Summary of Major Changes:

- Chapter 1, section 108.7, Detailed explanation of service voltages and maximum amperage around livestock.
- Chapter 1, section 109.A.4, Detailed explanation of primary metered services near animal confinement .
- Chapter 1, section 109.C.1.a, Allows customer to have multiple transformers less distance apart .
- Chapter 1, section 109.C.9, Detailed explanation of single service for livestock facilities and connected premises.
- Chapter 8, section 802.K, Encourages agriculture customers to convert to 3-Phase service.

Background:

- The Electric Service Rule Team conducts an annual review of the ESR.
- Company employees submit change requests to improve Electrical Services. There were some revisions based on this feedback.

Rule Number	Page	Rule Name	More Info about Edits
108.2	1-4	Superscripts	Updated language – "600-amp Continuous Duty service or 800-amp Intermittent Duty Services in non-agriculture areas are limited by loading on 167 kVA transformer."
108.7	1-4	Superscripts	Updated language – " In areas near livestock (within ~ ½ mile), single phase services are limited to the maximum sizes below. Larger single-phase services may be allowed pending Agriculture Representative testing. Additional system upgrades may also allow for larger services. Maximum single phase service sizes. All exceptions shall be approved by variance and Agriculture compliance teams (Refer to ESR Chapter 8):" a. 15kV and below: 400 Amp secondary b. 25kV system: 800 Amp secondary
109.A.4	1-6	Agriculture Primary Metered Services	New topic - Primary metered services are not available for animal confinement facilities without prior approval from the agriculture compliance manager.
109.C.1.a 109.C.1.b	1-6	Distance Exceptions	Changed 300 ft rule down to 250 ft.
109.C.3	1-6	Electrically Isolated Service Exception	Updated language – "Additional service(s) may be provided to a building or structure, where there are no electrically conductive (i.e. wiring) paths to another service. Services provided by this exception are treated according to Alliant Energy's extension rules."

Rule Number	Page	Rule Name	More Info about Edits
109.C.4	1-6	EV Charging Station Exception	Added – See Chapter 1502C
109.C.9	1-9	Multiple Agriculture Services only	Added – "Livestock facilities and associated/connected premises, one service per property applies. All exceptions shall be approved by variance and Agriculture compliance teams (Refer to ESR Chapter 8) prior to starting construction."
110.A	1-10	Single Phase metering Minimum Short Circuit Ratings	Updated – Table Header
201	2-2	Overhead Temporary service, Single-Phase, 3-Wire, 120/240 or 120/208 Volt, 200 AMP Max (for Construction Sites)	Update – Table Header ,Table and Drawing
203	2-5	Underground Temporary Service – Single-Phase, 3-Wire, 120/240 or 120/208 Volt, 200 AMP max (For Construction Sites)	Update – Table Header ,Table and Drawing
204	2-6	Underground Temporary Service – Single-Phase, 3-Wire, 120/240 or 120/208 Volt, 200 AMP max (For Winter Construction Sites)	Update – Table Header ,Table and Drawing
205	2-7	Large Temporary Services, 1PH or 3PH	Updated – Table and Drawing
300	3-1	Scope	Updated Language - This chapter covers the requirements and rules for overhead residential and commercial secondary services for Alliant Energy customers. Refer to ESR section 108. If in a rural area additional restrictions may apply. Refer to ESR Chapter 8.
305	3-4	Wall or Through-The-Roof Installation – Preferred Construction	Updated – Table and Drawing
306	3-5	Pole Mounted Service Entrance – 240 Volts Max – Optional Construction	Updated – Table and Drawing

