

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

DOCKET NO. 10R-799E

IN THE MATTER OF THE PROPOSED RULES RELATING TO SMART GRID DATA
PRIVACY FOR ELECTRIC UTILITIES, 4 CODE OF COLORADO REGULATIONS 723-3.

**RECOMMENDED DECISION OF
ADMINISTRATIVE LAW JUDGE
G. HARRIS ADAMS
ADOPTING RULES**

Mailed Date: August 29, 2011

TABLE OF CONTENTS

I. <u>STATEMENT</u>	2
A. Background.....	2
B. Data Privacy Rules Generally	4
C. Description of Individual Rule Changes	5
1. Rule 3001 Definitions	5
2. Rule 3026 Customer Data	10
3. Rule 3027 Customer Notice	13
4. Rule 3028 Informed Consent for Utility Disclosure of Customer Data to a Third Party	14
a. Informed consent.....	15
b. Entity Information.....	17
c. Notary.....	17
d. Duration of consent	19
e. Termination.....	19
5. Rule 3029 Contracted Agent Access to Customer Data	20
6. Rule 3030 Third Party Access to Customer Data.....	21
7. Rule 3031 Requests for Aggregated Data.....	22
8. Rule 3032 Data Freeze	26

9. Rule 3976 Regulated Electric Utility Rule Violations, Civil Enforcements, and Civil Penalties.28

D. Implementation.....29

II. ORDER.....30

A. The Commission Orders That:30

I. STATEMENT

A. Background

1. The Commission issued a Notice of Proposed Rulemaking (NOPR) regarding the Rules Regulating Electric Utilities, 4 *Code of Colorado Regulations* 723-3. See Decision No. C10-1192, mailed November 4, 2010. The NOPR commenced this rulemaking proceeding. A copy of the proposed rules was attached to the NOPR.

2. The basis and purpose of this rulemaking proceeding is to revise the current rules applicable to Smart Meter data privacy and disclosure rules (Data Privacy Rules). In this context, the Commission referred to “smart” meters as those allowing collection of data at a new level of granularity and may create new, previously unanticipated markets. Decision No. C10-1192 at 2. The proposed rules accompanying the NOPR were published in the November 25, 2010 edition of *The Colorado Register*.

3. The Commission invited interested persons to file written comments no later than January 6, 2011 and that reply comments should be submitted by January 20, 2011.

4. Hearing Commissioner Ron Binz conducted a hearing on the proposed rule amendments on January 27, 2011. Oral comments were accepted including a report regarding ongoing negotiations among interested parties to develop consensus rules. Following issuance of the NOPR, several participants filed Initial Comments for the Commission's consideration

by January 6, 2011. Staff of the Public Utilities Commission (Staff) hosted workshops on January 13, 18, and 25, 2011, to discuss issues surrounding the rules. Because the workshop participants believed significant progress was being made towards developing consensus, reply comments were filed on January 20, 2011, via a Joint Report on Negotiations of Consensus Data Privacy Rules and Procedural Request and a request was made to continue hearings. A further comment hearing was announced for February 25, 2011.

5. Hearing Commissioner Ron Binz conducted a hearing on the proposed rule amendments on February 25, 2011. Oral comments were again accepted including whether ongoing negotiations were worthwhile and a further comment hearing was announced for April 7, 2011.

6. The workshop process culminated in a "straw man set of rules," filed March 17, 2011. While the straw man set of rules reflects a great degree of consensus, it also includes some rule provisions where various parties identified different positions. A corrected consensus matrix was filed March 18, 2011 to detail the positions of those who took a position regarding specific rules sections from the straw man set of rules. Additionally, a consensus matrix identifying the positions of those who took a position on whether penalties for noncompliance should attach to any of the proposed rule sections, and identifying some possible penalty amounts was also attached as Attachment C.

7. By Decision No. R11-0309-I, participants were advised to direct further comments to the Workshop rules. The Commission invited interested persons to file additional written comments no later than March 24, 2011 and reply comments by March 31, 2011.

8. By Decision No. C11-0350, this matter was referred to an Administrative Law Judge for disposition.

9. The undersigned administrative law judge conducted a hearing on the proposed rule amendments on April 7, 2011. Oral comments were accepted and a further comment hearing was announced for May 4, 2011.

10. By Decision No. R11-0399-I, additional questions for comment were solicited and parties file responsive comments thereto. The orally-announced further comment hearing was also memorialized.

11. The undersigned administrative law judge conducted a hearing on the proposed rule amendments on May 4, 2011. After the final comment hearing, parties were afforded an opportunity for final written comment.

12. The undersigned administrative law judge reviewed the record in this proceeding to date, including written and oral comments.

13. Not all modifications to the proposed rules are specifically addressed herein. Any changes incorporated into the redline version of the rules appended hereto are recommended for adoption. Any specific recommendations made by interested parties that are not discussed below or otherwise incorporated into the redlined rules attached are not adopted.

14. Being fully advised in this matter and consistent with the discussion below, in accordance with § 40-6-109, C.R.S., the ALJ now transmits to the Commission the record and exhibits in this proceeding along with a written recommended decision.

B. Data Privacy Rules Generally

15. It is clear from comments that there is broad agreement that data privacy concerns are similar for all customers.

16. Throughout this proceeding, a distinction has been drawn between data privacy of customers in utility service and developing markets for unregulated services to utility customers. These rules maintain that delineation.

17. The bedrock for issues arising from innovations regarding energy usage is the direct regulatory authority over the essential utility-customer relationship. These considerations drive the appropriate adoption of policies to protect customer information from unauthorized disclosure while fostering customer access to information. Should a customer of record desire to authorize access by any third-party, they may do so through informed consent provided for in these rules.

C. Description of Individual Rule Changes

1. Rule 3001 Definitions

18. Comment suggests the potential for conflict between the proposed definition of aggregated data with the 15/15 Rule proposed in rule 3031(b). In order to eliminate that potential, aggregated data will be defined in rule 3001 and when disclosure is permissible will be addressed in rule 3031.

19. The definition of aggregated data will be clarified to acknowledge that aggregated data includes not only customer data, but also aggregation of customer data with other types of data. Illustratively, a utility might make offer residential customer usage by city as aggregate data. Such a report would combine usage information, which is customer data, with location by city, which is not customer data.

20. Comments suggest delineation between third parties that a customer authorizes to receive customer data from third parties contracted by a utility to assist in the provision of regulated utility services (*e.g.*, an affiliate or vendor) will be adopted. A definition of a

contracted agent will be adopted to implement this delineation. Requirements applicable to contracted agents will be addressed further in rule 3029 below.

21. Some aspects of the definition of customer data were the source of significant comment in the proceeding. Some argue the customer's data includes all data within the capability and capacity of the meter installed or capability of meters in the marketplace. Others argue customer data should only include data collected from the installed meter and stored by the utility.

22. It is clear that operation, capacity, and capability of installed meters vary widely within and between utilities. Additionally, it is clear that a variety of capabilities are available in the market place. While developing smart grid technologies initiated this proceeding, it is clear the Commission must be mindful in applying developing standards in the context of utilities' existing installed equipment base. The desire or willingness to provide customer data to customers necessarily must be limited by installed equipment. To require additional protection of information currently transmitted by some meters or to require disclosure of meter information beyond capability or capacity of installed equipment would likely cause significant utility expenditures, perhaps with unanticipated consequences.

23. Public Service Company of Colorado (Public Service) has an installed base of meters 307,000 "bubble-up" meters that periodically transmit usage data. Illustratively, if the definition of customer data were to encompass all information available from the meter, implementing protections in the recommended data privacy rules could unintentionally require replacement of more than 300,000 meters on Public Service's system. It is also noteworthy that this type of meter is useful for customers desiring to access information from their meter.

