁷ Electricity is "transmitted," while natural gas is "transported." Electricity is not matter, but the energy by-product of the movement of matter.

Matter, itself, can be a "good." Even if electricity were considered property, title and use of the moving property electrons is not sold; it is used temporarily for a period of time, and the cost of the transaction is measured, in part, by time of use. Use of something during time, rather than a transfer of title or fee simple to the property, is a lease.⁴⁸ Leases of access for a period of time, unlike the physical sale

44. WORLD ELECTRICITY STANDARDS, *supra* note 23.

45. *Id.* at 850.

46. Natural Gas Act, 15 U.S.C. ch. 15B et seq. (2012).

47. *Id.*

48. *Lease*, MERRIAM-WEBSTER DICTIONARY, <http://www.merriam-webster.com/dictionary/lease> [<https://perma.cc/YK3A-429X>] ("a contract by which one conveys real estate, equipment, or facilities for a specified term and for a specified rent; *also*: the act of such conveyance or the term for which it is made").

and consumption of other forms of energy such as natural gas or oil molecules, typically are considered by the law as service transactions.

Telecommunications, another utility, travel in electromagnetic waves through microwave transmissions which themselves travel through space, over copper wire, or fiber-optic cable. Telecommunications, Internet use, and television broadcasts⁴⁹ utilize the electromagnetic spectrum, as does electricity, for the purpose of a sound and/or video image. Electricity, television, Internet, and telecommunications transactions do not involve the transfer of exclusive legal possession of a tangible “good,” as do sales of oil or natural gas commodities. There is no physical flow of a containable volume of matter when electricity, the Internet, television, and telecommunications are involved. The consumer is accessing a network. Therefore, despite superficial similarities to fossil fuels, electricity has as much or more factually in common with telecommunications, the Internet, and television services.

It is well-settled that telecommunications is regarded as a service and not a “good” or commodity.⁵⁰ Similarly, audio and visual television communications have been deemed to be a service rather than a “good” or commodity.⁵¹ The fact that electricity is “sold” is not dispositive: Telephone service and cable television service, both indisputably services under the law, also are sold and “distributed in discrete quantities.”⁵² If telephone service quantities under court precedent are denominated as “discrete,” then certainly electric quantities also are “discrete.”

49. A television signal is an electromagnetic wave from an antenna transmitted through space at the speed of light. The consumers' antennae receive small amounts of power (a few millionths of a watt). In an analog signal are binary integers of information for transmission of picture and sound. Email from Dr. Will Happer, *supra* note 33.

50. See *MCI Telecomm. Corp. v. Alhadhood*, 82 F.3d 658, 664 (5th Cir. 2003) (holding long distance telephone calls did not constitute “commercial activity” within the meaning of the Foreign Sovereign Immunities Act); *Daleure v. Kentucky*, 269 F.3d 540, 524 (6th Cir. 2001) (finding telephone services were not “goods” pursuant to Robinson-Patman Act); *Nat'l Commc'ns Ass'n v. Am. Tel. & Tel. Co.*, 808 F. Supp. 1131, 1136 (S.D.N.Y. 1992) (holding long distance voice communication services were not commodities to which the Robinson-Patman Act applied but instead were “services”).

51. See *Rankin Cnty. Cablevision v. Pearl River Valley Water Supply Dist.*, 692 F. Supp. 691, 692–93 (S.D. Miss. 1988) (holding that cable television service was not a commodity); *Am. Tel. & Tel. Co. v. Delta Commc'ns Corp.*, 408 F. Supp. 1075, 1114 (S.D. Miss. 1976) (discussing the purchase and sale of television signal programming and finding that no sale or purchase of any tangible commodity was involved for purposes of Robinson-Patman Act, which “only relates to the sale of tangible commodities and not to services”). Many of these decisions occurred within the context of anti-trust litigation. For discussion of anti-trust law, see *supra* Part VI.

52. *City of Kirkwood v. Union Elec. Co.*, 671 F.2d 1173, 1181 (8th Cir. 1982). Telephone service is distributed and sold in quantities as discrete as one minute intervals, while electricity is billed in no smaller than hourly intervals (as a kilowatt hour of service).

Whether a “good,” a product, or a service, electricity is the same thing at every moment, not changing as it crosses state lines, enters additional transactions, or causes additional injuries. It is exactly the same unchanged item when confronted by any court in any state. In fact, few “goods” in commerce are as consistently uniform as electricity. Nonetheless, there are fundamental differences as to how courts construe this unchanging electricity in different states, and within the same state when the dispute involves contract, tort, anti-trust, or bankruptcy law.

The determination of electricity as a “good” or a service can be outcome-determinative in a legal dispute.⁵³ First, we look at contract law: How do states and federal agencies regard the millions of contracts for the use of electricity? We start and end with legal confusion.

III. CONTRACT LAW: THE NEW ‘ART’ OF THE DEAL⁵⁴

A. *How the Factual Distinction Determines the Law and Outcome*

Whether electricity is a good governed by the Uniform Commercial Code (“U.C.C.”), or a service governed by the general state common law, can alter the outcome of the legal dispute in more than a dozen significant areas of contract law, because a different set of rules, with substantively different principles, will apply.⁵⁵

Twenty states, a significant fraction of U.S. states, have either partially or entirely deregulated the sale of power.⁵⁶ With deregulation, private party contracts for sale replace much of traditional government regulation in the power market. In this new environment, there is a wide host of every kind of contractual dispute to resolve regarding electricity.⁵⁷ Contract disputes involving “goods” are resolved pursuant to the statutory rules of the U.C.C., with particular regard to its implied warranties of title to the “good” sold, fitness, and merchantability of “goods.”⁵⁸ Contractual disputes involving services are not covered by the statutory provisions of the U.C.C. but are determined pursuant to widely varying state common law. Table 1 sets

53. *See infra* Part III.

54. DONALD J. TRUMP & TONY SCHWARTZ, *THE ART OF THE DEAL* (1987).

55. *See infra* Table 1.

56. *See supra* Figure 1.

57. These include, e.g., production, sale, operation and maintenance arrangements, power wheeling, trading of power, etc. In a deregulated power market, individual contracts will need to address a variety of factors: (1) how primary and back-up power resources will be supplied; (2) the allowable loss, disruption, or variation in the quality and quantity of electricity supplied; (3) the remedies and damages for failure to supply; (4) specific force majeure provisions to relieve supply obligations, general allocation of risk among various suppliers, transporters, intermediaries, and users of power; (5) insurance provisions to support power supply obligations; and (6) agreement on the standard of provision of electric power.

58. *See* U.C.C. §§ 2-314, 2-315 (AM. LAW INST. & UNIF. LAW COMM’N 2014). State U.C.C. statutes generally are, with some variation, uniform from state to state.

forth some primary distinctions between these two systems of contract law.

TABLE 1: KEY DIFFERENT RULES BETWEEN THE U.C.C. AND THE COMMON LAW

Issue	Traditional Common Law	U.C.C.
1. Must acceptance of a contract offer exactly or materially "mirror" the terms of the offer?	Yes	No
2. In wholesale electric transactions, can additional terms to the deal be added by the acceptance, even if not contained in the offer?	No	Yes
3. Must enforceable contracts for more than \$500 either be in writing or evidenced by a writing?	No	Yes
4. Can an existing contract be modified without new consideration?	No	Yes
5. Are prior oral statements includable as part of a written contract?	Less likely	Possibly
6. Can a contract be modified orally even where that contract prevents such modification?	Yes	No
7. Will indefinite gaps in a contract usually be filled in and the contract enforced?	Often not	Usually
8. Must a demand for assurances of performance be in writing? Is response always required in less than thirty days?	No	Yes
9. Can a firm offer in writing not supported by consideration be revoked?	Yes	No
10. Is substantial performance of obligations, rather than perfect performance, allowed?	Yes	No
11. Are trade practices and past conduct relevant in interpreting the deal?	Often not	Always
12. Is the market value of an item measured at the time of breach rather than at the time that the party was to perform?	Yes	No
13. Will implied warranties of merchantability and fitness be read into the contract?	No	Yes
14. If the warranty/remedy fails, will courts throw out quality disclaimers?	No	Yes

B. *Legal Definitions of “Goods” and Services*

The U.C.C. definition of “goods” is:

- (1) [A]ll things (including specially manufactured goods) which are movable at the time of identification to the contract for sale other than the money in which the price is to be paid, investment securities (Article 8) and things in action. . . .
- (2) Goods must be both existing and identified before any interest in them can pass. Goods which are not both existing and identified are “future” goods.⁵⁹

1. Movement

The comments to the U.C.C. definition state that “[t]he definition of goods is based on the concept of movability”⁶⁰ The U.C.C. does not “deal with things which are not fairly identifiable as movables before the contract is performed.”⁶¹ The U.C.C. notes that “identifying” goods at some point prior to delivery is a distinction of goods.⁶²

Electrons cannot be identified and delivered in any sense that the U.C.C. contemplates. Electrons are not visible, and while we know that they are present in atoms, specific electrons cannot be identified as the object of a future sale. Electrons move at almost the speed of light, but specific electrons cannot be identified, and are not, delivered to a destination or buyer. Electrons in interstate commerce cannot legally be traced.⁶³ A seller or producer cannot move or send identified electrons to a particular purchaser or user. If not used within a nanosecond, it is lost as waste heat.⁶⁴ It can be stopped or started in a second.

An electric field is transmitted; it is not moved in wire conductors. Those wires do not move, are not sold in an electric power transaction, and do not change title. Electricity is similar to sound, which is not deemed movable and is not deemed by courts a “good” to be governed by the U.C.C.⁶⁵ Sound and power are things transferred through a medium.

59. § 2-105.

60. § 2-105 cmt. 1.

61. *Id.*

62. *See* §§ 2-501, 2-613, 2-709.

63. *See, e.g.,* *New York v. F.E.R.C.*, 535 U.S. 1, 7 n.5 (2002); *Fed. Power Comm’n v. Fla. Power & Light Co.*, 404 U.S. 453, 460 (1972).

64. STEVEN FERREY, *ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS* 568 (6th ed. 2013).

65. One transmits sound, like speech, through a medium of particles. Although a medium is not always required for an electric field as it is in sound, it is very similar to the transmission of sound.

2. Tangible

The legal question for courts is whether the electric field that the energy company provides its customers is a tangible, movable “good.” For electricity to qualify as a “good” governed by the U.C.C., it needs to be tangible and movable. That can be answered: “Movable” is legally defined as “[p]roperty that can be moved or displaced, such as personal goods.”⁶⁶ *Black’s Law Dictionary* defines electricity as movable, but intangible rather than tangible. It specifically identifies electricity and light as examples of intangible movables or a “physical thing that can be moved but that cannot be touched in the usual sense.”⁶⁷

Electricity has been found to be “tangible” for purposes of subjecting it to taxation,⁶⁸ and legislation in several states defines electricity as tangible.⁶⁹ If electricity is considered an intangible, it cannot be a good, pursuant to the U.C.C. Decisions in several other states declare electricity to be intangible,⁷⁰ and not subject to tax as a “good.”⁷¹

66. *Movable*, BLACK’S LAW DICTIONARY (7th ed. 1999).

67. *Intangible Movable*, BLACK’S LAW DICTIONARY (7th ed. 1999). The definition goes on to state “‘intangible movables’ is a term of art in the common law which has been applied more widely than its meaning literally justifies, which is merely to those things that have physical existence and can be moved, though cannot be touched in the normal sense, such as light, electricity and radioactive waves.”

68. *See* *Farrand Coal Co. v. Halpin*, 140 N.E.2d 698, 700 (Ill. 1957) (“The Retailers’ Occupation Tax Act is, by its title, an act ‘in relation to a tax upon persons engaged in the business of selling tangible personal property to purchasers for use or consumption’ [T]he General Assembly when using the word tangible in referring to personal property had in mind the ordinary and popularly understood meaning of such term as indicated in Webster’s first definition thereof, which is ‘Capable of being touched; also, perceptible to the touch; tactile; palpable’ From the evidence it appears that although energy and mass are closely interrelated, indestructible, equivalent, interchangeable, directly proportional to and may be equated with each other, yet energy as such cannot be separated from mass or matter and stored, weighed, transported, handled, liquified, solidified, photographed, touched or otherwise perceived by the senses in its own right or capacity separate and apart from mass or matter.” (citation omitted)).

69. Kansas’ statute states, for example, that “[p]roperty which is consumed’ means tangible personal property which is . . . used in the actual process of and immediately consumed . . . or dissipated within one year.” KAN. STAT. ANN. § 79-3602 (West 2015). Electricity qualifies as such property. New Mexico defines tangible personal property to include electricity. *See* N.M. STAT. ANN. § 7-9-3 (1978). Arizona states that, “[p]urchase’ means any transfer, exchange or barter, conditional or otherwise, in any manner or by any means, of tangible personal property for a consideration, including transactions by which the possession of property is transferred but the seller retains the title as security for payment.” ARIZ. REV. STAT. ANN. § 42-5151 (2013). Though not specifically deemed tangible property, Louisiana has not explicitly excluded electricity or other utilities from its tangible property definition. *See* LA. ADMIN. CODE tit. 61, § 4301 (2012).

70. *See* *Miller v. City of L.A.*, 197 P. 342, 343 (Cal. 1921) (“Electricity is rather an intangible asset, and the word ‘property’ is perhaps not the most apt word by which to describe the supply of electrical energy thus sought to be acquired for the use of the city.”); *People v. Menagas*, 11 N.E.2d 403, 405 (Ill. 1937) (referring twice to electrical energy as being intangible); *N. States Power Co. v. Comm’r of Revenue*, No. 6639,

Although people can feel electric current when they are shocked, the electric company is not providing electric current but rather is supplying the electric field to set that current in motion. So is this a service, rather than a tangible good that can be moved? *Black's Law Dictionary* defines a service as “[t]he act of doing something useful for a person or company for a fee”; “[a] person or a company whose business is to do useful things for others”; “[a]n intangible commodity in the form of human effort, such as labor, skill, or advice.”⁷²

C. *Electricity = Good*

Electricity may be a good technologically, but is it a “good” legally? The most cited decision in this area is an Indiana appellate decision holding that electricity is a “good.”⁷³ Helvey brought an action for breach of implied and express warranties for damage caused to his 110-volt appliances when the electric company furnished more electricity at 135 volts to his home.⁷⁴ The incident had occurred over four years before he filed suit.⁷⁵ The statute of limitations for a contract action in Indiana was four years while the statute of limitations for the breach of a furnished service was six years.⁷⁶ Therefore, Helvey argued electricity is a service, and the defendant electric company argued it was a good.

The court stated that it is “necessary for goods to be (1) a thing; (2) existing; and (3) movable, with (2) and (3) existing simultaneously.”⁷⁷ The court found electricity was movable because of “the monthly reminder from the electric company of how much current was passed through the meter . . . whatever can be measured in order to establish the price to be paid would be indicative of fulfilling both the existing and movable requirements of goods.”⁷⁸ The court held that electricity was a good and that a four-year statute of limitations applied, barring Helvey’s suit: “Logic would indicate that whatever can be measured in order to establish the price to be paid would be indicative of fulfilling both the existing and movable requirements of goods.”⁷⁹ The court

1997 WL 66759, at *2 (Minn. Tax Ct. Feb. 14, 1997) (footnotes omitted) (“We are convinced that electricity is not tangible personal property under the 1993 Definition.”).

71. See Corporate Franchise Hearings, Mins. of Cal. State Bd. of Equalization (April 17, 2002), <http://www.boe.ca.gov/meetings/pubmins/041702.pdf> [<https://perma.cc/Z6EY-FENP>] (explaining that electricity cannot be classified as tangible personal property because it cannot be traced to a destination and cannot be stored for future use).

72. *Service*, BLACK’S LAW DICTIONARY (7th ed. 1999).

73. *Helvey v. Wabash Cty. REMC*, 278 N.E.2d 608, 610 (Ind. App. 1972).

74. *Id.* at 609.

75. *Id.*

76. *Id.* at 609–10.

77. *Id.* at 610.

78. *Id.*

79. *Id.*

held that the electricity, having passed through the consumer's meter, was a good and the four-year statute of limitations applied and barred recovery.⁸⁰

In Indiana, for example, two later appellate court decisions cite to *Helvey* without further explanation as to whether electricity is a "good" or service.⁸¹ The Court of Appeals of Indiana determined that cable television signals were not tangible personal property but rather a service.⁸² Relying on this, the Indiana Tax Court concluded that electricity was not tangible personal property and *not* equivalent to a "good" for taxes on goods.⁸³ So there is inconsistency even within the courts of a given state.⁸⁴

A municipal court in Ohio found electricity to be a "good" when a utility company brought an action against a consumer for breach of

80. *Id.* at 609–10.