Rule Number	Page	Rule Name	More Info about Edits
400	4-1	Scope	Updated Language - This chapter covers the requirements and rules for underground residential and commercial secondary services for Alliant Energy customers. Refer to ESR section 108. If in a rural area additional restrictions may apply. Refer to ESR Chapter 8.
402.B	4-1	Sizing Underground Facilities	Updated Language - Transformer Pad – Consult Alliant Energy Engineering Department. Sized to customer's main disconnect. See Section 408-412: Three-Phase Transformer Pad Options.
404.B	4-2	Underground Service Installations	Updated Language - Services to a Metering Transformer Cabinet, Termination Cabinet or Multi-Metering (with more than two meters) The customer will install trench and service conduit for all services terminated in a group meter assembly or meter-pack of more than two meters, a metering transformer cabinet or a termination cabinet. See 407 for number and size of conduit(s). An expansion joint for both the line and load side shall be required for all wall-mount services in this category. *Expansion joints shall be above final grade. For all services with conduit runs, the customer shall install a pull string in the conduit at the time of the conduit installation. Alliant Energy will provide service conductor cables and make all connections. Check with Alliant Energy for conduit size and number required. (Also see drawing 404B)
405	4-4	Outdoor Meter Socket	Added – 100-200 AMP 1Phase 120/208 Volt – Commercial Updated Table
411	4-7	Side by side Joint Transformer & Metering Cabinet Pad w/ Foundation Walls	Removed Completely
411	4-7	Three-Phase Fiberglass Transformer Box Pad	Moved section 412 to 411 due to section 411 being removed.
412	4-7	Single-Phase Fiberglass Transformer Box Pad	Added – New Section and Drawing
408.C.2	4-10	Concrete Pad Specifications and Layout for Three-Phase, Pad-Mount Transformers	Updated Language – Removed reference to old 411 section.

Rule Number	Page	Rule Name	More Info about Edits
409	4-11	Concrete Specifications and Layout for foundation Wall for Three-Phase, Pad-Mount Transformers	Updated Language - Stand-alone transformer pad, ESR 408, will sit on top of foundation walls detailed below. Foundations may be used where unstable soil conditions exist to avoid tilting of pad, or where a large number of secondary cables are required to provide a cable training area. Consult with Alliant Energy.
410.2	4-14	Concrete Pad Specification and Layout for Joint Pad Three-Phase, Pad-Mount Transformer and Metering Transformer Cabinet	Updated Language – Removed reference to old 411 section.
412	4-16	Box Pad Specification for Single-Phase, Pad Mount Transformers	Updated Drawing
508.B.2	5-3	Point of Interconnection	Added #2 "Properly sized UL Listed NEMA 3R Termination Box"
509.D	5-3	Interconnection Disconnect Switch (Disconnection Device) Requirements	Updated Language - The disconnection device should disconnect DG only and should not disconnect any load.
510.B	5-4	Battery Energy Storage Systems	Updated Language - Battery energy storage systems shall use UL 1741 utility-interactive inverters. Energy storage system transfer devices are subject to the same requirements as standby generation systems, see ESR Chapter 12.
511 512	5-5	Drawings	Updated Header of Drawing Updated Header of Drawing and Drawing
515-523	Multiple	Drawings	Updated Header of Drawing
601.C	6-1	Location of Meters	Updated Language - When used for metering purposes, Alliant Energy prefers all yard pole meters, field built metering structures or free standing metering pedestals to be installed so the meter faces an area (usually a driveway) that will accommodate motor vehicle access to the meter.
606.1.a	6-5	Minimum Indoor Meter Qualifications	Updated Language - New high-rise construction, or multi-occupancy buildings where - it is impossible or impractical to install meter bases outside may be considered for indoor metering.

Rule Number	Page	Rule Name	More Info about Edits
607	6-6	Meter Socket Requirements	Updated Table
607.4	6-6	Meter Socket Requirements	Added Note #4 This meter socket is for 3 wire delta maintenance only.
611	6-13	277/480 Volt, 3-Phase, Up To 200 AMPS – OH Self Contained – Limited to 10,000 AMPS Max Available Fault Current	Updated Table Header and Table
611.1	6-13	277/480 Volt, 3-Phase, Up To 200 AMPS – OH Self Contained – Limited to 10,000 AMPS Max Available Fault Current	Updated Language - Customer to provide neutral kit for disconnect.
611.7	6-13	277/480 Volt, 3-Phase, Up To 200 AMPS – OH Self Contained – Limited to 10,000 AMPS Max Available Fault Current	Updated Language - Self-contained 277/480V service applications are limited to a single service and have a maximum transformer size of 150 kVA OH. For underground 277/480V services, metering transformer cabinet installations are required.
611	6-14	Drawing	Updated Drawing Removed Drawing 611B
612.6	6-15	Self Contained Group & Modular Metering	Updated Language - Alliant Energy will only terminate on Alliant Energy approved equipment and will not terminate on a customer's circuit breaker or disconnect switch.
612.B.5	6-17	Multiple Metering Meter Pak 2 to 6 Meters	Added Note #5 - For IA only disconnects must be compliant with NEC 230.71
614.E	6-30	Combined Self Contained Group & Modular Metering and Metering Transformer Cabinet Installations	Updated Drawing Header - Combination Termination Cabinet with Main Disconnect
614.E.3	6-30	Combined Self Contained Group & Modular Metering and Metering Transformer Cabinet Installations	Updated Language - Termination cabinets without disconnects 400 amps through 3000 amps are listed in the ESE book sections E217 - E224. Termination cabinets with main disconnects are in E303-E306C.