24. By Decision No. C11-0406, issued March 30, 2011 in Docket No. 10I-099EG, the Commission expressed a clear intent to separately address access and use of data. The Commission illustratively stated: “This future rulemaking may result in rules addressing the following issues: data access and sharing, utility asset usage and cost allocation issues, valuing of the data when it enters the market (in aggregated form) as a ‘product,’ who benefits when such ‘products’ yield revenues for the utility, and overall policy regarding the opening and development of this marketplace.”

25. In light of concerns raised herein and the Commission’s specific intention to address these matters further, customer data will primarily be defined to exist at the point that data is collected from the electric meter by the utility and stored in its systems. Data within the capability or potential capacity of a meter that is not collected or not stored will not be defined as customer data at this time.

26. The proposal to expand customer data to include that data which can *reasonably* be captured and stored at first appears reasonable. Public Service and Black Hills/Colorado Electric Utility Company, L.P. (Black Hills) conditionally do not oppose this proposal and the modest expansion may facilitate customer access to data readily available but which is not used for current operations in the ordinary course of business. This issue is more appropriately addressed in a future proceeding addressing access to data outside the scope of the current definition of customer data. If adopted, there could be a slippery slope as to what “reasonable” means in this context. Additionally, it seems that upon the utility’s collection and storage of such it would become customer data under the adopted definition in any event.

27. Modifications are proposed to clarify that customer data includes actual and historical consumption as well as other data currently collected by the utility through the

customer's meter. As adopted, customer data includes data collected from the meter and stored within utility capability and capacity. There is no time limitation as to when the customer requests their customer data so further clarification is not necessary.

28. Substantial comment was also provided as to the types and manner in which information is currently gathered and used in the provision of regulated utility service. In order to clarify applicability of Commission rules to such data, the definition will be modified to distinguish customer data from personal information already defined and protected by the Commission's Rules of Practice and Procedure. Other aspects of the definition were less subject to comment and will also be adopted.

29. Standard customer data defines that customer data that is available to customers as part of basic utility service without additional charge. Standard information is contemplated to be broadly applicable and beneficial to customers. This is distinguished from non-standard customer data a utility may offer. Illustratively, a utility might offer non-standard tariff services allowing customers to better utilize their customer data or manage energy usage.

30. Public Service and Black Hills comment that providing customers with access to their own standard customer data is a component of basic utility service and is necessary to deliver the promise of smart grid technologies. Clarifications are proposed to ensure that only access to standard customer data is included in base rates as part of basic utility service. Following traditional forms of cost causation, it is appropriate for those wanting information beyond standard customer data to bear the associated cost of providing that information.

31. Standard customer data is limited to data maintained by the utility in the normal course of business for customers to understand their usage at the level of detail available in light of the equipment used to provide service. The definition adopted appropriately

balances concerns to give customers access to information available to the utility within current capabilities. Thus, the definition applied to individual customers will vary and evolve based upon business practices and particular facilities servicing the customer account.

32. Illustratively, two neighbors might be served by meters having different capabilities or capacity (*i.e.*, based upon timing of installation or amount of installed memory). While these rules will afford access to customer data, a utility will not be required hereby to install meters having identical capabilities or capacities across their service territory in the ordinary course of business. Black Hills and Public Service urge the Commission to retain recognition of technological and delivery capability limitations. This recommendation will be adopted by incorporating limits upon the definition of customer data to reflect capability of the utility based upon installed equipment.

33. Comment suggests that selection of a meter for the provision of service is a management decision of the utility when made in the ordinary course of its business. Absent a showing of an abuse of managerial discretion prejudicial to customers, the Commission cannot interfere with management's sound exercise of its discretion. *Public Service Co. v. Public Utilities Comm'n*, 653 P.2d 1117, 1123 (Colo.1982).

34. It is also noteworthy that utilities cannot unreasonably discriminate among customers. While the meter belongs to the utility, a customer may desire available technology and equipment to manage their energy usage. Customers will not be able to require utilities to install equipment that they would not otherwise install on their system (*e.g.*, a meter they have not tested and accepted for installation). However, if there is a meter that the utility utilizes on its system to serve a customer class that provides functionality desired by the customer for the provision of service, it is reasonable that the utility accommodate the customer request so long as

the associated costs are borne by the customer causing the requested change outside the ordinary course of business. By this recognition, a customer desiring to manage electricity usage can take advantage of available technology and equipment that the utility currently installs in the ordinary course of business.

35. On the other hand, customers with keen privacy concerns might request installation of an analog meter to alleviate concerns about how their existing meter transmits energy usage information. Such concerns are addressed in limiting the equipment available to fulfill a customer request. If the utility no longer installs analog meters for the customer class in the ordinary course of business, then the choice would not be available to the customer.

36. A definition of third party is adopted to distinguish those authorized by customer consent to receive customer data from contracted agents authorized by a utility to receive customer data. Further, the definition makes clear to whom a utility will directly provide customer data pursuant to the customer consent process adopted in these rules.

37. As stated in the proposed rules, and reiterated here, these rules do not affect a customer's ability to provide any data in their possession to any one they wish. Rather, these rules provide a means to facilitate provision of customer data directly to a third party by the utility in compliance with a customer's request.

2. Rule 3026 Customer Data¹

38. Black Hills and Public Service appropriately focus upon utility operations. It is not incumbent on them to incur additional investment and costs to further the business plans of

¹ For each rule modified after rule 3001, rule numbers adopted are increased over the proposed rules and comments by 15 in order to preserve reservation of rules in the civil penalty section of rules. Illustratively, originally proposed and commented rule 3011 is addressed and adopted as rule 3026.

other commercial enterprises. The focus as to future business opportunities will be considered in subsequent proceeding and is beyond consideration of the protection of data privacy.

39. Rule 3026 explicitly recognizes that a utility is authorized to collect and use customer data to provide regulated utility service and that customer data cannot be disclosed other than as provided in Commission rule, unless required by Colorado law.

40. Information within the scope of the defined term of customer data will be specified and categorized in tariff, subject to minimum levels required by rule. This will provide customers with information about the utility's capability and provide a form that customers may utilize to authorize disclosure of customer data to third parties.

41. Several comments address utility protections from liability resulting from disclosure of customer data in compliance with Commission rules. The adopted rule strikes an appropriate balance to protect utilities from liability for actions in compliance with Commission rules. Clarification is also requested as to the conditions for limited liability. The adopted rules now establish a data privacy section in the rules. The section will be referred to in rule 3026(h) as well as 3031(f).

42. As commented, inclusion in tariff and in rule is redundant and unnecessary. Utilities prefer the reasonable proposal to include the provision in rule and the preference will be adopted. Utilities should not be subjected to liability for disclosure in compliance with Commission rule, and ultimately for complying with its customer's request.

43. As addressed below, the rules adopt a data freeze where a utility customer can arrange directly with the utility not to release customer data pursuant to a consent to disclose customer data. Rule 3026(e) establishes that a data freeze prevails when in conflict with an authorization to disclose customer information. Customers cannot validly consent to disclose

customer data when a data freeze is in place. As is clear by omitting reference to a data freeze in rule 3026(d), a data freeze on an account has no impact upon a customer's ability to access their own customer data.

44. Black Hills and Public Service recommend modifications to rule 3026(c)(V). Because the consent memorializes informed consent to the release of customer data and informs the utility as to what data should be released, it is argued to be unnecessary to include consent forms within tariffs. The proposed modification is reasonable. By prescribing a Commission-approved form meeting requirements established in rule, the burdens of maintaining a form in tariff exceed the benefits. The tariff requirement will be deleted.

45. Comments request that rule 3026(c) explicitly address a continual, systematic provision of customer data to customers and authorized third parties. Continual availability will not be required as this would improperly assume capacity and capability to provide continual information. However, it is noteworthy that rule 3026(c)(II) will be modified to require that the utility address frequency of collection and availability of data in tariff.