81. *Petroski v. N. Ind. Pub. Serv. Co.*, 354 N.E.2d 736, 747 (Ind. App. 1976); *Hedges v. Pub. Serv. Co. of Ind., Inc.*, 396 N.E.2d 933, 936 (Ind. App. 1979). In *Petroski*, a fourteen-year-old boy suffered serious injuries when he touched an electric distribution line where he often played. The boy brought an action for negligence and strict liability, arguing that the public utility was a manufacturer of a defective product, it placed that product into the stream of commerce, and that he was in the zone of foreseeable harm from such a defect (as required by § 402A of the Restatement (Second) of Torts). The court concluded that strict liability cannot be imposed on the utility because the product was not placed into the stream of commerce. *Petroski*, 354 N.E.2d at 747. On appeal, the *Petroski* court relied on *Helvey*, holding that electricity is a "product" under section 401A. *Id.*; see *Helvey v. Wabash Cty. REMC*, 278 N.E.2d 608, 611 (Ind. Ct. App. 1972). The *Petroski* court stated that "a literal 'sale' of goods is not necessary for the application of § 402A." *Petroski*, 354 N.E.2d at 747. The test is only "whether the product has been placed in the stream of commerce. . . . [U]ntil the electricity reaches its destination in a home or factory, it is transmitted by equipment over lines under the exclusive control of [the utility]." *Id.* The utility transmission lines "are not a part of the end product," therefore, the utility "had not yet placed its product in the stream of commerce" while the electricity was in the lines. *Id.*

82. *Dep't of State Revenue v. Cable Braz., Inc.*, 380 N.E.2d 555, 559–61 (Ind. Ct. App. 1978).

83. *Mynsberge v. Dep't of State Revenue*, 716 N.E.2d 629, 637 (Ind. T.C. 1999). Richard Mynsberge leased buildings and equipment to Coppes, a manufacturer of kitchen cabinets. *Id.* at 630–31. Under the lease agreement, Coppes made monthly payments to Mynsberge in return for electricity. *Id.* at 631. Mynsberge paid a total of \$11,492.11 in gross retail (sales) tax on its purchases of electricity from NIPSCO during the tax years at issue. *Id.* Mynsberge filed for a refund with the Department of State Revenue for the sales tax it paid on the purchase of electricity; however, the Department denied Mynsberge's refund. *Id.* Mynsberge appealed this decision. *Id.* Mynsberge argued that section 6-2.5-5-8 of the Indiana tax code provides that transactions involving tangible personal property are exempt from state gross retail tax if the person acquiring the property acquires it for resale, rental, or lease. *Id.* at 636. The court held that Mynsberge's purchase of electricity was a "retail transaction" subject to gross retail tax. *Id.* at 638. The Tax Court of Indiana adopted the court's reasoning in *Cable Brazil*, holding that electricity purchased by Mynsberge was "not tangible personal property" and thus, Mynsberge's resale of electricity to Coppes did not render Mynsberge's purchase of electricity within the sales tax exemption.

84. See *supra* notes 11–17 and accompanying text (explaining the California, Massachusetts, and Texas inconsistencies in determinations as to whether electricity is a "good" or a service).

contract in relation to gas and electricity supplied to a consumer, by relying on *Helvey* and cases with similar reasoning.⁸⁵ *Helvey* serves as the foundation upon which much of the case law classifying electricity as a “good” was built. The *Helvey* court held that electricity was movable simply because customers are billed for the amount of energy that they have used for the month. This is a controversial rationale.⁸⁶ Long distance phone companies charge customers for the time spent on the phone with long distance callers, but this is a service.⁸⁷

Electrons cannot be individually identified or delivered.⁸⁸ A seller or producer of electricity cannot identify and segregate at the time a contract is made a specific electron or stream of electrons and have it move to a specified customer.⁸⁹ Electricity is not movable like other types of goods or products; it is a charge inside an unmovable wire owned by the utility, and that wire is never transacted in a sale—it delivers usable power.

In the context of a bankruptcy proceeding⁹⁰ regarding Pacific Gas and Electric Company (“PG&E”), but adjudging a contract law action within the bankruptcy proceeding, a district court in California found that electricity was a “good” and the U.C.C. applied to the contracts at issue.⁹¹ Puget Sound Energy, Inc. and PG&E entered into contracts to transmit power to and from each other.⁹² PG&E failed to perform during the California electric energy crisis; Puget sued PG&E for breach on March 20, 2001, and PG&E filed bankruptcy on April 6, 2001. The bankruptcy filing stayed the Puget contract action, and Puget filed a motion for relief from the stay or, in the alternative, for adequate assurance or protection.⁹³ To determine whether adequate assurances were required, the court had to first determine whether the U.C.C. governed the transaction as the sale of a “good.”⁹⁴

85. *Cincinnati Gas & Elec. Co. v. Goebel*, 502 N.E.2d 713, 714–15 (Hamilton Cty. Mun. Ct. 1986).

86. Just because something can be measured and one can be charged for it does not mean that it is movable. Hourly workers are paid for their service as a function of time. Just because one can be billed, their service is not a “good.”

87. See *MCI Telecomm. Corp. v. Alhadhood*, 82 F.3d 658, 664 (5th Cir. 2003) (holding long distance telephone calls did not constitute “commercial activity” within the meaning of the Foreign Sovereign Immunities Act); *Daleure v. Kentucky*, 263 F.3d 540, 524 (6th Cir. 2001) (finding telephone services were not “goods” pursuant to Robinson-Patman Act); *Nat’l Commc’ns Ass’n, Inc. v. Am. Tel. & Tel. Co.*, 808 F. Supp. 1131, 1136 (S.D.N.Y. 1992) (holding long distance voice communication services were not commodities to which the Robinson-Patman Act applied but instead were “services”).

88. See, e.g., *New York v. F.E.R.C.*, 535 U.S. 1, 7 n.5 (2002); *Fed. Power Comm’n v. Fla. Power & Light Co.*, 404 U.S. 453, 460 (1972).

89. U.C.C. § 2-613 (AM. L. INST. & UNIF. L. COMM’N 2014).

90. For more on bankruptcy actions, see Part V, *infra*.

91. *Puget Sound Energy, Inc. v. Pac. Gas & Elec. Co.* (*In re Pac. Gas & Elec. Co.*), 271 B.R. 626, 638–40 (Bankr. N.D. Cal. 2002).

92. *Id.* at 629.

93. *Id.* at 633.

94. *Id.* at 638.

The court relied on the noun in the agreement calling for the “shipment” of electricity, a term often used for the transportation of goods, to categorize electricity, as a U.C.C. “good.”⁹⁵ Without any analysis of what electricity actually is physically, the court cited a litany of phrases from opinions implying that electricity is a “good” or a product, and held, in part:

Simply put, electricity in this instance is a thing movable at the time of identification to the contract for sale. That is clearly demonstrated by the fact that the Agreement calls for the shipment of specific quantities of electricity. The electricity is moved through power lines and the amounts are metered and therefore identifiable. The court will apply the U.C.C.⁹⁶

D. *Electricity = Service, Not a Sale of “Goods”*

New York classifies electricity as a service.⁹⁷ While removing a CB antenna from his friend’s roof, James Farina died when the antenna came into contact with the overhead power lines maintained by Niagara Mohawk Power Corporation.⁹⁸ The court determined that Niagara was not liable for Farina’s death. Noting that “there is implicit suggestion that electricity is a subtle agency that pervades all space and evades successful definition,”⁹⁹ the court concluded that electricity was not intended to be within the definition of “goods” under the U.C.C.,¹⁰⁰ even though this also contained products liability claims.¹⁰¹

A Massachusetts court held electricity to be a service in *New Balance Athletic Shoe, Inc. v. Boston Edison Co.*,¹⁰² rejecting the reasoning in *Helvey* because of its sweeping negligence and breach of warranty claims for a fire caused by a power surge, electricity was not a “good.”¹⁰³ The defendant, Boston Edison, argued that since public

95. *Id.* at 638–40.

96. *Id.* at 640.

97. *See* Farina v. Niagara Mohawk Power Corp., 438 N.Y.S.2d 645, 647 (App. Div. 1981).

98. *Id.* at 646.

99. *Id.* at 647.

100. *Id.* at 701. *But see* Hous. Lighting & Power Co. v. Reynolds, 712 S.W.2d 761 (Tex. App.—Houston [1st Dist.] 1986) (holding that electricity was not a service where a boy accidentally touched an aluminum tent pole to power lines, resulting in serious injury), *rev’d on other grounds*, 765 S.W.2d 784 (Tex. 1988) (“We agree with the better reasoned opinions of other jurisdictions which hold electricity to be a product.” *Id.* at 785.).

101. For more on tort actions, see Part IV, *infra*.

102. *New Balance Athletic Shoe, Inc. v. Bos. Edison Co.*, No. 95-5321-E, 1996 WL 406673, *3 (Mass. Super. Ct. Mar. 26, 1996). A New Balance athletic shoe factory in Boston was severely damaged by a fire caused by an electrical power surge emanating from equipment owned and operated by Boston Edison Company. When New Balance asserted a claim for breach of the implied warranties under U.C.C. sections 2-313 through 315, Boston Edison moved for, and the court granted, summary judgment on the warranty claims.

103. *Id.* at *2.

utilities were already heavily regulated, they should be outside the scope of tort and contract law.¹⁰⁴ The court agreed, finding that the “decision to expose public utilities to liability for their ‘products’ is best left in the capable hands of the legislative body that is charged with regulating those utilities.”¹⁰⁵

Michigan also defines electricity as a service and not a “good.”¹⁰⁶ In *Buckeye Union Fire Insurance*, the appellate court reversed on this point, agreeing with the trial court that electricity is a service.¹⁰⁷ Maryland courts also found electricity prior to its retail sale to be a service, rather than a “good,”¹⁰⁸ as did Ohio.¹⁰⁹

In *Navarro County Electric Cooperative v. Prince*, the Reverend plaintiff unsuccessfully attempted to sue a utility company for a violation of the U.C.C. implied warranty of merchantability for the sale of a “good.”¹¹⁰ The Texas appellate court held that the transmission of electrical energy along high-voltage lines prior to the step-down transformer were not “goods.”¹¹¹ The court reasoned that the legislature, in passing the implied warranty statute, meant to confine its applicability to tangible manufactured or produced products that normally might be found in bulk quantity or in packaged goods.¹¹² When applying those requirements to electric energy, the court found that electricity could not be classified as a fungible “good” nor could it be adequately packaged or labeled.¹¹³ The court held that the sale of electricity would more fittingly be termed the “rendition of a service.”¹¹⁴

104. *Id.*

105. *Id.* at *3.

106. *Buckeye Union Fire Ins. Co. v. Detroit Edison Co.*, 196 N.W.2d 316, 316–17 (Mich. App. 1972). *Buckeye*, along with a building owner, brought a suit against the Detroit Edison Company for negligence and breach of implied warranties of fitness and merchantability regarding the electricity supplied by Edison.

107. *Id.* at 319. Unfortunately for the plaintiffs, the evidence they submitted against the electricity supplier failed to establish that a fire in the house was caused by defect in the manufacture or delivery of electricity.

108. *The Singer Co., Link Simulation Sys. Div. v. Balt. Gas & Elec. Co.*, 558 A.2d 419, 420, 422 (Md. Ct. Spec. App. 1989).

109. *Cincinnati Gas & Elec. Co. v. Goebel*, 502 N.E.2d at 715.

110. *Navarro Cty. Elec. Co-op., Inc. v. Prince*, 640 S.W.2d 398 (Tex. App.—Waco 1982). The plaintiff lived in a mobile home beneath high voltage electrical transmission lines. The wires did not directly carry electricity into plaintiff’s home. While adjusting a television antenna beneath the wires, plaintiff received a shock, causing injuries.

111. *Id.* at 400.

112. *Id.*

113. *Id.*

114. *Id.*; see also TEX. BUS. & COMM. CODE ANN. § 2.314(b) (West 2003) (“Goods to be merchantable must be at least such as (1) pass without objection in the trade under the contract description; and (2) in the case of fungible goods, are of fair average quality within the description; and (3) are fit for the ordinary purposes for which such goods are used; and (4) run, within the variations permitted by the agreement, of even kind, quality and quantity within each unit and among all units involved; and (5) are adequately contained, packaged, and labeled as the agreement may require; and

A Maryland court determined that raw electricity did not constitute a “good” under the Maryland U.C.C.¹¹⁵ Moreover, raw electricity still within the utility’s distribution system was not deemed marketable.¹¹⁶ This high-voltage electricity, not yet converted into usable electricity, “is not the refined product that the customer intends to buy.”¹¹⁷ Other courts do not make voltage-related physical distinctions, but characterize electricity, in general, as a service.¹¹⁸ In *Farina v. Niagara Mohawk Power Corp.*, New York refused to recognize electricity as a good at any time during its production, delivery, or use.¹¹⁹ The New York court, after deeming electricity a service, refused to enforce the

(6) conform to the promises or affirmations of fact made on the container or label if any.”). In *Prince*, the plaintiff used these requirements to claim that the electricity was not fit for the purpose for which it was to be used. He also contended that the implied warranty extended to the container of the product, the wiring, and that it was unfit for transporting electricity. In support of these contentions, the plaintiff testified that the current jumped from the transmission line to the antenna. *Prince*, 640 S.W.2d at 399.

115. See *Singer Co. Link Stimulation Sys. Div. v. Balt. Gas & Elec. Co.*, 558 A.2d 419, 424 (Md. Ct. Spec. App. 1989). The Link Division of the Singer Company, a high tech engineering firm that made training simulators for government and industry, opened a manufacturing plant in Maryland. *Id.* at 422. Baltimore Gas & Electric Company supplied the electricity to the manufacturing plant. *Id.* Singer’s business was dependent on an uninterrupted supply of electricity because its simulators could not run without it. *Id.* In addition, the heating, ventilation, and cooling systems in the building were driven by electricity. *Id.* Singer experienced eight electrical power interruptions or outages and claimed that such interruptions violated the U.C.C. implied warranties of merchantability and fitness for purpose. *Id.* at 421.

116. *Hedges v. Pub. Serv. Co.*, 396 N.E.2d 933, 935 (Ind. Ct. App. 1979).

117. *The Singer Co.*, 558 A.2d at 424 (internal citation omitted). This raw electricity included electricity in the overhead cable transmission lines.

118. See *Encogen Four Partners, LP v. Niagara Mohawk Power Corp.*, 914 F. Supp. 57, 61 (S.D.N.Y. 1996). Encogen owned and operated a cogeneration facility in New York. *Id.* at 58. Niagara Mohawk provides electric gas and power throughout a larger portion of upstate New York. *Id.* Niagara entered into a power purchase agreement with Encogen where Niagara agreed, as required by the Public Utilities Regulatory Policy Act of 1978 (PURPA) and state statute, to purchase all electricity produced by Encogen. *Id.* at 58–59. Niagara made payments for the electricity, but the payments were below those amounts agreed in the power purchase agreement. *Id.* at 60. In a similar case, *Norcon*, an independent power producer, entered into a power purchase agreement with Niagara similar to the Encogen agreement. *Norcon Power Partners v. Niagara Mohawk Power Corp.*, 163 F.3d 153, 153–54 (2d Cir. 1998). In both cases, Niagara requested adequate assurances of future performance from Encogen and *Norcon* regarding their ability to continue to produce electricity. *Encogen*, 914 F. Supp. at 60; *Norcon*, 163 F.3d at 156–57. Under New York law, the sale of electricity is not a sale of “goods,” but rather a service. *Encogen*, 914 F. Supp. at 61. Thus, the U.C.C. would not govern contracts such as the Encogen and *Norcon* electric power purchase agreements. *Id.* The United States District Court in *Encogen* cited *Farina* as a basis for its conclusions, but just as in *Farina*, the *Encogen* court did not state any analysis that leads to its holding. *Id.*

119. *Farina v. Niagara Mohawk Power Corp.*, 438 N.Y.S.2d 645, 647 (App. Div. 1981). Mr. Farina was killed when an antenna he was removing from the roof of his home came in contact with an electrical wire owned by Niagara Mohawk Power Corporation. The administratrix of Farina’s estate sued Mohawk in tort and for breach of warranty.

U.C.C.'s provision governing the right to demand adequate assurances of future performance.¹²⁰

E. *Federal Administrative Law on Contract "Goods": FERC*

By applying U.C.C. principles without modification to adjudicated power transactions, FERC is establishing that electricity is a "good." FERC adopted the U.C.C. rule uncritically without any analysis, and in some cases appears to have done so contrary to a clear issue about electric distribution services. This FERC position sprung to life apparently without careful analysis of the comparisons or differences from a policy, physical, or legal perspective.¹²¹ Because FERC regulates both electricity and natural gas, which is a "good," FERC reflexively assumed that all energy is equal under the law, without being consistent with state law.

1. FERC Equates Electricity with Gas, Contrary to Applicable State Law

In *Commonwealth Electric Co. v. Boston Edison Co.*,¹²² FERC applied the U.C.C. course-of-performance rule without analyzing whether (1) electricity was a good, (2) the U.C.C. applied, or (3) which state's version of the U.C.C. governed the case. Of note, Massachusetts itself, as a matter of law, considers electricity not to be a "good," but to be a service.¹²³ The federal agency contradicted the state court determination on a matter exclusively of state law. And this also contradicts FERC's stated principle of wanting to apply Article II of the U.C.C. because forty-nine of fifty states have adopted it.¹²⁴ Though all states but one have adopted identical provisions of Article II of the U.C.C., this does not mean that a state applies it to every contract, especially for things deemed to be services by the state.

FERC mechanically applied U.C.C. course-of-performance rules regarding electricity sales. *Village of Jackson Center* involved an Ohio contract dispute¹²⁵ between Dayton Power & Light Company

120. *Id.*; see also U.C.C. § 2-609 (AM. L. INST. & UNIF. L. COMM'N 1989).