Rule Number	Page	Rule Name	More Info about Edits
802.C	8-1	Farm Service Yard Pole or Structure	Updated Language - Locate the transformer 20 feet from the customer's service entrance and any other customer owned structures/facilities for potential neutral isolation requests in the future. If this cannot be achieved due to physical limitations, the transformer may be located 12 feet but no more then 30 feet from customer's service entrance according to the Alliant Electric Service Rule Book (ESR) Chapter 8, Farm Services. If these distances cannot be met for farms with livestock, contact an Agriculture services team member for approval.
802.G	8-1	Farm Service Yard Pole or Structure	Updated Language - Alliant Energy requires that all meters be installed so the meter faces an area that is accessible and clear.
802.H	8-2	Farm Service Yard Pole or Structure	Updated Language - The customer's pole top transfer switch (NEC 547.2 Site Isolation Device) shall be approved by Alliant Energy as a single switch unit mounted in one enclosure. See Electric Service Equipment (ESE) book - Chapter 2. The site isolation device shall disconnect all underground conductors on the premise from utility service.
802.K	8-2	Farm Service Yard Pole or Structure	Added New Paragraph - Alliant Energy's agriculture compliance team encourages customers to convert to 3-Phase whenever practical and when appropriate for present loads or future expansion. To convert to 3-Phase a customer: 1. Shall have 3-Phase loads or immediate plans to install such. 2. Farm load has exceeded single-phase service sizes offered by Alliant Energy. When converting to 3-Phase, the customer shall make appropriate wiring changes on their side of the meter to utilize and balance all 3 phases as best as practical.
802.L	8-2	Farm Service Yard Pole or Structure	Added New Paragraph - For animal confinement facilities and associated/connected premises, one service per property applies. All exceptions shall be approved by variance and agriculture compliance teams. Please see ESR Chapter 1 for more information.

Rule Number	Page	Rule Name	More Info about Edits
802.K-802.N	8-2	Farm Service Yard Pole or Structure	All Paragraphs Lettered k-N have been moved down 2 letters do to adding new paragraphs.
804A - 807	Multiple	Drawings	Updated all Drawing with new distance requirement. Added Note to all drawings –"**Note: 20 feet is expected. 12-30 feet is allowed when necessary due to physical limitations."
907.2	9-12	Small Cell Equipment Installation	Updated Language - A minimum of 12 feet of clear space is required. 20 feet is preferred from customer owned equipment to Alliant Energy facilities (riser pole, pad-mounted transformer or pedestal) areas where a truck may need to gain access between Alliant Energy facilities and customer equipment.
1000.B	10-1	General	Updated Language - The primary service standard at Alliant Energy is underground 24.9kV. Alliant Energy requires the installation of 25kV rated metering equipment, overhead conductor, underground cable, switchgear and the use of 25kV high side rated transformers for all new installations, equipment upgrades or equipment replacements in all Alliant Energy service territory. Contact Alliant Energy to discuss non-standard primary service and equipment needs prior to designing or ordering.
1000	10-3	Drawing	Updated Drawing
1001.4	10-4	Underground Primary Service to Metering Enclosure	Updated Language - Consult Alliant Energy Metering for appropriate PTs and CTs, ordering procedure and shipment details to manufacturer for installation (If applicable).
1001	10-5	Drawing	Updated Drawing Note - Contact Alliant Energy Engineering to provide means to disconnect service to this enclosure by closest upstream disconnection device for maintenance of PTs and CTs. Customer required to provide grounding means on load side of primary metering enclosure.