46. Rule 3026(b) recognizes that disclosure of customer data may be required outside of the scope intended by these rules in order to comply with Colorado law. Black Hills and Public Service propose modification to restrict referenced subpoenas issued under the authority of adjudicatory bodies, rather than from attorney-issued subpoenas, to avoid fishing expeditions for customer data. With sympathy to the concern, no basis or authority has been shown for the Commission to limit or modify obligations arising from a legally valid subpoena. The requested modification will not be adopted.

47. Some comment suggests of remove emergency service providers from the list of permitted disclosure without customer consent in rule 3026(b) because need for the information

is unlikely and cannot be timely provided. Other comment opposes elimination of emergency service providers to be consistent with provisions regarding personal information in Rule 1104. As addressed above, the data privacy rules are being crafted to neither conflict nor overlap with rules applicable to personal information. As suggested in comment, no need to access customer data is apparent and it is not at all clear what customer data could be timely provided to assist provision of emergency services. Based thereupon, emergency service providers will be subject to consent requirements to obtain customer data.

48. Reviewing Rule 1104 highlights a potential conflict in existing rules that may result from adoption of the proposed rules. Rule 3001(j) defines customer data not to include personal information. However, Rule 1104(b) permits a utility to disclose information regarding a customer's typical or estimated average monthly electric bill to someone having a purchase or sale interest in the customer's property. By recognition in rule 3026(b) that a utility may disclose customer data to comply with a Commission rule, customer data may be disclosed to the extent necessary to comply with Rule 1104(b) without obtaining customer authorization. Thus, any potential conflict is avoided.

3. Rule 3027 Customer Notice

49. Rule 3027 establishes an annual notice that utilities must provide to customers regarding privacy and security policies governing access to and disclosure of customer data and aggregated data to third-parties.

50. Commentors request recognition that such notice may be provided to customers electronically. By requiring written notice, the rule does not limit the means by which the utility delivers the notice to customers. The rule will remain silent leaving the means of delivery to the discretion of the utility and its agreement with the customer as to how notices will be delivered.

51. Some comments recommend that multilingual notice be provided in Rule 3027(c) based upon 10% population threshold, consistent with other Commission policies (See Rule 3408(d)). Other comments point out that such a requirement would double the information provided to a substantial portion of the customer population and requests that the proposal be rejected.

52. The Commission must weigh the costs and benefits of expanding multi-lingual notice. Rule 3408(d) applies to the notice for discontinuance of service. The notice of discontinuance will directly impact the customer's service in absence of action and has greater potential for harm resulting from lack of notice. The notice in rule 3027 is applicable to all customers; however, there is no impact from the notice itself and the status quo does not change. Thus, the risk of potential harm from more narrow data privacy notification is significantly less than from the discontinuance notice. Limiting multi-lingual notice to where the utility's service territory contains a population of at least 30 percent who speak a specific language other than English as their primary language is reasonable.

4. Rule 3028 Informed Consent for Utility Disclosure of Customer Data to a Third Party

53. Rule 3028 establishes standards to obtain customer consent for utility disclosure of customer data to a third party. Rule 3029, below, distinguishes and addresses utility disclosure of customer data for assistance in the provision of regulated utility services.

54. Some comments advocate specificity in reporting and disclosure regarding utility release of customer data to third parties as well as contracted agents. As to third parties, the customer should have an understanding of the customer data they request the utility to release pursuant to the informed consent authoring disclosure. While utilities will be required to

maintain records as to customer data released, no further reporting (to the customer or the Commission) will be required at this time.

55. There was substantial comment regarding the consent form. Structurally, the rules will be modified to remove the Commission-approved model form from the rule. Rather, the rule will require use of a form prescribed and supplied by the Commission. The undersigned anticipates the form would be available though the Commission's website, as is customary for other forms. The initial form, addressed herein and recommended for Commission adoption, is attached hereto as Appendix B and is incorporated herein by reference. The form may be updated by Staff of the Public Utilities Commission from time to time.

56. The consent form provides flexibility to customers to describe the customer data they wish to disclose. Additionally, customer data is not time limited. There is no reason that a customer cannot authorize disclosure prospectively or retrospectively to the extent available. If a new type of customer data outside the scope of consent becomes available to a customer, and they wish to release it to a third party, informed consent including the further release would be necessary.

a. Informed consent

57. Several commentors propose modification to the consent form for a variety of purposes.

58. Concerns are raised as to the efficacy of informed consent due to education levels, interest in the subject, and time demands. Additionally, public utility customers purchase an essential service and are deprived of choice in providers. By adopting an opt-in approach to disclosure of customer data, the rules are designed not to change current disclosure practices in the event a customer takes no action – without regard to the reason. Thus, whether due to lack

of interest or ability, no change should occur in the disclosure of customer data. However, for those having a stronger interest and/or ability, tools are provided to authorize disclosure or prevent unauthorized disclosure. While there is concern that any customer may authorize disclosure of customer data without informed consent, this is a similar risk the customer takes in dealing with someone providing any other goods or services not regulated by the Commission. By adopting and providing clear requirements attempting to ensure informed consent, the data privacy rules strike an appropriate balance of protecting customers who desire to maximize benefit of their customer data as well as those who want to preserve their privacy.

59. It was pointed out in comment that the requirement in Rule 3028(a)(II) of “a copy of the Company’s assumed trade name or trade name registration, if applicable” is missing from the Consent Form. Comment also points out that the most recent model consent form requires such disclosure. Upon further consideration, the requirement to attach this documentation will be deleted. The consent requires disclosure of applicable trade names and the Secretary of State has provided readily-available internet tools for a customer to verify any trade name information desired. In addition to other resources, kiosks are publicly available at the Commission’s offices to access the Secretary of State’s website. Based thereupon the required filing of documentation will be removed from rule and the consent form.

60. Briefly addressing some individual comments, the title of the form will be modified to be consistent the scope of customer data. No need has been shown to require different forms to disclose customer data for different classes of customers. Generally, attempts to regulate the business or operations of a third-party will not be adopted. The Commission will focus upon reasonable assurances of informed customer consent without reaching or interfering in business of entity not regulated by the Commission. Some modifications for clarity or to

improve readability are adopted. Some concepts suggested are more appropriately included in the customer notice regarding rights and practices than as to consent for release. Where appropriate, modifications will be incorporated in the Commission-required notice.

b. Entity Information

61. Some commentors propose removing entity disclosure information from the consent process. Alternatives include require utilities to act as a repository of the information available on the Internet. Black Hills and Public Service do not oppose the concept of online disclosure; however, they posit that the third party website should host such information as a part of their cost of doing business.

62. Proposals to limit disclosure of entity information to the utility alone, and remove it from the consent form will not be adopted. While comments focus upon utility use of the form, benefit to the customer of having information is ignored. Also, there is no requirement for third parties to maintain a website at all, much less than to include in information directed by the Commission. The consent form provisions will be preserved.

63. In order to mitigate disclosure burdens, the certificate of good standing will be acceptable if issued within six months. The status of an entity is unlikely to change month to month and inclusion of information otherwise required in the form by an authorized representative of the third-party recipient is adequate.

c. Notary

64. Several commenters oppose notarization requirements for paper consent forms and contend that alternative less-onerous measures may be employed. Some request recognition of electronic notarization consistent with § 24-71.3-111, Colorado Revised Statutes. There is also support for the proposed rule as a reasonable means to validate informed consent.

65. In response to comments, the Colorado Office of Consumer Counsel (OCC) proposes replacement of notary requirements with a requirement that the utility require verbal telephone confirmation or written email verification by contacting the requesting customer at the telephone number or email address of record for the account after receiving the consent form.