121. Telephone Interview with FERC staff member, FERC (May 2002). FERC staff indicated that no analysis had been performed, no current staff could recall on what basis electricity has been treated as a "good," but that it was.

122. *Commonwealth Elec. Co. v. Bos. Edison Co.*, 46 F.E.R.C. ¶ 61,253, at P 61,758 (1989).

123. *New Balance Athletic Shoe, Inc. v. Bos. Edison Co.*, No. 95-5321-E, 1996 WL 406673 (Mass. Super. Ct. Mar. 26, 1996).

124. Telephone Interview with FERC staff member, *supra* note 121.

125. See *Vill. of Jackson Ctr.*, 91 F.E.R.C. ¶ 63,013, at P 65,123-24, 65,132 (2000). In 1994 the parties entered into a Power Service Agreement (PSA) with five different rate schedules: firm power, short-term power, firm transmission service, short-term transmission service, and regulation service. *Id.* A conflict developed over the fifth rate schedule when Dayton Power & Light Co. allegedly overcharged for regulation

("DP&L")¹²⁶ and municipal utilities over rate schedules and costs of purchased power.¹²⁷ FERC again cited the generic unenacted model U.C.C., adopted nowhere, as generally applicable contract law, rather than specific state U.C.C. provisions, to support the validity of the contract provisions.¹²⁸

FERC applied the U.C.C. to open price terms, where the U.C.C. rule differs significantly from the common law applied to service contracts. In *Central Illinois Public Service Company* ("CIPSCO"), the Commission applied section 2-305 of the U.C.C. to determine whether a contract between CIPSCO and its wholesale customers was an open price term contract.¹²⁹ The Commission concluded that the contracts were open price term contracts as defined by the U.C.C., and were therefore valid and enforceable.¹³⁰ Accordingly, FERC concluded that the sale of electrical energy is directly analogous to the sale of natural gas, and, therefore, within the purview of section 2-105(5) of the U.C.C.: "Since the Uniform Commercial Code applies to natural gas sales as the sale of goods . . . and all states except Louisiana have adopted the U.C.C., variations between state law and general principles are likely to be few."¹³¹ However, electricity is not analogous to natural gas and is governed by different federal statutes, even if FERC has administrative authority under both statutes.

In *Arkansas Power & Light Company* ("Arkansas Power"),¹³² the Commission granted reconsideration of its order that had denied the request of several Missouri cities to reject Arkansas Power's rate filing with the Commission.¹³³ In applying federal law, the Commission applied precedent that specifically cited to the unenacted model version

service. *Id.* at 65,124. Some of the municipal utilities parties to the contract either paid what they thought was a fair fee for service or did not pay at all. *Id.*

126. *Id.* at 65,123. Dayton Power & Light Co. ("DP&L") is a public utility in Ohio that serves residential, commercial, industrial, and government customers, and eleven municipal corporations in Ohio including the village of Jackson Center. *Id.*

127. *Id.* at 65,124. The municipal customers filed the original complaint against DP&L alleging that DP&L had breached the PSA's pricing provisions. DP&L filed a breach of contract suit in Ohio state court for failure to pay for services. *See* Vill. of Jackson Ctr., 90 F.E.R.C. ¶ 61,287, at P 61,756 (2000).

128. *Id.* at 65,132-33.

129. Cent. Ill. Pub. Serv. Co., 20 F.E.R.C. ¶ 61,043, at P 61,091 (1982).

130. *Id.*; *see* U.C.C. § 2-305 (AM. L. INST. & UNIF. L. COMM'N 1989). The U.C.C., which allows parties to conclude a contract without settling the price if they so intend, modified "traditional" common law that considered price "agreements to agree" typically unenforceable and indefinite. If the parties fail to agree on the price, the U.C.C. sets the "reasonable price" at the time of delivery. U.C.C. § 2-305.

131. Cent. Ill. Pub. Serv. Co., 20 F.E.R.C. at P 61,091.

132. Ark. Power & Light Co., 20 F.E.R.C. ¶ 61,013, at P 61,033 (1982).

133. *Id.* at 61,033-34. The Commission denied Missouri Cities' motion to reject Arkansas Power's rate filing. *Id.* (involving "the *Mobile-Sierra* contract question" doctrine).

of the U.C.C., which did not have the effect of law, either in Missouri or elsewhere.¹³⁴

In *Golden Spread Electric Cooperative*,¹³⁵ the Commission applied the U.C.C. to determine the assignment of contract rights. The assignment of property rights does not significantly vary between the U.C.C. and general common law/services jurisprudence. Even though the underlying contracts were contracts for service by a jurisdictional utility, Southwestern Public Service Company (“SPS”), and within the Commission’s jurisdiction, FERC elected to apply the U.C.C., which pertains only to goods.¹³⁶ The Commission found no controlling federal interest against applying “established law” to the assignment issue,¹³⁷ which it concluded without analysis was Texas’s version of U.C.C. section 2-210,¹³⁸ consistent with its past practice of addressing contract law questions.¹³⁹ Despite objection from SPS,¹⁴⁰ the Commission held that the assignment of the cooperative’s full requirements agreements with SPS was valid under both the U.C.C. analysis and Texas law.¹⁴¹

134. *Id.* at 61,034–35 (reconsidering its order dated March 3, 1982, pending a decision on the issue of Missouri Cities’ and Arkansas Power’s intent regarding the terms of their contract, to determine whether the contract allowed unilateral rate changes).

135. *Golden Spread Elec. Coop.*, 40 F.E.R.C. ¶ 61,348 (1987).

136. *See id.* at P 62,047. The Commission has authority to regulate the terms and conditions of electric rates and to determine that the assignment issue was “important in relation to the regulatory responsibilities of the Commission.” *Id.* at P 62,045. In support of its position, the Commission also held that to suspend its decision out of deference to a Texas court decision would violate § 205 of the Federal Power Act, which required the Commission to decide *Golden Spread*’s rate filing within sixty days. *See id.* at P 62,047 (noting the Commission’s responsibilities under 16 U.S.C. § 824d (1982)).

137. *Id.* at P 62,047 (citing *Pennzoil Co. v. F.E.R.C.*, 645 F.2d 360, 387 (5th Cir. 1981) (“[T]he appropriate law for the Commission to apply to a contract issue is, in the absence of significant conflict between federal interests and the application of state law, the law that would apply if the subject matter of the contract were unregulated.”)).

138. *See id.* “Unless otherwise agreed, all rights of either seller or buyer can be assigned except where the assignment would materially change the duty of the other party, or increase materially the burden or risk imposed on him by his contract, or impair materially his chance of obtaining return performance.” *Id.* (quoting TEX. BUS. & COM. CODE ANN. § 2.210 (West 1968)).

139. *See id.* (citing *Cent. Ill. Pub. Serv. Co.*, 20 F.E.R.C. ¶ 61,043, at P 61,091 (1982) (applying section 2-305 of the U.C.C. to a contract dispute)).

140. *See id.* at P 62,045. SPS had argued that under Texas law, contracts involving extension of credit and long-standing personal relationships, as between SPS and the cooperatives, were “exceptions to the general rule that contracts are assignable.” *Id.* SPS sought a factual determination of whether the parties intended the agreement to be assignable and whether *Golden Spread* would be able to perform as the cooperatives performed prior to the assignment. *See id.* at P 62,045–46.

141. *Id.* at P 62,048. The Commission held that the assignments were valid under both the U.C.C. analysis and the analysis applied by the Texas courts. *Id.* The Commission further held that full requirements agreements do not prohibit assignments and the assignment would not materially alter SPS’s position. *See id.* The Commission ordered that SPS would have the same obligation to provide the same service to *Golden Spread* as it had for the cooperatives. *Id.*

2. FERC Applies the U.C.C. to Transmission Services

Oddly, contrary to the U.C.C., FERC even applied the U.C.C. to decide a contract issue involving transmission *service*, rather than the sale of the electricity itself. Transmission service is typically understood to be a service. In *Southern Minnesota Municipal Power Agency v. Northern States Power Co.* (respectively, “Southern Minnesota” and “Northern States”),¹⁴² Southern Minnesota¹⁴³ filed a complaint alleging that Northern States¹⁴⁴ had adopted new contract interpretations and altered long-standing practices in relation to their three transmission contracts.¹⁴⁵ The Commission applied the U.C.C.’s definition of “course of performance” to the parties’ conduct, quoted the unenacted model version of the U.C.C., and cited the corresponding Minnesota provision.¹⁴⁶ It thus applied the U.C.C. to a contract for transmission services, utilizing a provision where the U.C.C. diverges from the common-law rule for services.¹⁴⁷

The Commission also determined that the STS transmission contract was analogous to an “agreement to agree” where the parties agreed to conclude a contract even if a price, or loss factor, was not

142. *S. Minn. Mun. Power Agency v. N. States Power Co.*, 73 F.E.R.C. ¶ 61,350 (1995); *see also* *N. States Power Co.*, 61 F.E.R.C. ¶ 63,010 (1992) (initial decision); *N. States Power Co. v. S. Minn. Mun. Power Agency*, 73 F.E.R.C. ¶ 61,350, at P 62,063 (1992).

143. “[Southern Minnesota] is a municipal corporation . . . of Minnesota, organized in 1977 for the purpose of supplying electric power to its members. [It] consists of 18 member municipalities, each of which owns and operates an electric utility system in Minnesota.” *N. States Power Co.*, 73 F.E.R.C. at P 62,064.

144. “[Northern States] is a public utility that . . . sells power and energy and operates a transmission system in parts of Minnesota, North Dakota and South Dakota.” *Id.* Northern States delivered power to Southern Minnesota under three contractual agreements. *Id.* at P 62,063.

145. *Id.* at P 62,063, 62,065.

146. *Id.* at P 62,080; *see also* MINN. STAT. § 336.2-208(1) (2002) (repealed 2004); U.C.C. § 2-208(1) (1989). The Commission determined that both parties’ “course of performance” modified the “initial” loss factor of 7% initially stated in the contract. *N. States Power Co.*, 73 F.E.R.C. at P 62,080. In a footnote the Commission referred to section 2-208(1) of the U.C.C.:

Where the contract for sale involves repeated occasions for performance by either party with knowledge of the nature of the performance and opportunity for objection to it by the other, any course of performance accepted or acquiesced in without objection shall be relevant to determine the meaning of the agreement. . . . The U.C.C., including this provision, has been adopted by Minnesota.

Id. at P 62,080 n.37 (citing MINN. STAT. § 336.2-208(1) (repealed 2004)).

147. During the periods that the parties did not agree, the loss factor would remain at the level that would be determined by their course of performance. *Id.* at P 62,080. After May 1, 1986, and until 1992, the parties were unable to reach an agreement as to the proper level of losses under the shared transmission system (“STS”) agreement, and the level of losses was changed on two different occasions. *Id.* at P 62,066. On May 1, 1986, the parties used losses of 4.5%, and on January 1, 1989, the parties used losses of 4.2%. *Id.* The new loss factors were used without the STS Coordinating Committee’s approval. *Id.*

determined, and applied the U.C.C. to govern such matters.¹⁴⁸ Here again, the application of the U.C.C. rule changed the outcome: An “agreement to agree” is enforceable under the U.C.C., but not typically enforceable in a services contract. Moreover, the application of the U.C.C. allowed the court to insert “reasonable” prices even where not settled by the parties. To determine a reasonable rate on which the parties intended to agree, the Commission once again quoted from the unenacted model version of the U.C.C. and cited the relevant Minnesota provision.¹⁴⁹ The contract was enforceable under the U.C.C. but perhaps would not have been enforceable under common law.¹⁵⁰

FERC has also employed the U.C.C. to invoke “usage of trade” in the interpretation of the performance of the parties. *Seminole Electric Cooperative, Inc. v. Florida Power & Light* (respectively, “Seminole” and “FPL”) involved a contract dispute over indirect costs listed in the parties’ Interconnection Agreement.¹⁵¹ The Commission agreed with FPL that Seminole’s interpretation was inconsistent with the U.C.C.’s usage of trade.¹⁵²

F. *Contract Conundrum*

There is a conundrum regarding contracts and commerce within the realm of electric power. Since virtually everyone and every business purchases electricity, this becomes a significant legal issue affecting

148. *See id.* at P 62,080. “In this context, the contract in question can be considered analogous to an ‘agreement to agree’ and is cognizable under section 2-305 of the U.C.C.” *Id.* at P 62,080 n.39; *see also* MINN. STAT. § 336.2-305. FERC quoted Minnesota’s U.C.C. section 2-305, which provides:

(1) The parties if they so intend can conclude a contract for sale even though the price is not settled. In such a case the price is a reasonable price at the time for delivery if . . . (b) the price is left to be agreed by the parties and they fail to agree . . .

MINN. STAT. § 336.2-305 (2015); *see N. States Power Co.*, 73 F.E.R.C. at P 62,080 n.39 (quoting MINN. STAT. § 336.2-305).

149. *See N. States Power Co.*, 73 F.E.R.C. at P 62,080 n.39.

150. *See id.* Although the Commission did not go through the same U.C.C. analysis for the Outlet Agreements, its decisions were similar, and also based on its authority to decide the rate factors. *See id.* at P 62,082, 62,084. The Commission fixed a loss factor of 2.3% for the STS, Southern Minnesota, and UMMPA Outlet Agreements effective as of the date of the order. *Id.* at P 62,084. The Commission applied the 2.3% loss factor for the STS Agreement during the fifteen-month refund period from August 25, 1991 through November 24, 1992. *Id.* at P 62,080. The loss factor would then revert to the 3% contract loss factor until the date of the order, where the loss factor would revert to the “just and reasonable” level of 2.3%. *Id.* at P 62,080–81. For the Southern Minnesota and UMMPA Outlet Agreements, the Commission held that the loss factors prior and subsequent to the August 25, 1991 fifteen-month refund period were the contract loss factors, 3% and 1.2%, respectively. The loss factor during the refund period and after the date of the order was 2.3%. *Id.* at P 62,084.

151. *Seminole Elec. Coop., Inc. v. Fla. Power & Light*, 53 F.E.R.C. ¶ 61,026, at P 61,098 (1990).

152. *See id.* at P 61,100, 61,104; *see also* U.C.C. § 1-205 (AM. L. INST. & UNIF. L. COMM’N 1989). FPL asserts that at the time of their agreement, indirect costs were regarded as standard utility costs that were routinely covered by utilities.

everyone. The states are split on whether electricity is a “good” or a service. There is a reason that forty-nine states have adopted Article II of the U.C.C. in almost identical form—so that there is a relatively uniform set of rules for the sale of “goods.”¹⁵³ However, adopting the U.C.C. does not mean that services are covered as if they were “goods” under the U.C.C.

In more than a half-dozen cases, FERC has applied the U.C.C. uncritically to resolve disputes regarding the course of performance, trade usage, open price terms, parol evidence, assignment of contract, and transmission rights.¹⁵⁴ This has often resulted in a significantly different decision than under the general common law applicable to services in the states. This difference could determine the outcome of the case, which creates precedent. In some decisions, FERC, a federal agency,¹⁵⁵ contradicted state court determinations on exclusively state law matters of contract law,¹⁵⁶ which further contradicts FERC’s stated principle of wanting to apply Article II of the U.C.C. because forty-nine of fifty states have adopted it.¹⁵⁷ Nevertheless, having adopted it does not mean that one always applies it—it only applies to contracts for “goods,” not contracts for services. This FERC position evolved apparently without careful analysis of the comparisons or differences from a policy, physical, or legal perspective.¹⁵⁸

The FERC decisions that electricity is a “good” under the U.C.C. were made, according to FERC personnel, in order to make it simple by treating electricity in the same legal manner that FERC treats natural gas and to adopt a consistent state law, the U.C.C.¹⁵⁹ And in the interest of uniformity, FERC has even taken something fairly universally regarded as an electric service—transmission and distribution of electricity over the power lines—and declared that that too is a “good.”¹⁶⁰ While convenient for decision makers, this avoids the core question of whether the thing itself, electricity, is a tangible, existing “good,” or the service of delivering into a house a unified electric field. While in physics there is a mathematical relationship between energy and mass ($E = mc^2$), legally, there is a difference between tangible “goods” and intangible services.

153. See UNIFORM COMMERCIAL CODE LOCATOR, <http://www.law.cornell.edu/uni-form/ucc#a2> (last visited Mar. 16, 2016).

154. See *supra* Section III.D.

155. *Commonwealth Elec. Co. v. Bos. Edison Co.*, 46 F.E.R.C. ¶ 61,253, at P 61,756.

156. *New Balance Athletic Shoe, Inc. v. Bos. Edison Co.*, No. 95-53221-E, 1996 WL 406673 (Mass. Super. Ct. Mar. 26, 1996).

157. Telephone Interview with FERC staff member, *supra* note 121.

158. *Id.* FERC staff indicated that no analysis had been performed, no current staff could recall on what basis electricity has been treated as a “good,” but that it was convenience.