Rule Number	Page	Rule Name	More Info about Edits
1002.3	10-6	Underground Primary Service to Switchgear	Updated Language - A single service disconnect is required.. It shall be gang operated, be operable by the customer and by Alliant Energy, have means to show visual open contacts, be capable of carrying full load requirements and withstanding faults of 10,000 amps (RMS symmetrical).
1002	10-7	Drawing	Updated Drawing Note - Sequence is Meter-Switch-Fuse
1003	10-8	Overhead Primary Service	Updated Table Header and Table
1101.A	11-1	Service Impairing Equipment	**A.** Updated Language - Service impairing equipment, because of its use, can lower the quality of power to other customers. Equipment that cannot be modified to prevent this shall be eliminated or controlled within performance limits required by Alliant Energy. If the customer meets these limits but still causes issues, such as but not limited to: flicker, harmonic distortion, voltage fluctuation, the customer causing the issues shall have equipment installed, at their expense, that addresses the service impairment.
1101.A.1	11-1	Service Impairing Equipment	Updated Language - Common types of service impairing equipment includes welders, arc furnaces, electric motors, augers, conveyors, plasma cutters, motor driven compressors, instantaneous water heaters, distributed generation (Inverter based resources), power factor correction equipment or other equipment having highly fluctuating or large instantaneous demands.
1101.A.3	11-1	Service Impairing Equipment	Updated Language - Equipment causing high-frequency current or harmonic distortion shall comply with IEEE standard 519-2014.
1102.A – 1102.F	11-1	Phase Balance	Rewrote 1102 added Points A -F
1105	11-3	Maximum Permitted HP for Single-Phase Motors	Updated Table
1106	11-4	Permitted Maximum HP for Three-Phase Motors	Updated Table
1202.D	12-1	Transfer System Requirements	Updated Language - All transfer switch devices that meet UL 1008 Rated and designed with Break-Before-Make connections will not require a Standby Generation Disconnect.
1204.A – 1204.H	12-2-12-3	Transfer Switches	Updated all Paragraph Headers
1206	12-4	1-Phase/3-Phase Partial Load Backup	Added New Bullet Point - All transfer switch devices that meet UL1008 Rated and designed with Break-Before-Make connections will not require a Standby Generation Disconnect as defined in Section 1202.E.

Rule Number	Page	Rule Name	More Info about Edits
1309	13-14	Single-Phase, Pad Mount Transformer Protection	Added Note to Drawing - Horizontal Barriers between posts are not allowed without Alliant Energy approval.
1310	13-15	Three-Phase, Pad-Mount Transformer Protection	Added Note to Drawing - Horizontal Barriers between posts are not allowed without Alliant Energy approval.
1401.B.1	14-1	General	Updated Language - The grounding electrode conductor shall not be routed through meter sockets, metering transformer cabinets, or a metering pedestal without a service disconnect.
1402E – 1402G2	Multiple	Drawings	Updated Drawings 1402E, 1402G1 and 1402G2
1502.A.1	15-1	Electric Vehicle (EV) Charging – Service Capacity	Updated Language - A dedicated circuit and standard outlet are needed. A second meter is not required. Customer should verify with a licensed electrician. If the existing wiring is sufficient to accommodate a Level I EV Charging Station.
1502.A.2	15-2	Level II EV Charging (240V residential or 208V Commercial)	Updated Language - A dedicated circuit and outlet with adequate capacity to accommodate a Level II EV Charging Station are needed. Customer should verify with a licensed electrician if the existing wiring, service panel and meter is sufficient to accommodate a Level II EV Charging Station.
1502.B	15-2	Existing Service Inadequate Service Capacity	Updated Language - If the existing electric service is deemed inadequate by a licensed electrician to supply a Level I or Level II EV Charging Station, multiple options exist for the customer. These options include replacing or making upgrades to the panel(s), meter equipment, or installing a duplex meter socket.