66. The proposed rules are intended to establish somewhat parallel paper and electronic processes for communications regarding customer data. Discussions through the workshops contemplated customer verification through new or existing utility web portals as part of electronic communications. However, the same level of authentication is not possible when third parties participate in the verification process. Notarization of consent forms processed without utility authentication will reconcile with authentication available by consenting through a utility-controlled web portal.

67. Through comments and review of applicable law, this simple design becomes more complicated. The proposed rule will be modified to align notarization requirements with the workshop discussions. Consent forms will still be provided by utilities in paper or electronic form. The form will require notarization. A new section will be added to clarify that utilities may provide an electronic process to obtain customer consent for disclosure, perhaps in cooperation with third-party providers. This utility controlled process provides an alternative means to authenticate the customer of record in lieu of notarization. Notarization requirements will remain when the utility does not otherwise control authentication.

68. Because the Commission does not control the use of the consent form, and there is jurisdictional uncertainty as to those third-parties authorized to access information, the notary requirement guarantees some verification from an independent third party in the consent process where the customer is not consenting directly with the utility. Notary obligations for

consent forms, as opposed to requiring utility verification, also properly places the burden of obtaining consent upon the one seeking it, and provides a reasonable basis upon which utilities may rely upon the consent form, subject to data freeze requirements addressed elsewhere herein.

69. The rules also explicitly recognize the ability of parties to agree to electronic signature and notarization, if they so agree.

d. Duration of consent

70. There is a split among commenters requesting a limited duration of informed consent to align the duration of customer consent with record retention responsibilities. Some contend the requirement imposes an unnecessary burden.

71. In partial recognition that notarization will impose some burden upon the consent process, the rules will be modified so as to limit duration of consent to three years. Thus, the burden of managing consent termination and renewal will be eliminated.

72. It is notable that Public Service's Billing of Vacant Rental Property Agreement (including several options) and Third Party Notifications do not expire and they are able to comply with record retention responsibilities. Similarly, Black Hills' Landlord Authorization to Revert Service form does not require renewal. It seems less burdensome to comply with record retention requirements for consent than to manage ongoing renewal with potential undesired interruption of dependent services provided by third parties to customers.

73. The rule, and consent form, will be modified such that term of the consent will continue until terminated.

e. Termination

74. Under the adopted rules, the term of consent, including termination of consent, is provided for in the consent form. Commentors suggest that it should only be necessary for a

customer to contact their utility, as gatekeeper, in order to terminate consent. This concept is adopted and incorporated into the form recommended for adoption.

75. At heart, consumer data comes from the customer-utility relationship. By the customer's consent, he or she authorizes the utility to release information directly to a third party. Authorization for a third party to receive customer data is between the customer and the third party. With the proper focus upon the customer-utility relationship and the purpose of consent, it is only appropriate that termination of consent be maintained within the customer's control and not be dependent upon an unregulated third party.

76. Consistent with the means for giving consent, written communication will be required to terminate consent. Additionally, this requirement will ensure termination is documented.

5. Rule 3029 Contracted Agent Access to Customer Data

77. Rule 3029 sets forth the process by which a utility may disclose customer data to third-parties pursuant to a contract meeting specified conditions for assistance in the provision of regulated utility services. The proposed rules will be modified to distinguish this type of third party as a contracted agent of the utility.

78. Public Service states that they "work with many vendors and third parties to provide customers with safe, reliable electricity and natural gas service." However, there is very little comment explaining the basis or need for the disclosure of customer data to third parties.² Arguments are also presented that imposing requirements upon third parties not directly subject to Commission authority impermissibly expand the Commission's jurisdiction.

² One example provided was for statement processing and/or mailing.

79. There has been no demonstrated need to release the entire scope of customer data adopted by these rules to contracted agents. To avoid interference with management discretion and existing practices, the Commission will ensure some procedural protections of customer data, but will not require customer authorization for the release of customer data to contracted agents. However, the utility will do so at its peril and will not be protected by limitations afforded for release of customer data to third parties in compliance with these rules.

80. In response to comments, contracted agents will be required to agree to limited use of customer data for the purposes of the engagement and that the data will be destroyed when no longer necessary for purposes of the engagement. It was also noted that such a provision is consistent with Public Service's current business practices.

6. Rule 3030 Third Party Access to Customer Data

81. Rule 3030 addresses utility disclosure of customer data to third parties pursuant to customer consent. Third parties receiving access pursuant to customer consent are distinguished from contracted agents receiving access to assist in providing regulated utility service pursuant to utility consent.

82. The proposed rules originally prohibited third parties from inducing customer disclosure of customer data. Comments suggest several modifications to the provision. One suggests only excluding deceptive non-transparent inducements by third parties. The proposal will not be adopted as the Commission's ability to enforce such a limitation is uncertain and third parties are otherwise subject to the Colorado Consumer Protection Act, § 6-1-101 et. seq.

83. Several comments oppose a blanket ban on any inducements offering that it will be difficult for third parties to distinguish inducements from services and such a limitation

would be arbitrary, vague and detrimental. Inducements are viewed as possible customer benefit through market development in addition to the energy savings and renewable energy benefits that may result.

84. To address concerns raised by comments, the provision affecting third-party business operations will be limited. Rather than prohibiting inducements for customer disclosure, the required content of the consent form will be modified to preclude inclusion or reference to inducements.

85. As to comments requesting clarification of the term inducement, no specific definition is proposed or addressed. Accordingly, the term will be applied based upon its ordinary meaning.

7. Rule 3031 Requests for Aggregated Data

86. Rule 3031 addresses utility disclosure of aggregated data as a matter of general applicability. Some comments recommend that standard aggregated data should be a part of basic utility service for benchmarking purposes by customers and third-parties.

87. Foundational principles of utility rate regulation include recognition of cost causation and allocation of costs consistent with benefits received. To the extent that a utility provides standard aggregated data as part of basic utility service, there is no basis shown upon which that standard aggregated data should be provided to those not customers of the utility without additional charge. Further, as costs associated with generating standard aggregated data would be includable in base rates, it is not clear who should be permitted access and how the costs and benefits can be considered herein without knowing the customer classes affected or included in such data. Finally, as to nonstandard aggregated data, the costs associated therewith should reasonably be borne by the party requesting such aggregated data. Particularly as to the

effect upon customers, such matters are more appropriately part of a tariff proceeding based upon the unique circumstances present. Thus, the proposed rules establish minimum tariff standards, including a description of standard and nonstandard aggregated data.

88. Some commentors recommend modifications aimed to protect aggregate data from reverse engineering customer data. In particular, the 15/15 rule is suggested to be applied within rate class. While no concrete example is provided, reasonable concern exists regarding manipulation of a data set to permit one to derive information. By clarifying that the 15 percent limitation in the second part of the 15/15 rule must be applied with customer classes, (*e.g.*, residential, commercial and industrial), there will be additional assurance of protecting customer data from unauthorized disclosure. Suggestions that the 15 percent limitation applies to the data requested, not just energy usage, is also incorporated. Thus, aggregated data would be guaranteed not to exceed 15% measured against the data requested. Corresponding modifications are made to rule 3031(c).

89. Some comment suggests rule 3031(c) is burdensome to utilities and potentially provides too much information to the requestor about the nature of the customer data included within the rejected request. It is recommended that utilities should only be required to deny requests that do not fall within the parameters without disclosing why those requests are denied.

90. By creatively choosing an aggregation method or by using reverse engineering, a third party may be able to bypass the protections regarding the release of individual customer data without consent. While the Commission is protective of customer data, no benefit comes from setting off a wild goose chase with the utility's only response being "no."

91. Rule 3031(d) establishes tariff requirements to disclose aggregate data availability in addition to the 15/15 rule. The proposed rule will be modified to delete the phrase

“with specificity” in hopes to facilitate reasonable communication while protecting customer data and minimize utility burden. Implementation of the adopted rule will be observed as to adequacy of communication permitting interested third parties to obtain aggregated data and may be reconsidered in the future.