159. *Id.*

160. See *supra* Section III.E.

The electric commodity is completely standardized as to uniform system frequency, voltage, ancillary services, and other key physical characteristics by the requirements of the integrated grid operator or the distribution utility.¹⁶¹ And despite several states making a distinction that electricity magically undergoes a transformative change in the electricity itself when at the point it is measured at a retail meter,¹⁶² this does not comport with the physical reality. Only a few court decisions seem to carefully analyze where and what metering does when deciding that metering transforms a service to a “good.” There is not a distinction as to what electricity is, depending on the voltage in a particular line, or whether it has been metered once, twice, or more times.

Although the states may slightly favor that electricity is a service, this is always evolving. Even consistency within states is not present. For example, Massachusetts has determined that electricity is a service rather than a “good” in contract disputes¹⁶³; yet in bankruptcy law matters, it has determined that electricity is a “commodity” rather than a service.¹⁶⁴ Notwithstanding this, FERC has determined that Massachusetts electricity in contract law matters is a “good.”¹⁶⁵ The *same electricity* cannot be both “good”/commodity and a service, simultaneously, under the law.

IV. TORT AND INJURY

In tort law, strict liability can be imposed under state precedent on all manufacturers or distributors of defective or inherently dangerous products.¹⁶⁶ In the products liability arena, in order to be subject to strict liability, electricity must be a product. A product is not a service to which strict liability for the supplier applies in tort law. A plaintiff bringing a strict products liability action need *not* prove negligence, recklessness, or intention to harm by the manufacturer or distributor of the product, thus facing a lower legal burden of proof.¹⁶⁷

Strict products liability applies to an entity that “sells any product in a defective condition [which renders the product] unreasonably dangerous” and causes injuries.¹⁶⁸ *Black’s Law Dictionary* defines a prod-

161. See FERREY, *supra* note 41, at §§ 10:81–10:84.

162. See *supra* Section III.C.

163. *New Balance Athletic Shoe, Inc. v. Bos. Edison Co.*, No. 95-53221-E, 1996 WL 406673, at *3 (Mass. Super. Ct. Mar. 26, 1996).

164. *In re Erving Indus., Inc.*, 432 B.R. 354 (Bankr. D. Mass. 2010).

165. *New Balance*, 1996 WL 406673, at *3.

166. To invoke strict liability under section 402A of the Restatement (Second) of Torts, the plaintiff must prove he or she purchased the product from someone engaged in the business of selling the product, the product was defective, the product caused harm to the plaintiff or his or her possessions, and the manufacturer or distributor put the product into the stream of commerce. RESTATEMENT (SECOND) OF TORTS § 402A (AM. LAW INST. 1965).

167. See *id.*

168. *Id.*

uct as “[s]omething that is distributed commercially for use or consumption and that is usu[ally] (1) tangible personal property, (2) the result of fabrication or processing, and (3) an item that has passed through a chain of commercial distribution before ultimate use or consumption.”¹⁶⁹ The electric field which is supplied is not a tangible product.

A. *Electricity: Not a Product*

The Ohio Supreme Court determined that electricity was not a product in *Otte v. Dayton Power & Light Co.* (“DP&L”).¹⁷⁰ The Ottes sued DP&L for damage to their dairy operation as a result of stray voltage released onto their property.¹⁷¹ In order to succeed on their products liability claim, the court had to characterize electricity as a product. The court defined a product as anything made by human industry or art.¹⁷² The court held that electricity did not fit within that definition because “electricity is the flow of electrically charged particles along a conductor.”¹⁷³ The charged particles are not manufactured by DP&L, “but rather, [DP&L] sets in motion the necessary elements that allow the flow of electricity.”¹⁷⁴ Such a system that allows for the flow of charged particles is a service.¹⁷⁵

The court called the court of appeals’ holding that electricity was a product an “attempt[] to equate the process of creating and delivering electricity to the manufacturing and sale of an ordinary consumer product . . . an intellectual disaster.”¹⁷⁶ Furthermore, consumers “do not pay for individual electrically charged particles [T]hey pay for each kilowatt hour provided [C]onsumers are charged for the length of time electricity flows through their electrical systems. They are not paying for individual products but for the privilege of using DP&L’s service.”¹⁷⁷

In *G & K Dairy v. Princeton Electric Plant Board*,¹⁷⁸ the court found that a municipal electric board that received electricity from the

169. *Product*, BLACK’S LAW DICTIONARY (4th pocket ed. 2011).

170. *Otte v. Dayton Power & Light Co.*, 523 N.E.2d 838 (Ohio 1988).

171. *Id.* at 837. The plaintiffs bought a dairy farm and operated it for several years. *Id.* at 836. Milk production declined by 25%, one-half of the cows contracted udder infections, and the cows were acting strangely, at the same time that stray neutral-to-earth voltage had been released onto their property. *Id.* at 836. The plaintiffs sued the utility for negligence, breach of contract, and strict liability. *Id.*

172. *Id.* at 838.

173. *Id.* (“Electricity appears to fall outside this definition . . . because electricity is the flow of electrically charged particles along a conductor. . . . [The defendant did] not manufacture electrically charged particles, but rather, set[] in motion the necessary elements that allow[ed] the flow of electricity.”).

174. *Id.*

175. *Id.*

176. *Id.*

177. *Id.* at 839.

178. *G & K Dairy v. Princeton Elec. Plant Bd.*, 781 F. Supp. 485 (W.D. Ky. 1991).

Tennessee Valley Authority did not manufacture the product within the meaning of the strict liability doctrine.¹⁷⁹ The court held that under Kentucky law, “strict products liability . . . is unavailable against one who renders a service as opposed to one who manufactures or supplies a ‘product.’”¹⁸⁰ The court found that because Princeton Electric Plant Board did not generate electricity, but rather received it and distributed it to its customers, it provided a service and products liability could not be applied.¹⁸¹

The opinion in *Otte* actually seeks to understand the nature of electricity before issuing its opinion that electricity is a service.¹⁸² In *Ransome v. Wisconsin Electric Power Co.*,¹⁸³ which is often cited for the proposition that electricity is a product rather than a service, instead of analyzing what electricity is, the court states that it “need not be concerned with . . . [the] accurate descriptions” of electricity.¹⁸⁴ While the distribution of electricity may be a service, the actual electricity in ordinary consumer use is a consumable product.¹⁸⁵

B. *Electricity as a Product Creating Strict Liability*

In 1979, the Wisconsin Supreme Court held that electricity is a product. In this determination, the court gave the following cursory analysis on the nature of electricity.

While there probably are numerous technical definitions of “electricity,” we need not be concerned with those accurate descriptions here—suffice it to say it is a form of energy that can be made or produced by men, confined, controlled, transmitted and distributed to be used as an energy source for heat, power and light and is distributed in the stream of commerce. The distribution might well be

179. *Id.* at 489. Kentucky had adopted the strict liability doctrine of the Restatement Second of Torts, and applied section 402A to the claim that G & K Dairy’s cattle were injured by stray electricity.

180. *Id.*

181. *Id.* The court placed much weight on the term “service,” which was used “consistently” by the Kentucky Public Service Commission’s regulations in reference to the furnishing of electricity. *Id.*

182. *Otte v. Dayton Power & Light Co.*, 523 N.E.2d 835, 839 (Ohio 1988).

183. *Ransome v. Wis. Elec. Power Co.*, 275 N.W.2d 641, 649 (Wis. 1979). The plaintiff brought an action against the defendant on a product liability theory claiming that at the time the electricity left the defendant’s control, it was unreasonably dangerous. *Id.* at 648–49. The defendant claimed that the lightning was an act of God and a superseding intervening cause of the fire. *Id.* at 649. The trial court stated that the sale of electricity occurs at the meter and may be considered a service, but the electricity itself is a consumable product. *Id.* at 643. The Supreme Court of Wisconsin agreed. *Id.* at 648. Section 402A of the Restatement (Second) of Torts defines “defective condition” as any “condition not contemplated by the ultimate consumer, which will be unreasonably dangerous to him.” RESTATEMENT (SECOND) OF TORTS § 402A (AM. LAW INST. 1965).

184. *Ransome*, 275 N.W.2d at 643. Electricity caused the injuries leading to a strict products liability suit, rather than the fact of its distribution. *Id.* at 649.

185. *Id.* at 643.

a service, but the electricity itself, in the contemplation of the ordinary user, is a consumable product.¹⁸⁶

In *Elgin Airport Inn, Inc. v. Commonwealth Edison Co.*, an Illinois appellate court also held that electricity was a product. The court rejected the argument that because electricity is intangible, it is not a product within the meaning of section 402A of the Restatement (Second) of Torts.¹⁸⁷ The court held:

Having in mind that electrical energy is artificially manufactured, can be measured, bought and sold, changed in quantity or quality, delivered wherever desired and has been held by our supreme court to be personal property whose unlawful asportation is larceny, we are of the opinion that it is a product within the meaning of section 402A.¹⁸⁸

The Supreme Court of Georgia held that electricity was a “product” within the meaning of the state’s strict liability statute.¹⁸⁹ The supreme court stated that “electricity has been deemed a product for strict liability purposes not merely because it can be produced, confined, controlled, transmitted, and distributed, . . . but also because it ‘is artificially manufactured, can be measured, bought and sold, changed in quantity or quality, delivered wherever desired, and [is subject to] larceny.’”¹⁹⁰ Georgia courts consider the relinquishment of control over the electricity and its marketability as key factors to be considered as to when it becomes a product.¹⁹¹

186. *Id.*

187. *Elgin Airport Inn, Inc., v. Commonwealth Edison Co.*, 410 N.E.2d 620, 623–34 (Ill. App. Ct. 1980), *aff’d in part and rev’d in part*, 432 N.E.2d 259 (Ill. 1982) (citing section 402A of the Restatement (Second) of Torts: “§ 402A Special Liability of Seller of Product for Physical Harm to User or Consumer (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if (a) the seller is engaged in the business of selling such a product, and (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold. (2) The rule stated in Subsection (1) applies although (a) the seller has exercised all possible care in the preparation and sale of his product, and (b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.”).

188. *Elgin*, 410 N.E.2d at 624.

189. *Monroe v. Savannah Elec. & Power Co.*, 471 S.E.2d 854, 855–56 (Ga. 1996). The decedent was towing a shrimp boat when a metal stanchion on the boat came into contact with an overhead power line. When the decedent stepped onto the dock, the electricity grounded through his body, the fuses did not blow, and he was killed. *Id.* at 855.

190. *Id.* (quoting *Ransome*, 275 N.W.2d at 643). The court affirmed the appellate court decision, which held that electricity is a product, but because the electricity had not passed through the meter, there was no sale as required by the statute. *Id.*

191. *See Zepp v. Mayor of Athens*, 348 S.E.2d 673 (Ga. Ct. App. 1986). Plaintiff rural residents appealed an order that awarded summary judgment in favor of defendants, mayor, and city council in an action disputing the rates charged for water that plaintiffs purchased from the city. *See id.* at 674–75 (“In this regard we adopt the reasoning of the *Helvey v. Wabash Cty. REMC*, . . . court: ‘Logic would indicate that

A California appellate court, when it found that electricity was a product, even noted that other courts addressing the issue of categorizing electricity “ha[d] not dwelled unduly on electricity’s physical properties.”¹⁹² The failures of numerous courts to address the technical characteristics of electricity are the norm, rather than the exception.¹⁹³ In this case, the plaintiff was injured by a fall as the result of electrical shock and brought suit alleging negligence and strict liability for defective products.¹⁹⁴

The court relied on *Ransome* and *Petroski v. Northern Indiana Public Service Co.* in support of its finding that electricity was a “product.”¹⁹⁵ The defendant argued that electricity “is a *force*, like the wind, with the *potential* to do work.”¹⁹⁶ Addressing whether electricity must be a “good” for contract law purposes if it is a “product” for tort law purposes, without extensive analysis, the court stated that if electricity is a “product” for purposes of strict liability, it assumed that electricity is a “good” for purposes of the U.C.C., and the plaintiff could have brought a successful implied warranty of fitness for particular purpose claim under the U.C.C. in conjunction with its strict liability claim in tort.¹⁹⁷

The California court reasoned that “[e]lectricity is a commodity which, like other goods, can be manufactured, transported and sold,” and as such, can only be classified as a product.¹⁹⁸ Interestingly, having used physical characteristics to justify its decision, the court did not go further to identify which specific properties of electricity constitute something being a product.¹⁹⁹ Relying on public policy reasons, the California appellate court in *Pierce v. Pacific Gas & Electric Co.* stated that it did not definitively depend on definitional arguments to

whatever can be measured in order to establish the price to be paid would be indicative of fulfilling both the existing and movable requirements of goods.” *Id.* at 677–78.

192. *Pierce v. Pac. Gas & Elec. Co.*, 212 Cal. Rptr. 283, 290 (Cal. Ct. App. 1985).

193. *See id.*

194. *Id.* at 285. Lightning struck several utility company transformers, causing the plaintiff’s home to lose electricity. The utility company came to the plaintiff’s property and replaced the transformers, but did not test the replacement transformers before installing them. One of the new transformers exploded causing a rupture in the gas line located on the plaintiff’s property. The plaintiff went to shut off the propane gas and received a serious shock from the propane gas tank’s shutoff valve. The shock tightened her hand around the valve, which prevented her from letting it go. Ten to twenty seconds later, the plaintiff fell onto the propane tank, the electricity blew her hand off the valve, and she tumbled away from the tank and down a six-foot embankment. *Id.*

195. *Id.* at 289–90. The court defined “product” as any object or possession of intrinsic value, capable of delivery, and produced for introduction into trade or commerce. *Id.* at 288 n.4.

196. *Id.* at 288 n.3.

197. *Id.* at 293–94.

198. *Id.* at 290.

199. *Id.*

determine whether electricity constituted a product or a service, including²⁰⁰:

- to provide a shortcut to liability where negligence may be present but is difficult to prove;
- to provide an economic incentive for improved product safety;
- to induce the reallocation of resources toward safer products; and
- to spread the risk of loss among all who use the products.

C. *Metered Electricity: Does Measurement Change the Electric Field?*

Some courts have drawn a distinction between metered electricity as a good, and non-metered electricity as a service. There is no physical difference between either metered or non-metered electricity. The only difference is whether the measurement results in a transaction. There are millions of transactions every day for both services and goods. For both contract and tort law claims, some courts have used this to say that electricity becomes a product once it is measured and sold, which occurs when it passes through the consumer meter.²⁰¹

1. Metering Under a Contract

Regarding contract law claims, a municipal court in Ohio held that electricity in its so-called “raw” state should be distinguished from “metered amounts passing through utility owned conduits and into the homes of consumers. The latter-described form of electricity is goods as defined in the Uniform Commercial Code.”²⁰² The court reaches this conclusion by listing precedents from several other states and then stating its outcome without explaining other reasoning.

An Indiana court held that metered electricity sold to a consumer at retail consumer voltage passing through the retail meter is a “good” covered by the U.C.C.²⁰³ The court reasoned, as distinguished in *Helvey*, that retail metered electricity was a “good,” while “raw” electricity was not a “good.”²⁰⁴ The court held that metered electricity stepped-down to consumer voltage and sold to the homes of consumers is a “good” under the U.C.C., while raw electrical energy encountered in “an unmarketable and unmarketed state” in the overhead

200. *Id.* at 291; *cf.* *Otte v. Dayton Power & Light Co.*, 523 N.E.2d 835, 838 (Ohio 1988) (rejecting any public-policy minded justification for the imposition of strict products liability because they lack legitimacy in a highly regulated environment); *see also* *Bowen v. Niagara Mohawk Power Corp.*, 590 N.Y.S.2d 628, 631 (App. Div. 1992) (discussing a healthy tree falling on several power lines, causing abnormally high voltage to pass into the plaintiff’s house and dismissing the case).

201. For discussion of contract law claims, see Part III, *supra*.

202. *Cincinnati Gas & Elec. Co. v. Goebel*, 503 N.E.2d 713, 715 (Ohio Mun. Ct. 1986).

203. *Hedges v. Pub. Serv. Co. of Ind.*, 396 N.E.2d 933 (Ind. Ct. App. 1979).

204. *Id.* at 936.

transmission cable was not.²⁰⁵ The court further reasoned that “[t]he high-voltage electricity with which the Hedges came into contact was not the good that [the power company] was intending to sell or the Hedges were intending to buy.”²⁰⁶

In *Singer Co. v. Baltimore Gas & Electric Co.* (“BG&E”), Singer filed suit against BG&E, asserting breach of contract and warranty claims when Singer experienced power interruptions and outages that shut down the simulations its computers were running.²⁰⁷ Singer claimed that the electricity BG&E agreed to provide comprised “goods” as defined in the Maryland U.C.C.²⁰⁸ The court found no reported decision that held electricity to be a “good” while it remained in a utility company’s distribution system.²⁰⁹ Since Singer’s claims were based on an allegation of defects in an underground feeder, a part of the BG&E distribution system that failed to allow electricity to pass through the meter, the electricity at issue was still in BG&E’s distribution system.²¹⁰ The court found that “raw high voltage electricity contained in a utility company’s distribution system because it has not yet been converted into a useable state of lower voltage by passing through a meter into a customer’s home or place of business, is not the refined product that the customer intends to buy.”²¹¹ Thus, electricity remaining in the utility company’s distribution system is not a “good” within Title 2 of Maryland’s U.C.C. and is not subject to U.C.C. implied warranties.²¹²

In *Cincinnati Gas & Electric Co. v. Goebel*, the dispute involved a breach of contract action over unpaid bills for the sale of gas and electricity.²¹³ The court was most convinced by reasoning that distinguished electricity in its “raw” form from metered amounts passing through utility-owned conduits and into the homes of consumers.²¹⁴ The court held that once electricity passes through the meter and into

205. *Id.*

206. *Id.*

207. *The Singer Co., Link Simulation Sys. Div. v. Balt. Gas & Elec. Co.*, 558 A.2d 419, 421–22 (Md. Ct. Spec. App. 1989).

208. *Id.* at 423.

209. *Id.* at 424.

210. *Id.*

211. *Id.*

212. *Id.*

213. *Cincinnati Gas & Elec. Co. v. Goebel*, 502 N.E.2d 713, 714 (Ohio Mun. Ct. 1986). *Cincinnati Gas & Electric Co.* brought an action alleging breach of contract. At that time however, no case law existed in Ohio that was on point. Consequently, the Hamilton County Municipal Court looked to other states’ decisions concerning the issue. *See id.*

214. *Id.* at 715. The court, however, after determining electricity did constitute a good under the U.C.C., granted the defendant’s motion for summary judgment because Ohio’s U.C.C. contained a four-year statute of limitations, and plaintiff failed to commence its action within four years. *Id.*

the home of the consumer, it becomes a “good” as defined by the U.C.C.²¹⁵

2. Injury and Metering

Regarding tort claims, in Kentucky, a court found that “electricity is subject to product liability rules only after it is ‘sold’ to the consumer.”²¹⁶ Sawmill owners had brought suit against an electricity utility seeking to recover damages sustained in connection with a fire caused by a series of voltage surges.²¹⁷ It found that electricity is sold when it passes through the customer’s meter because “it is at [that] moment that the customer’s charges are computed, the seller relinquishes control over its product, and the electricity has been reduced to a voltage suitable for ordinary use.”²¹⁸ The court found that ordinary electricity is a product, and electricity is sold and first becomes subject to strict liability when it passes through a customer’s meter.²¹⁹

In *Bamberger & Feibleman v. Indianapolis Power & Light Co.* (“IP&L”), the plaintiff’s attorneys asserted that IP&L was liable under the Indiana Product Liability Act for economic losses arising from the interruption of electrical service at a law firm.²²⁰ The court found that electricity can be a “product” but must be in a marketable and marketed state when the injury is incurred, as well as when placed into the stream of commerce once it “reaches its destination in a home or factory.”²²¹

California courts also consider whether the electricity had been metered.²²² They determined that while still in the distribution system, electricity is a service, not a product, until it passes through the customer’s meter and into the stream of commerce.²²³ These cases all

215. *See id.* at 714–15.

216. *C.G. Bryant v. Tri-County Elec. Membership Corp.*, 844 F. Supp. 347, 350 (W.D. Ky. 1994).

217. *Id.* at 348.

218. *Id.*

219. *Id.* at 352.

220. *Bamberger & Feibleman v. Indianapolis Power & Light Co.*, 665 N.E.2d 933 (Ind. Ct. App. 1996).

221. *Id.* at 937.

222. *See Mancuso v. S. Cal. Edison Co.*, 283 Cal. Rptr. 300, 306 (Ct. App. 1991).

223. *Id.* at 307. The Court of Appeals held that the sale and delivery of electricity was the sale and delivery of a “product” for strict liability purposes once it is delivered. *Id.* at 308. The plaintiff owned and operated a furniture shop to which electric service was provided by the defendant utility. *Id.* at 302. Lightning struck a transformer causing the transformer to explode, causing one of the meters in the plaintiff’s shop to explode resulting in a fire that destroyed the premises and its contents. *Id.* The plaintiff sued the defendant on negligence and strict liability theories. *Id.* at 303. The *Mancuso* court cited *Pierce* and *Ransome* in support of its holding that electricity is a product within the meaning of Restatement (Second) of Torts section 402A strict liability. *Id.* at 305–10. The court based its holding on language from *Pierce* that found that electricity is a commodity and language from *Ransome*, which found that electricity itself, in contemplation of the ordinary user, is a consumable product. *Id.* at 307.

agree with the *Helvey* definition of electricity, but limit it to only electricity that has actually been sold to the customer.

D. Tort Tension

As with contract law,²²⁴ state law is split as to whether electricity is a product or a service. A majority of courts, at least eight, have determined certain electricity to be a product, including California, Colorado, Connecticut, Indiana, New Jersey, Pennsylvania, Texas, and Wisconsin.²²⁵ This allows consumers to assert claims for strict product liability. At least three other states, Kentucky,²²⁶ New York,²²⁷ and Ohio,²²⁸ deem electricity to be a service in terms of the law.

224. See *supra* Section III.F.

225. The courts that have labeled electricity a product “have been consistent in holding that the electricity must have been placed into the stream of commerce before § 402A strict liability can attach.” *Schriner v. Pa. Power & Light Co.*, 501 A.2d 1128, 1133–34 (Pa. Super. Ct. 1985) (“[I]f electricity ‘in a defective condition, unreasonably dangerous’ passes through the meter of a user or consumer and into the stream of commerce, causing physical harm . . . , the doctrine of strict liability in tort may be applied against the public utility”); see *Smith v. Home Light & Power Co.*, 734 P.2d 1051, 1055 (Colo. 1987) (“[A]t least until the electricity reaches a point where it is made available for consumer use, it is not a ‘product’ that has been ‘sold’ or otherwise ‘placed in the stream of commerce’ for the purpose of strict products liability under § 402A.”); *Ransome v. Wis. Elec. Power Co.*, 275 N.W.2d 641, 649 (Wis. 1979) (holding power company strictly liable for damage caused by electricity traveling through the utility’s lines into the plaintiff’s house at a voltage between 1000 and 4000 volts). The point at which electricity enters the stream of commerce, losing its character as a service and assuming that of a product, has been subject to dispute. Some jurisdictions consider electricity to have left the utility’s control only after it has passed through the customer’s electric meter, the point where the customer’s charges are generally computed. See *Mancuso v. S. Cal. Edison Co.*, 283 Cal. Rptr. 300, 308 (Ct. App. 1991) (“Electricity has been deemed to enter the stream of commerce when it leaves the transmission lines and passes through the consumer’s meter.”); *Curtiss v. Ne. Utils.*, No. CV92-0511572-S, 1994 WL 702690, at *6 (Conn. Super. Ct. 1994) (“[A]s a practical and legal matter the acceptance of electricity as a product has been very rare. The concept of strict liability for the use or misuse of electricity has not found a solid home in the area of product liability case law. . . . [E]lectricity is not a ‘product’”); *Pub. Serv. Ind., Inc. v. Nichols*, 494 N.E.2d 349, 355 (Ind. Ct. App. 1986) (“Electricity is considered to be placed into the stream of commerce when it reaches its destination in a home or factory.”); *Hills v. Ozark Border Elec.*, 710 S.W.2d 338, 342 (Mo. Ct. App. 1986) (Prewitt, C.J., concurring) (“[The majority did] not decide if strict liability in tort applies to sellers of electricity placed into the ‘stream of commerce,’ but the opinion reviews causation as if strict liability does apply.”); *Otte v. Dayton Power & Light Co.*, 523 N.E.2d 835, 842 (Ohio 1988) (“[S]trict liability in tort for damages caused by [stray voltage] is not a cause of action that may be asserted against a public utility.”); *Kolpin v. Pioneer Power & Light Co., Inc.*, 469 N.W.2d 595, 601 (Wis. 1991) (noting that the lower court held that stray voltage is not a product).

226. *G & K Dairy v. Princeton Elec. Plant Bd.*, 781 F. Supp. 485, 489–90 (W.D. Ky. 1991).

227. *Bowen v. Niagara Mohawk Power Corp.*, 590 N.Y.S.2d 628, 631 (App. Div. 1992).

228. *Otte*, 523 N.E.2d at 838.

As with contract law,²²⁹ a significant number of states also conclude that electricity is transformed into a product at the point it is metered and enters the consumer's building.²³⁰ However, the physical thing that is electricity is no different before and after metering. Here again, there can be different positions in decisions of courts within the same state. For example, Kentucky courts have held that electricity is a service and not a product in tort actions, and it becomes a product once it is metered and enters a consumer's building.²³¹ The meter measures the thing that electricity is—it does not change the thing.

V. BANKRUPTCY

May a creditor seek a preferred award of administrative expenses under the Bankruptcy Code for its sale of electricity to a now-insolvent debtor? The code provides a payment hierarchy:

- (b) After notice and hearing, there shall be allowed administrative expenses, other than claims allowed under section 502(f) of this title, including—
 - (9) the value of any goods received by the debtor within 20 days before the date of commencement of a case under this title in which the goods have been sold to the debtor in the ordinary course of such debtor's business.²³²

Courts are divided here too: Some conclude that because electricity is movable and identifiable at the time of contract formation, it is a “good,” and as such a creditor may seek to recoup monies owed under § 503(b)(9) on a preferred basis.²³³ Other courts hold that electricity is a “service,” that it does not satisfy the definition of “goods” pursuant to the Bankruptcy Code, and, therefore, should not be subject to a creditor's claim in bankruptcy.²³⁴ Here again, there is inconsistent treatment in different states on the answer to the fundamental factual question of what electricity is. Some of the states reach a different conclusion in bankruptcy matters than they reach on the same question in contract, tort, or anti-trust matters, even though electricity is a constant factual component.

A. “Goods”

In a bankruptcy proceeding, a district court in California found that electricity was a “good” and the U.C.C. applied to the contracts at issue.²³⁵ This was explained as more of a conclusion, without legal or technical analysis of what electricity physically is:

229. *See supra* Section IV.C.1.

230. *See supra* Section IV.C.2.

231. *G & K Dairy v. Princeton Elec. Plant Bd.*, 781 F. Supp. 485 (W.D. Ky. 1991).

232. 11 U.S.C. § 503f(b)(9) (2014).

233. *In re Erving Indus., Inc.*, 432 B.R. 354 (Bankr. W.D. Mass. 2010).

234. *In re Pilgrim's Pride Corp.*, 421 B.R. 231 (Bankr. N.D. Tex. 2009).

235. *In re Pac. Gas & Elec. Co.*, 271 B.R. 626 (Bankr. N.D. Cal. 2002).

Simply put, electricity in this instance is a thing movable at the time of identification to the contract for sale. That is clearly demonstrated by the fact that the Agreement calls for the shipment of specific quantities of electricity. The electricity is moved through the power lines and the amounts are metered and therefore identifiable. The court will apply the U.C.C.²³⁶

In a Massachusetts bankruptcy court decision, *In Re Erving Industries*, the court held that the Massachusetts creditor's § 503(b)(9) claim related to the sale of electricity was entitled to be treated as preferred administrative expenses as a sale of a "good."²³⁷ Debtor asserted that whether or not the court determined electricity itself to be a "good," NewEnergy was a service provider under regulatory definitions established by the Massachusetts Executive Office of Energy and Environmental Affairs ("MEOEEA")²³⁸ and under the "predominant factor" test, negating any § 503(b)(9) claim.²³⁹

The court held that the "predominant factor" test did not apply to the statute creating priority administrative expense claims for the value of "goods" received by Debtor in the ordinary course of business during the twenty days prior to the commencement of bankruptcy.²⁴⁰ The court held that electricity constituted a "good" within the meaning of the bankruptcy statute, finding persuasive NewEnergy's argument that it was a "competitive supplier," which bought electricity from generators for the purpose of selling it through the deregulated market.²⁴¹ The court noted that the Bankruptcy Code

236. *Id.* at 640.

237. *In re Erving Indus.*, 432 B.R. at 354.

238. *Id.* at 357. The court reasoned that the description of the industry provided on MEOEEA's website was meant to educate the general public and that it did not "purport to reach any conclusive legal characterization relevant to the industry." *Id.* at 362.

239. *Id.* at 375.

240. *Id.* NewEnergy argued that the "predominant factor" test was irrelevant as to a claim under § 503(b)(9), which created a priority claim for the value of any "goods" sold to a debtor in the ordinary course of business within the twenty days preceding the commencement of bankruptcy and did not impose a condition precedent that a contract must be primarily for the sale of "goods" in order to raise a § 503(b)(9) claim. *Id.* The court agreed with NewEnergy's reasoning that the customer was ultimately responsible to contract with the local utility for ensuring that the electricity was delivered to the customer's location. *Id.* at 362. The court held that the transactions did not involve the rendering of services and therefore the test was inapplicable. *Id.* at 372. The court further emphasized that even if part of what was delivered could be deemed a service, the "predominant factor" test would be irrelevant to the determination of the value of goods received by the debtor within the meaning of § 503(b)(9). *Id.*

241. NewEnergy made several arguments as to why it was not a service provider: (1) it did not perform the traditional service functions associated with electric utilities; (2) it neither generated nor transmitted electric energy, and it was only a competitive supplier in a deregulated market; (3) the state did not list it as a "utility provider" on the Chart of Massachusetts Electric Utility Providers; and (4) referencing *Black's Law Dictionary*, "because [NewEnergy] [did] not have a monopoly or exclusive service or franchise area, [was] not regulated by the government, and [was] subject to competi-

does not define “utility,” but suggested that the term has come to be understood as:

[A] business organization (as an electric company) performing a public service and subject to special governmental regulations, that has some special position with respect to the debtor, and has a monopoly in the area so that the debtor cannot easily obtain comparable service from another.²⁴²

Because NewEnergy was not subject to governmental regulation, and because it did not provide transmission, distribution, or customer services in Massachusetts, it was not deemed to be a “utility.”²⁴³ As to the nature of electricity, the court found:

We begin with the most basic concept, the idea that “all things are made of atoms—little particles that move around in perpetual motion.” These atoms, in turn, are comprised of “a nucleus that has a positive electrical charge . . . together with a number of electrons, all having the same negative charge and mass, which move at distances from the nucleus.” Electrons moving around the nucleus on the outermost plane (or “shell”) can be knocked out of orbit and move from one atom to another, taking their charge with them. It is the energy produced by this movement of electrons from atom to atom that we call “electricity.”

Power plants use these basic principles to create electricity by applying a force to push electrons out of their orbits and cause them to “flow” from atom to atom. For example, the force of a spinning electromagnetic rotor will move electrons out of orbit in a nearby copper wire. This creates the electricity and electrical currents that move through various transmission and distribution lines and are ultimately diverted to homes and business where the electricity is put to use.²⁴⁴

The court addressed whether electricity was tangible as “goods.”²⁴⁵ Debtor claimed that electricity had no actual physical form or attributes,²⁴⁶ relying on the court’s reasoning in *Pilgrim’s Pride*, “[that] UCC § 2-105 does not suggest that the provision’s drafters had intended that ‘goods’ would include things which cannot be packaged.”²⁴⁷ However, the *Erving* court ultimately agreed with Creditor’s reasoning: “[A]lthough its ultimate nature may be mystifying to most, electricity *is* tangible and *does* possess physical properties. It is not simply an ‘idea’ akin to intellectual property. Although perhaps lack-

tion from a number of available alternative sources of electricity [it was not a utility provider].” *Id.* at 358; *see also id.* at 361.

242. *Id.* at 363 (internal quotation marks omitted).

243. *Id.* at 364. The fact that MEOEEA did not list NewEnergy as a utility regulated by the state supported the court’s conclusion that NewEnergy’s claim arose solely from the sale of electricity and not from services provided. *Id.*

244. *Id.* at 367.

245. *Id.* at 367–78.

246. *Id.* at 368.

247. *In re Pilgrim’s Pride Corp.*, 421 B.R. 231, 239 (Bankr. N.D. Tex. 2009).

ing in corporeal shape and not easily observed, electricity really is some *thing*, something that can be felt (although we are loathe to) and something that can be created, measured and stored.”²⁴⁸

The bankruptcy court addressed issues regarding whether electricity was movable and identifiable at the time of contracting, and concluded that electricity was movable through the grid to the customer.²⁴⁹ The court concluded that “[c]ourts have generally held that electricity is identifiable because it can be measured at the point it passes through the meter” and that “[the] process may occur at speeds so imperceptible that consumption appears to occur simultaneous with identification, but logic compels the conclusion that the electricity is moving (and remains in motion) until it reaches the product sought to be electrified.”²⁵⁰

In *GFI Wisconsin, Inc. v. Reedsburg Utility Commission (In re Grede Foundries)*, the district court, affirmed the bankruptcy court’s award of preferred administrative expense claims made by Reedsburg Utility Commission and another power company for their sale of electricity to GFI Wisconsin within twenty days of its commencement of bankruptcy.²⁵¹ Debtor claimed that electricity was not a “good” pursuant to § 503(b)(9) because electricity was not movable and identifiable at the time of the contract of sale and could not be reclaimed or replevied by the creditor.²⁵² Relying on *Erving Industries*, the court found electricity to be a “good,” movable when it entered the meter and moved to debtor’s facilities, regardless of whether it can be reclaimed,²⁵³ finding the movement virtually instantaneous and sufficient to satisfy the definition of “goods.”²⁵⁴ The court determined that the physical nature of electricity is complex:

[Electricity] requires an understanding of the nature of electrons and a grasp of quantum physics and special relativity. For the purpose of determining administrative priority under the Bankruptcy Code, the meaning of “goods” under the UCC should not depend on quantum physics, how fast electrons are moving at a particular

248. *In re Erving Indus.*, 432 B.R. at 369.