92. Black Hills and Public Service contend Rule 3031(d)(I) is unnecessary and unclear. Additionally, they contend that identification of the data fields in the utility’s billing and back-office systems is proprietary, potentially subject to licensing agreements, and increases likelihood of enabling reverse engineering of data. Finally, Black Hills and Public Service contend that vague and overly broad provisions impose unclear burdens upon utilities.

93. As to the scope of data includable in aggregated data, Rule 3001(b) clarifies that aggregated data includes, but is not limited to, customer data. Thus, aggregate data includes aggregation of customer data with other information sources.

94. The undersigned acknowledges that the proposed rules protect exclusive utility control over customer data. However, it is appropriate that the utility provide information about the aggregate data that can be made available rather than requiring each third party requesting aggregate data to explore all possibilities. The scope of particular aggregate data available by the utility is more appropriately addressed in individual tariff, within the permitted scope of these rules. By including tariff requirements of general applicability, application based upon specific facts and circumstances can be considered in tariff proceedings.

95. The OCC proposes Rule 3031(d) to require limitations of liability to be addressed in tariff. This recommendation will not be adopted based upon discussion of the same issue as to customer data.

96. Several commentors support broadening access to customer data for analysis of energy consumption data, particularly for governmental entities. It is argued that broadened access will have beneficial use for others (*i.e.*, universities and nonprofit organizations).

97. Several commentors address the provision and propriety of third party aggregators of customer data. It is argued that the proposed rule preserves the option for utilities to provide aggregate data, and offers an option for third-party data aggregators if utilities are unwilling or unable to provide the requested aggregated data analyses in a timely and cost-effective manner. Further, it is argued that these options will better enable third parties to analyze and reduce resource consumption (*e.g.*, DSM programs). Some comment argues that such activities should not be permitted, or, at a minimum, should be strictly limited until more is understood about the potential harms that could come from such data-merging activities. Although commentors appropriately recognize legitimate interests of governmental entities in fulfilling public purposes utilizing aggregate data, these legitimate purposes provide no basis to mandate that customers provide that data for these purposes.

98. Black Hills and Public Service argue that rules 3031(e) and (f) should not be adopted because they impermissibly encroach upon the utility's managerial discretion. They suggest mandating contracting (contrary to the vary nature of a bilateral agreement) with a vendor is improper. In the event the provisions are adopted, they contend that they should clearly be made permissive.

99. The Commission cannot compel utilities to agree to contracts. Where appropriate, the proposed rules permit, but do not require, utilities to utilize contracted agents to expand service included in the provision of regulated utility services. However, the scope of such services will not be expanded at this time.

100. The OCC proposed clarifying language to rule 3031(e) clarifying that if the utility contracts with a data aggregator, as allowed under this rule, that it would be the financial responsibility of the data requestor to pay for the cost of the data aggregator. Explicit provision for cost recovery is included in rule 3031(d).

101. Finally, Black Hills and Public Service believe a utility should not be held liable for any damages stemming from the use of aggregate data disclosed in accordance with rule 3031. Others contend liability protections are overly broad. The rule will be adopted to balance these concerns to as to protect from liability for disclosure of aggregate data in accordance with these data privacy rules.

8. Rule 3032 Data Freeze

102. In recognition of the foundational nature of the utility-customer relationship and the involuntary nature of customers providing information to the utility for the provision of this essential service, the Commission's jurisdiction will permit a means for customers to protect customer information from unauthorized disclosure solely within the scope of the regulatory framework.

103. Because the informed consent regime incorporated within these rules incorporates participants that may not provide utility service to the customer, there is uncertainty as to the Commission's scope of jurisdiction and the ability to remedy violation of Commission standards. While customers are free to do with their information as they wish, the utility is not. Customers should be afforded a direct opportunity to circumvent potential unscrupulous actors in the informed consent regime by directly prohibiting third party disclosure of information comparable to slamming that has been observed to occur in the telecommunications industry.

104. Commentors raise concerns regarding the burdens upon potential market entrants seeking to provide energy management services. However, the interests of existing utility customers must prevail. For the Commission to provide a means to maximize protections of customer data, it must rest solely upon the shoulders of the regulated utility. By requiring direct communication between the utility and the customer (which might also be accomplished electronically or through a website), the customer is in the best position to ensure privacy of their information in accordance with their wishes.

105. It is suggested that utility customers might provide secret information to a third party vendor as validation that can be relied upon by the utility. However, such reliance jeopardizes the protection of customer data. Information from a customer bill is provided as an example in comment. However, if an unscrupulous vendor obtains a customer's bill or information, there may be no Commission remedy available to cure unauthorized disclosure of customer data by the utility. Yet, on the other hand, by direct involvement of the customer, the utility gains assurance in disclosing information without responsibility.

106. A commentator requests that the Commission refrain from adopting any procedure pertaining to the protection of customer proprietary data that would require a customer to take specific action to ensure that its customer data is not released to third parties. This concern is clearly reasonable and the informed consent structure will be based upon an opt-in principle. Thus, a customer should not be required to act to preserve confidentiality of information. However, informed consent may be dependent, in part, upon conduct beyond the Commission's jurisdiction. Adopting a data freeze in rule 3032 provides customers with an additional tool wholly within the regulated environment to assure protection of customer information while easing market entry to those not utilizing the tool to avoid unauthorized disclosure.

Thus, the benefits of additional voluntary protections more than outweigh the harm of action to later authorize disclosure.

107. The data freeze is designed to be uniformly imposed and released upon the written and signed authorization of customers. However, as with other data privacy rules, compliance may be had in paper or electronic form.

108. The initial data freeze forms, addressed herein and recommended for Commission adoption, are attached hereto as Appendix C and are incorporated herein by reference. The forms may be updated by Staff of the Public Utilities Commission from time to time.

**9. Rule 3976 Regulated Electric Utility Rule Violations,
Civil Enforcements, and Civil Penalties.**

109. The Commission only has penalty assessment authority to the extent provided by statute. Rule 3976 describes violations and penalties associated with each violation.

110. The OCC recommends the proposed maximum penalty of \$2,000 per day per violation be associated with any rule violation that could result in the unintended disclosure of customer data. The \$2,000 maximum penalty would apply to: Rule 3026(b), Rule 3029(a), Rule 3030(a), 3030(c), Rule 3031(a), Rule 3031(b), and Rule 3031(c).

111. The City of Boulder (Boulder) acknowledges that a violation of 3026(b), 3029(a), 3030(a), 3031(a) are more major infractions, some of which could have catastrophic consequences for the customers whose data is disclosed. Accordingly, they should be subject to higher penalty amounts.

112. Rules in which the utility's failure to comply results in an omission of privacy-related information to the customer should be subject to penalties. The OCC recommends that these rules be subject to a \$1,000 penalty: Rule 3027(a), Rule 3027(c), and Rule 3028(b).

113. Boulder suggests that there be lesser penalties for the non-compliance with certain other rules, recognizing that the consequences are not as severe (*e.g.*, Rule 3027(a), the notice requirement; and Rule 3031, subsections (d), (e) and (f)).

114. Black Hills and Public Service urge that the Commission ensure that the harshness of the penalty matches the gravity of the offense. Black Hills and Public Service suggest that a fine or civil penalty of up to a maximum of \$2,000 per incident may be warranted for violations of Proposed Rule 3026(b). However, they urge the Commission to exercise restraint at this time and to exclude from Rule 3976 any violations of other data privacy rules. They contend it is not appropriate to impose penalties prior to proven effectiveness of rules after some period of operations. Rather than deferring implementation of penalties, such concerns are better addressed through prosecutorial discretion and consideration of mitigating factors.