249. *Id.* Debtor argued that electricity ceased to move at the time it was identified in the contract for sale (measured by the meter) because identification and consumption occur simultaneously. *Id.* at 370.

250. *Id.* (citing *In re Pac. Gas & Elec. Co.*, 271 B.R. 626, 640 (Bankr. N.D. Cal. 2002)).

251. *GFI Wis., Inc. v. Reedsburg Util. Comm’n*, 440 B.R. 791, 794 (Bankr. W.D. Wis. 2010).

252. *Id.*

253. *Id.* The district court noted that to constitute goods under § 503(b)(9), the thing at issue must be identifiable, movable, have value, and be received by the debtor during the 20-day period preceding the petition date. *Id.* at 798. Both the parties agreed that the electricity Creditors sold to Debtor had been identified at the time of contract because it had been metered, but disputed its movability. *Id.* The district court rejected Debtor’s argument noting that section 546 of the Bankruptcy Code does not require that goods must be reclaimable to fall under § 503(b)(9). *Id.* at 802.

254. *Id.* at 799.

time or even where a debtor's meter is located on an electrical circuit. Rather, determining whether a particular thing qualifies as a good and deserves administrative priority should be a straightforward assessment, taking into consideration the nature and common understanding of the thing, but also considering its similarities to goods that fall undisputedly under the UCC and would receive administrative priority under § 503(b)(9).²⁵⁵

The district court noted that every bankruptcy court that had considered the issue had applied the U.C.C. definition of "goods" in U.C.C. section 2-105, and because forty-nine states had adopted some version of the U.C.C., no additional definition was necessary.²⁵⁶ This argument that one should use a U.C.C. definition because one exists, even if the U.C.C. does not apply to transactions for services alleged to be at issue, mirrors the logic of convenience of FERC in applying the U.C.C. to indisputable transmission services.²⁵⁷

B. Services

In *In re Pilgrim's Pride*, the debtor argued that electricity was not a "good" in a § 503(b)(9) claim for electricity sold during the twenty days immediately preceding the commencement of bankruptcy.²⁵⁸ Because the Bankruptcy Code does not define meaning of the term "goods"—even though it appears throughout the code, the court utilized the U.C.C.'s Article 2 definition of "goods" for the purpose of "goods" under § 503(b)(9):

"Goods" means all things (including specially manufactured goods) which are movable at the time of identification to the contract for sale other than the money in which the price to be paid, investment securities (Article 8) and things in action. "Goods" also includes the unborn young of animals and growing crops and other identified things attached to realty as described in the section on goods to be severed from realty (Section 2-107).²⁵⁹

The court tracked precedent that electricity is property, but not all property is "goods," noting intellectual property as property that is not "goods."²⁶⁰ The court did not find persuasive *Black's Law Dic-*

255. *Id.* at 799–800.

256. *Id.* at 797. The district court noted that Debtor did not plead the "predominate factor" test initially and that it only addressed it in its reply brief before the bankruptcy court, and thus had waived it. *Id.* at 804.

257. *See supra* Section III.E.

258. *In re Pilgrim's Pride Corp.*, 421 B.R. 231 (Bankr. N.D. Tex. 2009).

259. *Id.* at 237. The majority of courts, both those that have concluded electricity to be "goods" and those that have ruled it to be "services," discuss the definition found in Article 2. *See, e.g., In re Erving Indus.*, 432 B.R. 354 (Bankr. W.D. Mass. 2010) (holding that electricity is "goods" once it is metered); *contra, In re Samaritan All., LLC*, No. 07-50725, 2008 WL 2520107 (Bankr. E.D. Ky. June 20, 2008).

260. *In re Pilgrim's Pride Corp.*, 421 B.R. at 238 (citing *Ashwander v. Tenn. Valley Auth.*, 297 U.S. 288 (1936) ("electric energy thus produced, constitute[s] property")). The Court reasoned that Congress has the authority to dispose of electricity gener-

tionary definition of a “product” in a modern economy.²⁶¹ The court noted that while electricity is metered, it does not automatically follow that it falls within the U.C.C. definition of “goods.” While telecommunication companies meter phone calls and bandwidths in a similar manner as electricity providers, the former are considered “services” and not “goods.”²⁶² Decisions holding the contrary were not persuasive,²⁶³ and if the drafters of the U.C.C. intended that “goods” include things that cannot be packaged and handled, they would have so noted, contrary to the existing plain meaning of the U.C.C. and the Bankruptcy Code.²⁶⁴

In *In re Great Atlantic & Pacific Tea Co.*, the creditor, Hudson Energy Services, LLC appealed a decision of the bankruptcy court denying its request for administrative priority pursuant to 11 U.S.C. § 503(b)(9).²⁶⁵ Pacific Tea objected to Hudson’s motion claiming that electricity did not constitute “goods” under § 503(b)(9).²⁶⁶ The bankruptcy court in the initial trial denied Hudson’s motion, agreeing in part with Pacific Tea that electricity did not fall within the definition of “goods” in § 503(b)(9).²⁶⁷ The court considered *In re Pilgrim’s*

ated by a government owned dam, because electricity is property and Article 4, Section 3 of the Constitution authorizes Congress dispose of property if it chooses. *Id.* Not all property may be deemed to be “goods”—“one can have property rights in trademarks, patents, and copyrights, but no one would argue that intellectual property falls under the UCC definition of ‘goods.’” *Id.*

261. *Id.* at 238–39. *Black’s Law Dictionary* defines a “product” as something distributed commercially for use or consumption. Many products that satisfy this definition would not qualify as “goods” under the U.C.C., such as television, explaining that a broadcast is something that is commercially distributed and consumed by the viewing public, but does not fall within the meaning of “goods” because it is intellectual property.

262. *Id.* at 239. The court further noted that metering and consumption of electricity takes place simultaneously and as such there is no possibility of returning electricity to the provider. *Id.* This would seem to suggest that “goods” needs to be subject to replevy.

263. *Id.* (citing *In re Pac. Gas & Elec. Co.*, 271 B.R. 626 (Bankr. N.D. Cal. 2002) (stressing that once electricity passes through a customer’s meter, it can be measured and is in the stream of commerce)).

264. *Id.*

265. *In re Great Atl. & Pac. Tea Co.*, 498 B.R. 19 (Bankr. S.D.N.Y. 2013). Hudson filed a motion to replevy \$875,943.90 worth of electricity that it sold to Great Atlantic & Pacific Tea within twenty days prior to the commencement of Pacific Tea’s bankruptcy. *Id.* at 21.

266. *Id.*

267. *Id.* at 19, 21 (quoting *Howard Delivery Serv., Inc. v. Zurich Am. Ins. Co.*, 547 U.S. 651 (2006), for the proposition that administrative expense claims “must be tightly construed . . . and clearly fit within the statute’s provisions” before the court can entertain any such claim). The bankruptcy court noted how other courts had interpreted “goods” within the context of § 503(b)(9) claims, acknowledging that the majority of courts dealing with § 503(b)(9) claims consider the U.C.C. definition of “goods” to be sufficient to inform their decisions, but as to the sale of electricity, the court thought otherwise, pursuant to the definition of “goods” under U.C.C. Article 2, and the legislative history of the Bankruptcy Abuse Prevention and Consumer Protection Act.

Pride Corp.,²⁶⁸ *In re Grede Foundries*,²⁶⁹ and *In re Erving Industries, Inc.*,²⁷⁰ two of three of which determined that electricity is a “good” rather than a service, and rejected the argument that when state law considers electricity to be a service, state law should govern.²⁷¹ The court concluded that § 503(b)(9) requires a uniform bankruptcy analysis to apply nationwide, citing *In re Erving Industries, Inc.*, which had found electricity to be a service:

The Court remains mindful, however, that § 503(b)(9) is federal law [T]o the extent that differences arise from local enactments of the UCC or the variances in its interpretation by the courts of the states, . . . federal bankruptcy courts should be reluctant to give those variances effect under federal law.²⁷²

In its appeal, Hudson argued that the bankruptcy court erred in finding that electricity was not a “good” for purposes of § 503(b)(9).²⁷³ On appeal, the district court found that the wide usage and acceptance of “goods” as found in the U.C.C. was sufficient,²⁷⁴ and electricity did not fall within either U.C.C. section 2-105(1) (a thing “which is movable at the time of identification to the contract”)²⁷⁵ or section 2-105(4) (“an identified bulk of fungible goods”).²⁷⁶ The court found that electricity was neither movable at the

268. *In re Pilgrim’s Pride Corp.*, 421 B.R. 231 (Bankr. N.D. Tex. 2009) (holding that electricity is not a “good” for purposes of § 503(b)(9) claims and therefore denying creditor’s petition for administrative priority).

269. *GFI Wis., Inc. v. Reedsburg Util. Comm’n*, 440 B.R. 791, 799 (Bankr. W.D. Wis. 2010) (“[T]he bankruptcy court ruled correctly that electricity is a ‘good’ within the meaning of Section 503(b)(9) of the Code.”).

270. *In re Erving Indus., Inc.*, 432 B.R. 354, 374 (Bankr. D. Mass. 2010) (“Having determined that the only question is whether electricity, as supplied by [claimant], is a good under § 503(b)(9), this Court concludes that, using either the UCC definition or the definition urged the Debtor, electricity easily falls within the definition.”).

271. *Norcon Power Partners, L.P. v. Niagara Mohawk Power Corp.*, 163 F.3d 153, 155 (2d. Cir. 1998) (“[T]he UCC does not apply to the sale of electricity which is a service under New York law.”).

272. *In re Great Atl. & Pac. Tea Co.*, 498 B.R. at 22 (citing *In re Erving Indus., Inc.*, 432 B.R. at 366 n.23).

273. *Id.* at 24.

274. *Id.* at 25. The court noted that it would either review the bankruptcy court’s findings of fact for clear error or review its legal conclusions *de novo*, and since an administrative expense was a question of law, either standard of review would yield similar outcome. The court ultimately determined that the bankruptcy court’s interpretation of the U.C.C. definition of goods was valid. *Id.* at 24–25.

275. *Id.* at 26, 28. Hudson argued that electricity was moveable at two distinct points: When Hudson purchased it and then released it into the grid, and when it was measured as it exited the grid and passed through the customer’s meter. *Id.* at 26. Hudson further explained that its purchase of electricity from power generators was readily identifiable to its contract with Pacific Tea—thus satisfying the identification requirement of Article 2-105(1). As to movability, Hudson contended that electricity did not disappear the moment it passed through a meter, and was consumed when it passed through a device. Hudson further argued that the precise moment of identification and consumption was imperceptible, but the distinction existed nonetheless. *Id.*

276. *Id.* at 26, 28. Hudson argued that electricity did qualify as “identified bulk fungible goods,” analogizing electricity to oil in a pipeline or grain in an elevator, with

time of identification to the contract nor an identified fungible bulk of goods; the order of the bankruptcy court was vacated and remanded.²⁷⁷ Having relied more on precedent finding that electricity is a “good,” nonetheless, the court found electricity to be a service.²⁷⁸

In *In re PMC Marketing Corp.*, Puerto Rico Electric Power Authority (“PREPA”) filed a motion for pre-petition administrative expenses pursuant to § 503(b)(9) in response to PMC Marketing Corporation filing for bankruptcy.²⁷⁹ The bankruptcy court denied PREPA’s motion, holding that the utility provided a “service” rather than a “good” and was not entitled to pre-petition priority expenses.²⁸⁰ The court simply relied on the fact that PREPA, as a utility company, provides “services.”²⁸¹ The court distinguished the facts from those of *In re Erving Industries*,²⁸² because PREPA was not an alternative energy seller, but is a traditional utility, noting that PREPA’s web page defined itself as such: “PREPA produces, transmits and distributes, practically, all the electric power used in Puerto Rico.”²⁸³ Thus, the bankruptcy court held that electricity did not constitute “goods” for purposes of § 503(b)(9) because PREPA is a utility providing electricity services.

one unit of electricity no different than another with the electricity it purchased existing as an “undivided” part of the whole power grid. *Id.* at 26. In response, Pacific Tea argued that it is irrelevant if electricity is identifiable when it enters the power grid because Hudson made no argument that electricity it sold to Pacific Tea was identified to a contract for sale at the moment it entered the grid, once electricity was identified at the meter and simultaneously consumed, it was no longer moveable, and it is unreasonable to consider the entire power grid as “bulk” of goods, given that electricity is continually generated, transmitted, and consumed and not a stable source of electricity capable of identification. *Id.* at 27–28.

277. *Id.* at 28–29, 31. Hudson argued that Pacific Tea’s assertions on which the bankruptcy court relied in concluding that electricity disappears at the moment it enters the meter, and that electricity can only be identified at the point of delivery to the customer, did not provide the district court with a clear path for determining whether electricity was a good. *Id.* at 28.

278. *Id.* at 22.

279. *In re PMC Mktg. Corp.*, 501 B.R. 17, 19 (Bankr. D.P.R. 2013), *vacated and remanded*, 517 B.R. 386 (B.A.P. 1st Cir. 2014). PREPA claimed that twenty days before the commencement of debtor’s bankruptcy, PREPA sold debtor electricity whose total value amounted to \$154,023.52, of which \$89,336.42 remained uncollected after debtor’s surety paid a prepetition bond secured by PREPA for debtor’s obligations. *Id.* PREPA asserted that the electricity that it sold Debtor constituted “goods” under U.C.C. Article 2-105(1) because electricity is moveable and identifiable at the time it passed through debtor’s meters, and it was entitled to administrative expenses under § 503(b)(9). *Id.*

280. *Id.* at 24. PREPA is a utility because it is subject to government regulation as are traditional utilities, and it has a monopoly and is a government-owned corporation of Puerto Rico. *Id.*

281. *Id.* at 23.

282. *In re Erving Indus., Inc.*, 432 B.R. 354 (Bankr. D. Mass. 2010).

283. *In re PMC Mktg. Corp.*, 501 B.R. at 23 (emphasis omitted). The court cited the definition of “utility” in *Merriam-Webster Collegiate Dictionary* (10th ed. 2001): “The term ‘utility’ is not defined in the Bankruptcy Code, but its ordinary meaning is ‘a service (such as light, power, or water) provided by a public utility.’” *Id.* at 24.

Westfield Gas & Electric Light Department, a municipal utility, sought administrative expense treatment for *both* electricity and natural gas that it sold to NE Opco, Inc. immediately prior to the customer's bankruptcy filing.²⁸⁴ The bankruptcy court concluded that the "predominant purpose" test²⁸⁵ was not necessary for deciding whether to grant administrative expenses:

[T]here is nothing in § 503(b)(9) that requires . . . [the predominant purpose] approach for the purposes of that section of the Bankruptcy Code. If a particular transaction provides for *both* a sale of goods and a sale of services, and the value of each of them can be ascertained, why shouldn't the value of the goods be entitled to the § 503(b)(9) administrative expense priority and the value of the services be relegated to an unsecured non-priority claim? There may well be sound policy reasons for not distinguishing between the sale of goods and the sale of services to a debtor within 20 days before bankruptcy, but that is just what § 503(b)(9) does. . . . The only relevant determination under § 503(b)(9) is the value of the "goods" that were delivered, irrespective of whether the contract also called for the delivery and sale of services. The predominant purpose test does not inform the Court as to whether a particular thing that has been sold is or is not "goods." Therefore, the predominant purpose test is unnecessary. There is nothing in § 503(b)(9) that dictates the use of a "winner take all" approach.²⁸⁶

In reconciling the inconsistency among other bankruptcy courts regarding whether electricity was a "good" or service under § 503(b)(9), applying U.C.C. section 2-105 for its definition of "goods,"²⁸⁷ the

284. *In re NE Opco, Inc.*, 501 B.R. 233, 236 (Bankr. D. Del. 2013).

285. Debtor urged the court to apply the apportionment test; Westfield urged use of the predominant purpose test. *Id.* at 257. In the "predominant purpose" test, courts look to the overall transaction between debtor and creditor to determine whether "goods" or "services" predominate in the contract. Courts consider each component of a bill issued by creditor to debtor, in an item-by-item analysis. *Id.*

286. *Id.* (citing *In re Plastech Engineered Prod., Inc.*, 397 B.R. 828, 837 (Bankr. E.D. Mich. 2008)).