115. The approach recommended by the OCC will generally be adopted and incorporated into the proposed rules. To date, the record reflects little dependence of customers upon access to customer data individually or by third parties. Rather, the risk of greater harm appears in the unauthorized release of customer data. Thus, the maximum penalty available will be imposed for unauthorized release and a lesser penalty will be imposed for failure to disclose information pursuant to these data privacy rules or other violations.

116. Based upon the foregoing considerations, the proposed rules will be adopted.

D. Implementation

117. There is mixed comment regarding a timeline to implement processes to authorize and disclose information subject to these data privacy rules. Some contend it should be operative within 30 days while others suggest as long as 90 days.

118. It is noteworthy that the Commission-approved consent form is available with this Recommended Decision. Thus, forms should be readily available as soon as internal procedures are in place to implement consent. However, tariff proceedings will be necessary to fully implement the data privacy rules. Also, any desired web portal will take time to implement.

119. Utilities will be ordered to file advice letters in compliance with rules adopted hereby within 45 days of the effective date of such rules.

II. ORDER

A. The Commission Orders That:

1. Commission Rules pursuant to 4 *Code of Colorado Regulations* 723-3-3001, 3026 -- 3032, and 3976, contained in Attachment A to this Order are adopted consistent with the discussion above.

2. The Consent to Disclose Utility Customer Data for attached hereto as Appendix B is the first form prescribed and supplied by the Commission pursuant to Rule 3028, 4 CCR 723-3.

3. The Data Freeze Form and Data Freeze Release Form attached hereto as Appendix C is the first forms prescribed and supplied by the Commission pursuant to Rule 3032, 4 CCR 723-3.

4. Any utility subject to the rules adopted herein shall file advice letters to comply with them within 45 days following the effective date of the adopted rules.

5. This Recommended Decision shall be effective on the day it becomes a Decision of the Commission, if that is the case, and is entered as of the date above.

6. The rules shall be effective 20 days after publication in the Colorado Register by the Office of the Secretary of State.

7. The opinion of the Attorney General of the State of Colorado shall be obtained regarding the constitutionality and legality of the rules.

8. A copy of the rules adopted by this Order shall be filed with the Office of the Secretary of State for publication in the Colorado Register. The rules shall be submitted to the appropriate committee of the Colorado General Assembly if the General Assembly is in session at the time this Order becomes effective, or for an opinion as to whether the adopted rules conform with § 24-4-103, C.R.S.

9. Pursuant to § 40-6-109, C.R.S., copies of this Recommended Decision shall be served upon the interested parties, who may file exceptions to it.

a) If no exceptions are filed within 20 days after service or within any extended period of time authorized, or unless the decision is stayed by the Commission upon its own motion, the Recommended Decision shall become the decision of the Commission and subject to the provisions of § 40-6-114, C.R.S.

b) If a person seeks to amend, modify, annul, or reverse basic findings of fact in its exceptions, that person must request and pay for a transcript to be filed, or the parties may stipulate to portions of the transcript according to the procedure stated in § 40-6-113, C.R.S. If no transcript or stipulation is filed, the Commission is bound by the facts set out by the Hearing Commissioner and the parties cannot challenge these facts. This will limit what the Commission can review if exceptions are filed.

10. If exceptions to this Decision are filed, they shall not exceed 30 pages in length, unless the Commission for good cause shown permits this limit to be exceeded.

(S E A L)



THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

G. HARRIS ADAMS

Administrative Law Judge

ATTEST: A TRUE COPY

A handwritten signature in cursive script that reads "Doug Dean".

Doug Dean,
Director

COLORADO DEPARTMENT OF REGULATORY AGENCIES

Public Utilities Commission

4 CODE OF COLORADO REGULATIONS (CCR) 723-3

PART 3 RULES REGULATING ELECTRIC UTILITIES

* * * * *

[indicates omission of unaffected rules]

GENERAL PROVISIONS

* * * * *

[indicates omission of unaffected rules]

3001. Definitions.

The following definitions apply throughout this Part 3, except where a specific rule or statute provides otherwise. In addition to the definitions stated here, the definitions found in the Public Utilities Law apply to these rules. In the event of a conflict between these definitions and a statutory definition, the statutory definition shall apply.

- (a) "Affiliate" of a public utility means a subsidiary of a public utility, a parent corporation of a public utility, a joint venture organized as a separate corporation or partnership to the extent of the individual public utility's involvement with the joint venture, a subsidiary of a parent corporation of a public utility or where the public utility or the parent corporation has a controlling interest over an entity.
- (b) "Aggregated data" means reports aggregating customer data, alone or in combination with other data.
- (bc) "Applicant for service" means a person who applies for utility service and who either has taken no previous utility service from that utility or has not taken utility service from that utility within the most recent 30 days.
- (ed) "Average error" means the arithmetic average of the percent registration at light load and at heavy load, giving the heavy load registration a weight of four and the light load registration a weight of one.
- (ee) "Basis point" means one-hundredth of a percentage point (100 basis points = 1 percent).

- (ef) "Benefit of service" means the use of utility service by each person of legal age who resides at a premises to which service is delivered and who is not registered with the utility as the customer of record.
- (fg) "Commission" means the Colorado Public Utilities Commission.
- (h) "Contracted agent" means any third-party entity that has contracted with a utility in compliance with rule 3029 to assist in the provision of regulated utility services (e.g., an affiliate or vendor).
- (gi) "Customer" means any person who is currently receiving utility service. Any person who moves within a utility's service territory and obtains utility service at a new location within 30 days shall be considered a "customer." Unless stated in a particular rule, "customer" applies to any class of customer as defined by the Commission or by utility tariff.
- (j) "Customer data" means customer-specific data or information that: (1) is collected from the electric meter by the utility and stored in its systems (e.g., kWh, kW, voltage, VARs and power factor); (2) is received by the utility from the customer identifying whether they participate in regulated utility programs, such as renewable energy, demand-side management, load management, and energy efficiency; and (3) information other than personal information that is shown on bills issued to customers for metered service furnished.
- (hk) "Creep" means that, with all load wires disconnected, a meter's moving element makes one complete revolution in ten minutes or less.
- (il) "Distribution extension" is any construction of distribution facilities, including primary and secondary distribution lines, transformers, service laterals, and appurtenant facilities (except meters and meter installation facilities), necessary to supply service to one or more additional customers.
- (jm) "Distribution facilities" are those lines designed to operate at the utility's distribution voltages in the area as defined in the utility's tariffs including substation transformers that transform electricity to a distribution voltage and also includes other equipment within a transforming substation which is not integral to the circuitry of the utility's transmission system.
- (kn) "Energy assistance organization" means the nonprofit corporation established for low-income energy assistance pursuant to § 40-8.5-104, C.R.S.
- (lo) "Heavy load" means not less than 60 percent, but not more than 100 percent, of the nameplate-rated capacity of a meter.
- (mp) "Informal complaint" means an informal complaint as defined and discussed in the Commission's Rules Regulating Practice and Procedure.
- (qg) "Light load" means approximately five to ten percent of the nameplate-rated capacity of a meter.
- (er) "Load" means the power consumed by an electric utility customer over time (measured in terms of either demand or energy or both).

- (~~ps~~) "Local office" means any Colorado office operated by a utility at which persons may make requests to establish or to discontinue utility service. If the utility does not operate an office in Colorado, "local office" means any office operated by a utility at which persons may make requests to establish or to discontinue utility service in Colorado.
- (~~qt~~) "Main service terminal" means the point at which the utility's metering connections terminate. Main service terminals are accessed by removing the meter dial face from the meter housing.
- (~~ru~~) "MVA" means mega-volt amperes and is the vector sum of the real power and the reactive power.
- (~~sv~~) "Output" means the energy and power produced by a generation system.
- (~~tw~~) "Past due" means the point at which a utility can affect a customer's account for regulated service due to non-payment of charges for regulated service.
- (~~ux~~) "Principal place of business" means the place, in or out of the State of Colorado, where the executive or managing principals who directly oversee the utility's operations in Colorado are located.
- (~~vy~~) "Reference standard" means suitable indicating electrical equipment permanently mounted in a utility's laboratory and used for no purpose other than testing rotating standards.
- (~~wz~~) "Regulated charges" means charges billed by a utility to a customer if such charges are approved by the Commission or contained in a tariff of the utility.
- (~~xaa~~) "Rotating standard" means a portable meter used for testing service meters.
- (~~ybb~~) "RUS" means the Rural Utilities Service of the United States Department of Agriculture, or its successor agencies.
- (~~zcc~~) "Security" includes any stock, bond, note, or other evidence of indebtedness.
- (~~aadd~~) "Service connection" is the location on the customer's premises/facilities at which a point of delivery of power between the utility and the customer is established. For example, in the case of a typical residential customer served from overhead secondary supply, this is the location at which the utility's electric service drop conductors are physically connected to the customer's electric service entrance conductors.
- (~~bbee~~) "Staff" means Staff of the Public Utilities Commission.
- (ff) "Standard customer data" means customer data maintained by a utility in its ordinary course of business, including energy usage information sufficient to allow customers to understand their usage at level of detail commensurate with the meter or network technology deployed by the utility to serve the customer's premise.
- (gg) "Third-party" means any entity other than the customer of record, the utility serving such customer, or a contracted agent, that requests authorization from the customer for access to customer data from the utility.

- (eehh) "Transmission extension" is any construction of transmission facilities and appurtenant facilities, including meter installation facilities (except meters), which is connected to and enlarges the utility's transmission system and which is necessary to supply transmission service to one or more additional customers.
- (ddij) "Transmission facilities" are those lines and related substations designed and operating at voltage levels above the utility's voltages for distribution facilities, including but not limited to related substation facilities such as transformers, capacitor banks, or breakers that are integral to the circuitry of the utility's transmission system.
- (eejj) "Unregulated charges" means charges that are billed by a utility to a customer and that are not regulated or approved by the Commission, are not contained in a tariff filed with the Commission, and are for service or merchandise not required as a condition of receiving regulated utility service.
- (ffkk) "Utility" means any public utility as defined in § 40-1-103, C.R.S., providing electric, steam, or associated services in the state of Colorado.
- (ggll) "Utility service" or "service" means a service offering of a public utility, which service offering is regulated by the Commission.

* * * * *

[indicates omission of unaffected rules]

3011. – 3025. [Reserved].

DATA PRIVACY

3026. Disclosure of Customer Data by a Utility.

- (a) A utility is only authorized to use customer data to provide regulated utility service in the ordinary course of business.
- (b) A utility shall not disclose customer data unless such disclosure conforms to these rules, except as required by law or to comply with Commission rule. Illustratively, this includes responses to requests of the Commission, warrants, subpoenas, court orders, or as authorized by § 16-15.5-102, C.R.S.
- (c) A utility shall include in its tariffs a description of standard and non-standard customer data that the utility is able to provide to the customer or to any third-party recipient to whom the customer has authorized disclosure of the customer's data within the utility's technological and data capabilities. At a minimum, the utility's tariff will provide the following:
- (l) A description of standard customer data and non-standard customer data (billing determinants or other collected data) and frequency of data collected (annual, monthly, daily, etc.);

- (II) The method and frequency of customer data transmittal and access available (electronic, paper, etc.) as well as the security protections or requirements for such transmittal;
 - (III) A timeframe for processing the request;
 - (IV) Any rate associated with processing a request for non-standard customer data; and
 - (V) Any charges associated with obtaining non-standard customer data.
- (d) As part of basic utility service, a utility shall provide to a customer the customer's standard customer data, access to the customer's standard customer data in electronic machine-readable form, in conformity with nationally recognized open standards and best practices, in a manner that ensures adequate protections for the utility's system security and the continued privacy of the customer data during transmission. Such access shall be provided without additional charge.
- (e) Unless a data freeze is in effect pursuant to rule 3032, a utility shall provide to a customer and to any third-party recipient to whom the customer has authorized disclosure of the customer's CD, access to the customer's CD in electronic machine-readable form, in conformity with nationally recognized open standards and best practices, in a manner that ensures adequate protections for the utility's system security and the continued privacy of the CD during transmission. Such access shall be provided without additional charge to the customer or the third-party recipient.
- (f) Nothing in these rules shall limit a customer's right to provide his or her customer data to anyone.
- (g) A utility and each of its directors, officers and employees that discloses customer data pursuant to a customer's authorization in accordance with these data privacy rules shall not be liable or responsible for any claims for loss or damages resulting from the utility's disclosure of customer data.

3027. Customer Notice.

- (a) A utility shall annually provide written notice to its customers complying with this rule and conspicuously post on its website notice of its privacy and security policies governing access to and disclosure of customer data and aggregated data to third-parties. This notice shall clearly advise customers that their customer data will not be disclosed to third-parties, except: (1) as necessary to provide regulated utility services to the customers, (2) as provided in paragraph 3026(b), or (3) pursuant to the authorization given by the customer in accordance with these rules.
- (b) The notice shall advise customers that their customer data can be used to obtain insight into their activities within the premises receiving service. The notice shall also explain how the customer data collected may reveal information about the way customers use energy at their premises. The notice shall advise the customers to consider the proposed scope, purpose, and use of customer data prior to authorizing the disclosure of customer data to third-parties.
- (c) The contents of the notice required by this rule shall:
- (I) Include a description of customer data;

- (II) Explain the frequency with which the utility collects and stores customer data and the frequency that the customer can obtain customer data;
- (III) Inform customers that the privacy and security of their customer data will be protected by the utility while in its possession;
- (IV) Explain that customers can access their standard customer data, as identified by the utility's tariff, without additional charge;
- (V) Explain that, with the exception of the data disclosures provided in rule 3026(b), customers have an expectation of privacy for their customer data.
- (VI) Describe the utility's policies regarding how customers can authorize access and disclosure of their customer data to third-parties not falling within the exceptions outlined in paragraph 3026(b). With regard to such third party data disclosure, the notice shall:
 - (A) Inform customers that declining a request for disclosure of customer data to a third-party will not affect the provision of utility service that the customer receives from the utility; and
 - (B) Explain that any customer consent for access to, disclosure of, or use of a customer's customer data by a third-party may be terminated or limited by the customer of record at any time and inform the customers of the process for doing so.
- (VII) Inform customers that customer data may be used to create aggregated data, and that the utility may provide aggregated data to third-parties, subject to its obligation under paragraph 3031(b);
- (VIII) Be viewable on-line and printed in 12 point or larger font;
- (IX) Be mailed either separately or included as an insert in a regular monthly bill conspicuously marked and stating clearly that important information on the utility's privacy practices is contained therein;
- (X) Be printed in English and any specific language or languages other than English where the utility's service territory contains a population of at least 30 percent who speak a specific language other than English as their primary language as determined by the Commission using the latest U.S. Census information;
- (XI) Include an explanation, in clear and neutral language, describing a data freeze, that it is available without additional charge, and that it must be released before authorization can be given to disclose customer data to a third party; and.
- (XII) Provide a customer service phone number and web address where customers can direct additional questions or obtain additional information regarding their customer data, the disclosure of customer data or aggregated data, or the utility's privacy policies and procedures with respect to customer data or aggregated data.