287. *Id.* at 241. The bankruptcy court discussed in depth the systematic approach used by the court in *In re Erving Indus., Inc.*, 432 B.R. 354 (Bankr. D. Mass. 2010) ("[E]lectricity is moveable, tangible and consumable, that it has physical properties, that it is bought and sold in the marketplace and thus, that it qualifies as a good for purposes of the UCC and the Bankruptcy Code. . . . [E]lectricity begins flowing through power lines when a circuit is formed and continues moving at least until it is metered. The metering satisfies the identification requirement of the UCC and the movement is sufficient to satisfy the movability requirement, even if it reaches the speed of light."); *GFI Wis., Inc. v. Reedsburg Util. Comm'n*, 440 B.R. 791 (Bankr. W.D. Wis. 2010) ("Taking into consideration the physical properties of electricity as noted by appellant's expert and the bankruptcy court, including the fact that electricity is movable, and the parties agreement under which the energy usage and consumption were determined by meter readings, [concluded] that electricity is a good under the [U.C.C.] definition and also under the Bankruptcy Code."); *In re Great Atl. & Pac. Tea Co., Inc.*, 498 B.R. 19 (Bankr. S.D.N.Y. 2013) (The court indicated that the nature of electricity is not sufficiently uniform to support a rule applicable in all cases.); *In re Pilgrim's Pride Corp.*, 421 B.R. 231 (Bankr. N.D. Tex. 2009) (holding

court noted that the courts in those cases considered one or more of the following factors²⁸⁸:

- “Is electricity moveable at the time it is identified by passing through the meter or is it consumed simultaneously with identification?”²⁸⁹ “Electricity cannot be shoehorned into the definition of a good Thus, under the plain meaning of section 503(b)(9) of the Bankruptcy Code, electricity is not moveable at identification and, thus, is not a good because there is not a meaningful delay between identification and consumption.”²⁹⁰
- “Is electricity ‘comparable’ with other things that are goods under the U.C.C.?”²⁹¹ “While water and natural gas stored in a tank are still water and natural gas, electricity stored in a battery is no longer electricity. It has become potential energy stored in materials or chemicals that will produce electricity when they react with each other. While the battery itself is a good, the electricity used to charge it and that will flow from it is not.”²⁹²
- “Does section 546(c) governing reclamation of goods control whether electricity is a good or a service?”²⁹³ “As the statute is written, section 546(c) establishes a narrowly tailored *in rem* remedy for reclamation of goods sold to the debtor that is subject to a number of contingencies and defenses. . . . While certain goods are subject to reclamation, other non-reclaimable goods are also entitled to an administrative expense claim. Thus, section 546(c) is irrelevant for purposes of determining whether electricity is a good under section 503(b)(9).”²⁹⁴
- “Does section 366 of the Bankruptcy Code governing ‘utility services’ control whether electricity is a good or service?”²⁹⁵ A utility provider may provide both “goods” and services within the meaning of both § 503(b)(9) and § 366, but the former is not dependent on the latter for purposes of remedy under the Bankruptcy Code, nor vice versa.²⁹⁶
- “Should the nature of the parties’ relationship, e.g., is the claimant acting as a ‘public utility,’ determine whether electricity is a good or service?”²⁹⁷ “If one makes the good/service determina-

that narrowly defining “good” so as not to include electricity for purposes of § 503(b)(9) is consistent with public policy under the Bankruptcy Code and that electricity is not a good).

288. *In re NE Opco, Inc.*, 501 B.R. at 249.

289. *Id.*

290. *Id.* at 251.

291. *Id.*

292. *Id.* at 252. Batteries do not store electric power, rather they store chemical energy that can be readily converted to electric power.

293. *Id.*

294. *Id.* at 254–55.

295. *Id.* at 255.

296. *Id.*

297. *Id.*

tion based on the parties' relationship, then the electric current could travel from origination to use, starting as a good and ending as a service. Indeed, since section 366 is unique to the Bankruptcy Code, whether the wholesaler providing electricity to the consumer is delivering a good or a service might depend on whether the consumer is in bankruptcy. The problems with this approach are self evident. The proper course is to determine whether electricity, in and of itself, is a good."²⁹⁸

- "Should section 503(b)(9) be strictly construed because it provides an otherwise unsecured creditor with an administrative expense claim and, if so, to what extent?"²⁹⁹ "The Court disagrees that section 503(b)(9) should be strictly construed. Neither should it be loosely construed. The court should simply apply the law as written and not put a judicially created obstacle in the path of an administrative expense claimant."³⁰⁰

The bankruptcy court thereon held that electricity was not a "good" under § 503(b)(9) of the Bankruptcy Code, but that the natural gas provided by Westfield to the debtor-customer was a "good" because the U.C.C. specifically includes natural gas as a good in section 2-107(1): "A contract for the sale of minerals or the like (including oil and gas) . . . is a contract for the sale of goods within this Article if they are to be severed by the seller"³⁰¹

Having concluded that natural gas constituted "goods" under U.C.C. section 2-107(1), the bankruptcy court directed that it be determined which portions of Westfield's combined gas and electric bill applied to natural gas and to grant those expenses under § 503(b)(9).³⁰² This precedent makes a key distinction between electricity as a service and natural gas as a "good." This rigorous analysis is apparently what FERC did not undertake to date at the federal level.³⁰³

C. Bankruptcy Restart

There is even less reason for variation in treatment of electricity under bankruptcy law than under state law. Bankruptcy law is federal law, so there is not variation in fifty states, and one would expect a consistent pattern of decision as to what electricity is. However, as with contract and tort law, bankruptcy law is not uniform on whether electricity is a "good" or a service. Cited above are five decisions find-

298. *Id.* at 255–56.

299. *Id.* at 256.

300. *Id.*

301. *Id.* at 256–57. As a result of this finding, the court ruled that Westfield's § 503(b)(9) claim was valid as it referred to natural gas. *Id.* at 257.

302. *Id.* at 257–58.

303. *See supra* Section III.D.

ing electricity to be a service and two decisions finding electricity to be a “good.”

In these decisions, there does appear to be a reasonable consensus that the definition of “goods” in the U.C.C. is appropriate to use to define the undefined term “goods” in the Bankruptcy Code. Having merged on a specified uniform statutory definition in the statute, the courts could not agree on the conclusion as to whether electricity is a “good” or a service.

And here too, there are more examples of state inconsistency as to what electricity is, a discrepancy that further depends on the legal claim in question. For example, in different Massachusetts matters:

- A bankruptcy court treated electricity as a “good.”³⁰⁴
- In contract law, Massachusetts treats electricity as a service rather than a “good.”³⁰⁵
- FERC treats electricity as a “good” in Massachusetts contract matters, despite the contrary state determination.³⁰⁶
- In anti-trust matters, electricity is deemed to be a commodity.³⁰⁷

In completely reversed alignment to Massachusetts, in bankruptcy in a Texas matter, electricity is determined to be a service rather than a “good,”³⁰⁸ while in contract law, Texas determines that electricity is a “good” rather than a service.³⁰⁹ So there remains confusion and inconsistency in how electricity is perceived in state and federal adjudications.

VI. ELECTRICITY AND ANTI-TRUST LAW

A. Federal Acts

The Clayton and Robinson-Patman Acts only apply to commodities. Therefore, the application of these acts to the electrical energy industry depends on whether the court classifies electricity as a commodity or a service.³¹⁰ For anti-trust legal claims, the Clayton Act and its revision under the Robinson-Patman Act, statutorily provide definitions of what is and is not subject to anti-trust actions: “It shall be

304. See *In re Erving Indus., Inc.*, 432 B.R. 354 (Bankr. D. Mass. 2010).

305. *New Balance Athletic Shoe, Inc. v. Bos. Edison Co.*, No. 95-5321-E, 1996 WL 406673 (Mass. Super. Ct. Mar. 26, 1996).

306. *Commonwealth Elec. Co. v. Bos. Edison Co.*, 46 F.E.R.C. ¶ 61,253 (1989).

307. *Town of Concord v. Bos. Edison Co.*, 676 F. Supp. 396 (D. Mass. 1988).

308. See *In re Pilgrim’s Pride Corp.*, 421 B.R. 231, 235, 240 (Bankr. N.D. Tex. 2009).

309. See *Hous. Lighting & Power Co. v. Reynolds*, 712 S.W.2d 761, 765–66 (Tex. App.—Houston [1st Dist.] 1986), *rev’d on other grounds*, 765 S.W.2d 784 (Tex. 1988) (“We agree with the better reasoned opinions of other jurisdictions which held electricity to be a product.” *Id.* at 785.).

310. KEITH N. HYLTON, *ANTITRUST LAW: ECONOMIC THEORY AND COMMON LAW EVOLUTION* 305 (2003). The importance of this classification lies in the Congressional purpose in enacting the Clayton Act. The Clayton Act was a reaction by Congress to the 1911 Supreme Court opinion in *Standard Oil*, which hold that only unreasonable restraints upon trade violated the Sherman Act. *Id.*

unlawful for any person engaged in commerce, in the course of such commerce, either directly or indirectly, to discriminate in price between different purchasers of commodities of like grade and quality. . . .”³¹¹ A section of the Clayton Act “makes it unlawful for anyone engaged in interstate commerce to discriminate in price, ‘between different purchasers of commodities of like grade and quality’ when the effect may be substantially to lessen competition or to tend to create a monopoly.”³¹²

Therefore, the application of the Robinson-Patman Act would only apply to electricity if it is a commodity in commerce. A commodity is “[a]n article of trade or commerce. The term embraces only tangible goods, such as products and merchandise, as distinguished from services.”³¹³ Again as with the “product” definition in tort law, it is unclear whether or not the electric field provided by the electric company is tangible or a “good.” Arguably, electricity is neither tangible nor movable because it is transmitted rather than transported.

B. *Electricity is not a Commodity or Manufactured “Good”*

A U.S. district court in Delaware held in *City of Newark v. Delmarva Power & Light Co.* that electricity was not a commodity under the Clayton Act as amended by the Robinson-Patman Act.³¹⁴ The plaintiff in the suit was a municipal corporation that owned and operated electric distribution systems and purchased all of its power from the defendants.³¹⁵ The plaintiff alleged that Delmarva, among other things, had substantially lessened competition in violation of section 2(a) of the Clayton Act.³¹⁶ The parties agreed that the term “‘commodities’ refers to tangible articles of commerce.”³¹⁷

The court noted that the term “commodities” is used in the Clayton Act “in the context of items of ‘like grade and qualities’ and as synonymous with ‘goods, wares or merchandise.’ These terms are not commonly applied to electric power.”³¹⁸ The court also explained that the Clayton Act reflected a concern about price discrimination with respect to manufactured products and consumer goods.³¹⁹ Since there was a FERC regulatory structure in place and prevalent state energy

311. Robinson-Patman Act, 15 U.S.C. § 13(a) (2012) (emphasis added).

312. *City of Newark v. Delmarva Power & Light Co.*, 467 F. Supp. 763, 772 (D. Del. 1979).

313. *Commodity*, BLACK’S LAW DICTIONARY (7th ed. 1999).

314. *Delmarva Power & Light Co.*, 467 F. Supp. at 777.

315. *Id.* at 765.

316. *Id.*

317. *Id.* at 772–73.

318. *Id.* at 774.

319. *Id.*

regulation, the court found it unlikely that Congress intended electric utility rates to be subject to the Robinson-Patman Act.³²⁰

C. *Electricity as a Commodity*

Conversely, a Massachusetts district court held that electricity was a commodity.³²¹ The municipal corporation plaintiffs sued Boston Edison, who supplied 95% of its power requirements.³²² The plaintiffs alleged that Boston Edison had violated the Robinson-Patman Act by unlawfully charging them a higher wholesale price for electricity than it charged to retail customers.³²³ Since the Act's prohibition only applies to commodities, the plaintiffs' claim was dependent on whether electricity was a commodity.³²⁴

This court defined a commodity as "goods, merchandise, wares, supplies and other items bought and sold in the marketplace."³²⁵ The court did not include services in the definition even if tangible products are transferred incidentally as part of the provision of services: Electricity "lacks [the] typical characteristic[s] of items traditionally placed" in the category of "goods."³²⁶ Even though not clearly a tangible item,³²⁷ "[l]ike the more traditional commodities, electrical energy is a thing bought and sold in the market place. It may be measured, stored and even stolen."³²⁸

The court held that electricity, although not obviously tangible, is not completely intangible as it can be felt or touched: "The manufacture and sale of electricity is no more a service than the manufacture and sale of widgets."³²⁹ In *City of Kirkwood v. Union Electric Co.*, the Eighth Circuit reversed the district court, finding that because "[e]lectric power can be felt, if not touched . . . produced, sold, stored in small quantities, transmitted, and distributed in discrete quantities," it is therefore a commodity subject to the Robinson-Patman Act.³³⁰

320. *Id.* One year prior to the passage of the Robinson-Patman Act, Congress had amended the Federal Power Act to provide for review of rates.

321. *Town of Concord v. Bos. Edison Co.*, 676 F. Supp. 396, 398 (D. Mass. 1988).

322. *Id.* at 397.

323. *Id.*

324. *Id.*

325. *Id.*

326. *Id.*

327. *Id.* at 398.

328. *Id.* The Eighth Circuit, in another price discrimination lawsuit, held that electricity is a commodity because it can be "felt, if not touched. It is produced, sold, stored in small quantities, transmitted, and distributed in discrete quantities." *City of Kirkwood v. Union Elec. Co.*, 671 F.2d 1173, 1181 (8th Cir. 1982).

329. *Bos. Edison Co.*, 676 F. Supp. at 398 ("A decision that electricity is a 'commodity' . . . would further the Congressional purpose to protect small retailers from being forced out of business by unjustified price discrimination.").

330. *City of Kirkwood*, 671 F.2d at 1181. Relying on *City of Gainesville*, the court summarily found that electricity was a commodity at least for purposes of the Robinson-Patman Act. *Id.* at 1182.

In *City of Gainesville v. Florida Power and Light Co.*, fourteen Florida cities brought suit against an electric company alleging that the electric company violated federal and state anti-trust laws.³³¹ The plaintiffs conceded that the transmission of electricity was not a commodity within the Clayton Act or the Robinson-Patman Act. The court pointed out that nowhere in those acts did Congress define the term “commodities.”³³² Several lower courts had interpreted the term “commodity” in reference to the two acts, distinguishing commodities from intangibles.³³³

The plaintiffs argued that electricity was tangible because electrons can be weighed.³³⁴ Without a physical or legal analysis of whether electricity is tangible or movable, the court determined that the “tangible-intangible distinction” does not help in classifying electricity.³³⁵ The court held that the Robinson-Patman Act should apply because electricity “is a product manufactured from other forms of energy” and distributed through multi-level sales from supplier to retailer.³³⁶ As a means to include electricity with other forms of energy commodities, such as coal, gasoline, and petroleum, the court reasoned that “Congress did not intend that one form of manufactured energy be exempt from these antitrust laws while others are not.”³³⁷

D. *Anti-Trust Anti-Matter*

Regardless of surmising congressional intent, it does not follow physically or legally that when one form of energy is a movable “good,” all forms of energy are movable “goods.” Physically, electricity is distinct from all other forms of energy. The *City of Gainesville* decision is critical of a Fourth Circuit panel and a single judge of the Fifth Circuit, each assuming that electricity is a commodity or “good”

331. *City of Gainesville v. Fla. Power & Light Co.*, 488 F. Supp. 1258, 1261 (S.D. Fla. 1980).

332. *Id.* at 1280.

333. *Id.* at 1281. The court noted that intangibles included services rights and privileges. The court also included this citation from the Fifth Circuit: “Legislative history and subsequent congressional studies clearly indicate that section 2(a) of the Act was intended to encompass only tangible articles of commerce (citations omitted). In 1957, the Chairman of the House Judiciary Committee unsuccessfully sought to amend the Act to define ‘commodities’ as including ‘services rendered by independent contractors.’” *Id.* (citing *Tri-State Broadcasting Co. v. United Press Int’l, Inc.*, 369 F.2d 268, 270 n.2 (5th Cir. 1966)).

334. *Id.*

335. *Id.*

336. *Id.* at 1281–82.

337. *Id.* at 1282. The court criticized *Delmarva* and its finding that Congress could not have intended to make electric power subject to the Robinson-Patman Act because Congress had a year earlier incorporated anti-discriminatory pricing provisions in the Federal Power Act.

without any careful analysis.³³⁸ Legally, congressional regulation of electricity, gas, coal, oil, and renewable power sources are contained in separate legislation.³³⁹

For anti-trust purposes, other forms of energy have been determined to be commodities within the scope of federal anti-trust statutes, including coal,³⁴⁰ gasoline,³⁴¹ and natural gas.³⁴² The legislative history indicates that members of the House Judiciary Committee sought unsuccessfully to amend the definitions to define anti-trust “commodities” to include “services.”³⁴³ Therefore, with the application of anti-trust statutes to electricity, unlike the application of common law, there is legislative history that services are not included. One size does not fit all—either in terms of physical reality or law.

In anti-trust decisions, again, there is a split on what electricity is. In all four anti-trust cases above, the result turns on a rendering of congressional intent of the statute and not on whether electricity physically or legally fits the definition of the noun used—commodity. The opinions only briefly analyze electricity.³⁴⁴

And these cases again illustrate inconsistency as to what electricity is even within a state. For example, in a Massachusetts anti-trust matter, electricity was deemed to be a “commodity” and not a “service,”³⁴⁵ while in contract law matters, Massachusetts determined electricity to be a “service” and not a “good.”³⁴⁶

VII. CONFUSION CONCLUSION

One does not expect state common law to be identical between all states. However, the chaos intertwined with electricity is not about the

338. *Id.* at 1282 (citing Pa. Water & Power Co. v. Consol. Gas, Elec. Light & Power Co., 184 F.2d 552, 559 (4th Cir. 1950)); *see also* Ala. Power Co. v. Ala. Elec. Coop., Inc., 394 F.2d 672, 679–80 (5th Cir. 1968) (Godbold, J., dissenting).

339. *See* FERREY, *supra* note 41, §§ 10:3.

340. Tampa Elec. Co. v. Nashville Coal Co., 365 U.S. 320, 330 (1961) (assuming coal as a commodity within Clayton Act).

341. F.T.C. v. Sun Oil Co., 371 U.S. 505, 529 (1963) (treating automobile gasoline as within Clayton Act); United States v. Richfield Oil Corp., 99 F. Supp. 280, 284–86 (S.D. Cal. 1951), *aff'd*, 343 U.S. 922 (1952) (holding automobile gasoline and other petroleum products within Clayton Act).

342. B & W Gas, Inc. v. Gen. Gas Corp., 247 F. Supp. 339, 344–45 (N.D. Ga. 1965) (assuming natural gas is covered by the Clayton Act).

343. *See* City of Gainesville v. Fla. Power & Light Co., 488 F. Supp. 1258, 1281 (S.D. Fla. 1980).

344. City of Newark v. Delmarva Power & Light Co., 467 F. Supp. 763, 773 (D. Del. 1979). In *Delmarva*, the court spends little time at all discussing the nature of electricity. After finding no case law on the subject, the court determines that the matter “is one of Congressional intent . . . and the wording of the statute, its legislative history, and the regulation of the electric utility industry which existed at the time the adoption of the Robinson-Patman Act, all suggest that ‘commodity’ was not intended to encompass electric power.” *Id.*

345. Town of Concord v. Bos. Edison Co., 676 F. Supp. 396, 398 (D. Mass. 1988).

346. New Balance Athletic Shoe, Inc. v. Bos. Edison Co., No. 95-5321-E, 1996 WL 406673, at *3 (Mass. Super. Ct. Mar. 26, 1996).

application of differently evolved state common law rules—the confusion is about a basic physical fact that does not change anywhere in the United States. Electricity is identical everywhere: It is a rigorously controlled moving electromagnetic force field at 60 Hz. While physically more constant and uniform than any other thing in commerce in the United States, judicial opinions are anything but consistent—better described by chaos theory.

The physical reality of electricity does not change depending on whether the issue is one of contract interpretation, injury in tort, bankruptcy claims for preferred priority payment regarding electricity supplied but not paid for, or sanction of anti-competitive behavior. Nonetheless, there is legal inconsistency as to how electricity is characterized by courts in the same state at different times or under different claims. California jurisprudence holds that:

- Electricity is personal property.³⁴⁷
- Electricity is a product (for tort products liability) and may also be a “good.”³⁴⁸
- Electricity is a service until it is metered.³⁴⁹
- Electricity is an intangible or service.³⁵⁰

There is similar judicial inconsistency in Massachusetts:

- In a Massachusetts anti-trust matter, electricity was deemed to be a commodity and not a service.³⁵¹
- In bankruptcy court, electricity was deemed to be a “good.”³⁵²
- In contract law matters, Massachusetts determined electricity to be a service and not a “good.”³⁵³
- FERC, in supposedly applying Massachusetts state law to a Massachusetts electricity contract, without any analysis³⁵⁴ and in contradiction to the state court determination on a matter exclusively of state law,³⁵⁵ decided that electricity is a “good.”³⁵⁶

347. *Hill v. Pac. Gas & Elec. Co.*, 136 P. 492, 500 (Cal. Ct. App. 1913).

348. *Pierce v. Pac. Gas & Elec. Co.*, 212 Cal. Rptr. 283, 292 (1985).

349. *Mancuso v. S. Cal. Edison Co.*, 83 Cal. Rptr. 3d 300, 308 (1991).

350. Appeal of PacifiCorp at 10, *In re Appeal of PacifiCorp*, No. 90027 (Cal. State Bd. of Equalization Sept. 12, 2002) (“[T]he sales of electricity here are sales of services that essentially consisted of appellant’s setting and keeping in motion, through its generation and transmission facilities, electrically charged particles. Also as in *Otte*, we further conclude that the basic reason the generation and transmission process employed by appellant is appropriately characterized as a service is that the process does not result in either (1) the ‘creation’ in its generation facilities of any such arguably tangible particles or (2) the ‘injection’ of those particles into its transmission facilities.”).

351. *Town of Concord v. Bos. Edison Co.*, 676 F. Supp. 396, 398 (D. Mass. 1988).

352. *In re Erving Indus., Inc.*, 432 B.R. 354, 370 (Bankr. W.D. Mass. 2010).

353. *New Balance Athletic Shoe, Inc. v. Bos. Edison Co.*, No. 95-5321-E, 1996 WL 406673, at *1, 3 (Mass. Super. Ct. 1996).

354. *Commonwealth Elec. Co. v. Bos. Edison Co.*, 46 F.E.R.C. ¶ 61,253, at P 61,756 (1989).

355. *New Balance*, 1996 WL 406673, at *3.

And a similar legal inconsistency exists in Texas, contrary to what Massachusetts believes electricity is in different types of matters:

- In a Texas bankruptcy matter, electricity was deemed a service rather than a “good.”³⁵⁷
- In contract law, Texas determines that electricity is a “good” rather than a service.³⁵⁸

Several courts have concluded that electricity is a hybrid of “good” and service depending on at what stage of its transmission one encounters it.³⁵⁹ The predominant components that one pays for in a retail electricity financial transaction often can be costs for transmission, distribution, and ancillary services, rather than the electricity itself, even assuming, *arguendo*, that the electric commodity is deemed a “good.”³⁶⁰ Under this predominant factor analysis, “goods” often do not typically dominate in the financial transaction, and the applicable rule would conclude that the U.C.C. therefore would not apply.

The intangibility of electricity is a critical legal factor. Despite some courts finding that electricity is tangible because it can be felt when touched, this is not always true. The electricity entering a charging laptop computer is lowered in voltage by more than 90% from the wall socket voltage, and cannot be experienced by touch, which keeps consumers from being shocked. Electricity is movable, but so are delivered services, ideas which are communicated, and intellectual property. There is no critical distinction in movability.

For physical comparison, the sale of water involves a much more “tangible” and movable asset than the sale of electricity: Water molecules are actually transferred to, and thereafter consumed by, the retail purchaser, whereas no electricity electrons are consumed when selling or using electricity.³⁶¹ Even when the provision of water is determined to be a “good” traded under a hybrid “goods” and services

356. Telephone Interview with FERC staff member, *supra* note 121. FERC staff indicated that no analysis had been performed, no current staff could recall on what basis electricity has been treated as a “good,” but that it was convenient.

357. See *In re Pilgrim’s Pride Corp.*, 421 B.R. 231, 240 (Bankr. N.D. Tex. 2009).

358. See *Hous. Lighting & Power Co. v. Reynolds*, 712 S.W.2d 761, 766 (Tex. App.—Houston [1st Dist.] 1986), *rev’d on other grounds*, 765 S.W.2d 784 (Tex. 1988) (“We agree with the better reasoned opinions of other jurisdictions which hold electricity to be a product.” *Id.* at 785.).

359. “While the distribution of . . . electricity through a system of towers, poles, and wires may well be considered a service, the electricity itself is a consumable product.” *Hous. Lighting & Power Co.*, 712 S.W.2d at 766. “The distribution might well be a service, but the electricity itself, in the contemplation of the ordinary user, is a consumable product.” *Ransome v. Wis. Elec. Power Co.*, 275 N.W.2d 641, 643 (Wis. 1979).

360. See, for example, the bill components for National Grid in Massachusetts.

361. By contrast, a wastewater treatment system is often deemed to be predominantly the sale of the hardware, rather than the associated service. *Coca-Cola Bottling Co. v. Weston & Sampson Eng’rs, Inc.*, 695 N.E.2d 688, 691 n.6 (Mass. App. Ct. 1998). *But see Waste Stream Envtl., Inc. v. Lynn Water & Sewer Comm’n*, No. 00518D, 2003 WL 917086, *6 n.27 (Mass. Super. Ct. Jan. 3, 2003).

contract, it is dominated by its service component, and thus not subject to the U.C.C.:

Water is a unique product and is essential to human health and well-being. Here, the city did not create or manufacture the water. Rather, the city, by a system of reservoirs, captured the water from brooks, streams, and rainfall. It treated the water and then distributed it to its citizens. Although the city charged a sum for the water, that rate reflected the cost of storage, treatment and distribution. Thus, it is clear that the predominant factor, thrust, or purpose of the activity was the rendition of services and not the sale of goods.³⁶²

Water is a more tangible and flexibly movable thing, both physically and legally, than electricity. If water legally is deemed a service in terms of its predominant factor, electricity would also seem to be even more predominantly a service. The Internet, cable TV service, and phone service are routinely regarded as services and not goods.³⁶³ They each utilize the electromagnetic spectrum, as does electricity, and are the most relevant analogues to electricity. Clearly reasoned and closely examined decisions, such as that of Justice Wright in *Otte*,³⁶⁴ engage in careful analysis of electricity. Yet there remains confusion and no United States Supreme Court decisions to resolve the legal inconsistency and chaos that encircles rights associated with the second most important invention in the history of the world.³⁶⁵

But this chaos should not be hard-wired into the judicial future. Despite the convenient measurement at the point of metering, measurement does not change the fundamental physical nature and flow of electricity. Electricity does not become a product rather than a service sold by passing through a meter. X-rays administered at a hospital use electromagnetic force moved to your body, which tangibly reacts to the radiation and is carefully measured to control the dose or radiation, but x-rays would not be considered a "good" that the patient purchased, despite their tangibility, movement, and measurement. Making a distinction that identical electricity somehow is transformed

362. *Mattoon v. City of Pittsfield*, 775 N.E.2d 770, 784 (Mass. App. Ct. 2002).

363. See *MCI Telecomm. Corp. v. Alhadhood*, 82 F.3d 658, 664 (5th Cir. 1996); *Daleure v. Kentucky*, 269 F.3d 540, 542 (6th Cir. 2001) (finding telephone services were not "goods"); *Nat'l Commc'ns Ass'n v. Am. Tel. & Tel. Co.*, 808 F. Supp. 1131, 1136 (S.D.N.Y. 1992) (holding long distance voice communication services were not commodities to which the Robinson-Patman Act applied but instead were "services"); see also *Rankin Cty. Cablevision v. Pearl River Valley Water Supply Dist.*, 692 F. Supp. 691, 692-93 (S.D. Miss. 1988) (holding that cable television service was not a commodity); *Am. Tel. & Tel. Co. v. Delta Commc'ns Corp.*, 408 F. Supp. 1075, 1114 (S.D. Miss. 1976) (discussing the purchase and sale of television signal programming and finding that no sale or purchase of any tangible commodity was involved for purposes of the Robinson-Patman Act, which "only relates to the sale of tangible commodities and not to services").

364. *Otte v. Dayton Power & Light Co.*, 523 N.E.2d 835, 838-39 (Ohio 1988).

365. *Fallows*, *supra* note 2, at 58.

from a service to a “good,” commodity, or product at the meter is jurisprudence at odds with scientific reality:

More fundamentally, none of the utilities can show that, through the use of this equipment, the utility makes something new and different, whether it generates the electricity or buys the electricity from others. Though volts and amperes may change during the transmission and distribution, not every change is “manufacturing.” The total amount of electric energy does not change very much from the point of generation to the points of use. Electric energy is sold by its producers and distributors in quantities of power over a time period, commonly expressed as “kilowatt-hours” or “megawatt-hours.” A kilowatt of power can be 100 volts at 10 amperes, or it can be 1,000 volts at one ampere. The product is the same; only its measurements change. By either measure it is the same product, and nearly the same total amount of product. The essential character of electricity—the aggregation of subatomic particles that utilities can generate, transmit, distribute, measure and sell—is not changed by the equipment at issue here. Nothing is added and nothing is subtracted in the transmission and distribution process.³⁶⁶

Nor is there a persuasive change from a service to a “good” or product when electricity is transformed from 13 kV or 480 volts in the distribution line to enter the customer premises at 110 volts, as some courts have concluded.³⁶⁷ Many consumer appliances elevate the voltage: A cathode ray tube in a conventional television operates at several thousand volts, hospital equipment can operate at 5,000 volts or more, and even home electric dryers operate at an elevated 240 volts.³⁶⁸ Once transformed again to a higher voltage, if we adopt voltage as the key legal variable, does that particular electricity again change from a “good” back to a service? No.

The policy motivation for some precedent may be that a utility distributing electric power is regarded by some as a quasi-public functionary, reallocating the large amount of group resources which flow through the utility each month to certain parties. Utilities traditionally operated as monopolies which could spread any liability and costs incurred as business expenses over a broad base of every household in their monopolized geographic area. This is not true today, with twenty states breaking the retail monopoly of their utilities,³⁶⁹ and FERC

366. *Utilicorp United, Inc. v. Dir. of Revenue*, 75 S.W.3d 725, 729 (Mo. 2001) (citations and footnotes omitted). Petitioner utilities sought a sales tax exemption for certain equipment used in the transmission and distribution of electricity. *See id.* at 729. The utilities petitioned for review of the decision of the Missouri Administrative Commission in favor of respondent Missouri Director of Revenue. *Id.* at 725.

367. *See supra* Section IV.C.

368. Author’s information from Dr. Joseph Leung, formerly at Massachusetts General Hospital.

369. *See supra* Figure 1.

breaking the wholesale power and transmission monopoly of utilities.³⁷⁰

A view that electricity is a differentiated product or tangible “good” may be antiquated.³⁷¹ For the last century of its 135 years of existence, electricity has not changed or varied in the U.S. as a constant uniform electromagnetic field transmitted at 60 Hz AC (60 cycles per second).³⁷² Electricity is an identical force field in every state, in every transaction, and at every moment of time.³⁷³ The electromagnetic force, as a primary universal force of quantum field theory, can both cause ripples in the fabric of space-time,³⁷⁴ and when sold, is measured throughout the world as a function of the time of its use. Neither time, nor an invisible force, typically is considered by the law as a product or “good.”

Legal distinctions with regard to electricity become increasingly important in this era of retail electric sector deregulation, with individual state common law and court interpretation replacing systematized regulation by FERC and the states. Restructuring and deregulation of the retail electric power sector, which commenced at the state level in approximately 1997, dramatically changed the regulatory paradigm.³⁷⁵ About 40% of the states restructured or deregulated prior to the elec-

370. In Order No. 888, FERC established the foundation for the development of competitive bulk power markets. Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 Fed. Reg. 21, 540 (May 10, 1996) (codified as amended at 18 C.F.R. pts. 35 & 385).

In Order No. 2000, FERC encouraged the development of Regional Transmission Organizations to form “competitive wholesale electric markets,” that had to incorporate non-discriminatory transmission service. Regional Transmission Organizations, Order No. 2000, FERC Stats. & Regs. ¶ 31,089 (1999), *on reh’g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000), petitions for review dismissed, Pub. Util. Dist. No. 1 of Snohomish Cty., Wash. v. F.E.R.C., 272 F.3d 607 (D.C. Cir. 2001).

In Order No. 890, the Commission amended the Order No. 888 pro forma tariff to require transmission providers to plan for the needs of their customers on a comparable basis to planning for their own needs. Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, 72 Fed. Reg. 12266 (Mar. 15, 2007), *on reh’g*, Order No. 890-A, 73 Fed. Reg. 2984 (Jan. 16, 2008), *on reh’g*, Order No. 890-B, 123 F.E.R.C. ¶ 61,299 (2008), *on reh’g*, Order No. 890-C, 126 F.E.R.C. ¶ 61228 (2009).

In Order No. 1000, FERC required not favoring of incumbent utility transmission owners in building new transmissin capacity. Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Order No. 1000, 136 F.E.R.C. ¶ 61,051 (2011), *order on reh’g*, Order No. 1000-A, 139 F.E.R.C. ¶ 61,132, *order on reh’g and clarification*, Order No. 1000-B, 141 F.E.R.C. ¶ 61,044 (2012).

371. Until the early twentieth century, electricity was supplied by different suppliers at different voltages ranging from 100–600 volts and 40–133 cycles per second. For the past century, it is standardized throughout the United States by regulation at a set frequency of 60 mH and it does not vary. For a history of electric power, see FERREY, *supra* note 20, at Appendix A.

372. WORLD ELECTRICITY STANDARDS, *supra* note 23.

373. Its voltage can be easily transformed for various purposes.

374. GREENE, *supra* note 24, at 197.

375. *Id.* at 149–50.

tric sector problems in California in 2000–2001, whereafter the other 60% of the states retained traditionally structured retail electric sectors.³⁷⁶ As noted by the federal courts and affirmed by the Supreme Court, independent market participants now sell the bulk of U.S. power pursuant to the rules of contract law.³⁷⁷

At the bottom line, on something as ubiquitous and critical as electricity, one needs consistent jurisprudence to reconcile the randomness and chaos theory surrounding power. With electricity occupying unprecedented and increasing historical importance, courts must analyze what electricity actually is, for which this Article has highlighted significant physical and legal aspects.³⁷⁸ After more than a century of widespread use of electric power, workable precedent requires the convergence of interpretation to conform substantial judicial inconsistency. This chaos need not be hard-wired into our electric future.

376. See Ferrey, *supra* note 8, at 218–19.

377. Pub. Util. Dist. No. 1 of Snohomish Cty., Wash. v. F.E.R.C., 471 F.3d 1053, 1066–67 (9th Cir. 2006), *aff'd in part and rev'd in part sub nom.* Morgan Stanley Capital Grp., Inc. v. Pub. Util. Distr. No. 1 of Snohomish Cty., Wash., 554 U.S. 527 (2008).

378. See *supra* Part II.