3028. Customer Consent Form for the Disclosure of their Customer Data to Third-Party Recipients by a Utility.

(a) A utility shall make available a consent to disclose customer data form, prescribed and supplied by the Commission, to any customer or third-party upon request. The form shall be provided and made available in paper and electronic form for use in obtaining customer consent to disclose customer data. The contents of the consent to disclose customer data form must:

(I) Describe the customer's rights under subparagraph 3027(c)(V); and

(II) Provide spaces for the following information regarding the third-party recipient to be populated by that third-party recipient on the consent to disclose customer data form:

(A) The name, including trade name if applicable, physical address, mailing address, e-mail address, and telephone number;

(B) The name, mailing address, e-mail address, and telephone number of the third-party recipient's data custodian;

(C) The name, mailing address, e-mail address, and telephone number of the third-party recipient's Colorado agent for service of process; and

(D) A statement describing the third-party recipient's business structure (corporation, limited liability company, partnership, sole proprietorship, etc).

(i) If the third-party recipient is a corporation: the name of the state in which it is incorporated; the location of its principal office, if any, in Colorado; the names of its directors and officers; and a certificate of good standing issued by the Secretary of State authorizing it to do business in Colorado, certified within six months prior to the submission of the consent to disclose customer data form.

(ii) If the third-party recipient is a limited liability company: the name of the state in which it is organized; the complete mailing address and physical address of its principal office; the name of its managers; and a certificate of good standing issued by the Secretary of State authorizing it to do business in Colorado, certified within six months prior to the submission of the consent to disclose customer data form.

(iii) If the third-party recipient is a partnership: the names, titles, and addresses of all general and limited partners and a copy of the partnership agreement establishing the partnership and all subsequent amendments.

(III) State the uses of the data for which the customer is allowing disclosure;

(IV) State the purposes of the data collection;

(V) State the date(s) of disclosure;

- (VI) State the description of the data disclosed;
 - (VII) State that the consent is valid until terminated;
 - (VIII) State that the customer must notify the utility service provider in writing (electronically or nonelectronically) to terminate the consent including appropriate utility contact information;
 - (IX) State any additional terms except an inducement for the customer's disclosure;
 - (X) Provide notice to the customer that the utility shall not be responsible for monitoring or taking any steps to ensure that the third-party to whom the data is disclosed is maintaining the confidentiality of the data or using the data as intended by the customer; and
 - (XI) Require notarization of the customer of record's signature by any means authorized by Colorado law.
- (b) A utility may make available an electronic customer consent process for disclosure of customer data to a third-party (e.g. a utility controlled web portal) that authenticates the customer identity in lieu of the notarization requirement. The contents of the electronic consent process must generally follow the format of the model consent to disclose customer data form, be clear, and include the elements to be provided pursuant to paragraph (a) of this rule, except notarization. Such process may not include an inducement for disclosure by the customer.
- (c) A third-party recipient may use its own consent form so long as the contents of the form are clearly stated and include the elements to be provided pursuant to paragraph (a) of this rule and the form generally follows the format of the model consent to disclose customer data form. Such form may not include an inducement for disclosure by the customer.
- (d) The use of an electronic signature is permitted in accordance with §§ 24-71-101 and 24-71.3-105, C.R.S., provided the form complies with all applicable provisions of Title 24, Article 71.3, C.R.S. When required, notarization is permitted by any means complying with the Notaries Public Act, § 12-55-101 et. seq.
- (e) The consent to disclose customer data form may be submitted to the utility through paper or electronic methods.

3029. Contracted Agent Access to Customer Data from a Utility.

- (a) A utility may disclose customer data to a contracted agent provided that the contract meets the following minimum requirements:
- (I) Implement and maintain reasonable data security procedures and practices appropriate to the private nature of the information to protect the customer data from unauthorized access, destruction, use, modification, or disclosure. These data security procedures and practices shall be equal to or greater than the data privacy and security policies and procedures used by the utility internally to protect customer data;

- (II) Use customer data solely for the purpose of the contract, and prohibit the use of customer data for a secondary commercial purpose not related to the purpose of the contract without first obtaining the customer's consent as provided for in these rules;
 - (III) Destroy any customer data that is no longer necessary for the purpose for which it was transferred; and
 - (IV) Execute a non-disclosure agreement with the utility.
- (b) The utility shall maintain records of the disclosure of customer data to contracted agents for a minimum of three years. Such records shall include all contracts with the contracted agent and executed non-disclosure agreements.

3030. Third-Party Access to Customer Data from a Utility.

- (a) Except as outlined in paragraphs 3026(b) and 3029(a), a utility shall not disclose customer data to any third-party unless the customer or a third-party acting on behalf of a customer submits a paper or electronic signed consent to disclose customer data form that has been executed by the customer of record and any data feeze for the service address has been released.
- (b) Incomplete or non-compliant consent to disclose customer data forms are not valid and shall be rejected by the utility.
- (c) The utility shall maintain records of all of the disclosures of customer data to third-party requestors. Such records shall include a copy of the customer's signed consent to disclose customer data form, all identifying documentation produced by the third-party requestor, the customer's agreed upon terms of use, the date(s) and frequency of disclosure, and a description of the customer data disclosed.
- (d) The utility shall maintain records of customer data disclosures for a minimum of three years and shall make the records of the disclosure of a customer's customer data available for review by the customer within five business days of receipt a paper or electronic request from the customer, or at such greater time as is mutually agreed between the utility and the customer.

3031. Requests for Aggregated Data Reports from a Utility

- (a) A utility shall not disclose aggregated data unless such disclosure conforms to these rules.
- (b) In aggregating customer data to create an aggregated data report, a utility must take steps to ensure the report is sufficiently anonymous in its aggregated form so that any individual customer data or reasonable approximation thereof cannot be determined from the aggregated amount. At a minimum, a particular aggregation must contain: (1) at least fifteen customers or premises, and (2) within any customer class, no single customer's customer data or premise associated with a single customer's customer data may comprise 15 percent or more of the total customer data aggregated per customer class to generate the aggregated data report (the "15/15 Rule"). Notwithstanding, the 15/15 Rule, the utility shall not be required to disclose aggregated data if such disclosure would compromise the individual customer's privacy or the security of the utility's system.

- (c) If a single customer's customer data or premise associated with a single customer's customer data is 15 percent or more of the total aggregated customer data per customer class used to generate the aggregated data report requested, the utility will notify the requestor that the aggregated data, as requested, cannot be disclosed and identify the reason(s) the request was denied. The requestor shall be given an opportunity to revise its aggregated data request in order to address the identified concerns. An aggregated data request may be revised by expanding the number of customers or premise accounts in the request, expanding the geographic area included in the request, combining different customer classes or rate categories, or other applicable means of aggregating.
- (d) A utility shall include in its tariffs a description of standard and non-standard aggregated data reports available from the utility to any requestor. At a minimum, the utility's tariff shall provide the following:
- (I) A description of standard and non-standard aggregated data reports available from the utility including all available selection parameters (customer data or other data);
 - (II) The frequency of data collection (annual, monthly, daily, etc.);
 - (III) The method of transmittal available (electronic, paper, etc.) and the security protections or requirements for such transmittal;
 - (IV) The charge for providing a standard aggregated data report or the hourly charge for compiling a non-standard aggregated data report;
 - (V) The timeframe for processing the request; and
 - (VI) A request form for submitting a data request for aggregated data reports to the utility identifying any information necessary from the requestor in order for the utility to process the request.
- (e) If a utility is unable to fulfill an aggregated data report request because it does not have and/or does not elect to or cannot obtain all of the data the requestor wishes to include in the aggregated data report, then the utility may contract with a contracted agent to include the additional data, along with the customer data in the utility's possession, to generate an aggregated data report.
- (f) A utility and each of its directors, officers and employees that discloses aggregated data as provided in these data privacy rules shall not be liable or responsible for any claims for loss or damages resulting from the utility's disclosure of aggregated data.

3032. Customer Data Freeze by Customer of Record.

- (a) When a customer requests a data freeze be placed on their account, the utility shall not disclose a customer's customer data pursuant to a third-party authorization unless and until the customer first requests a release of the data freeze.
- (b) All utilities maintaining customer data shall offer data freezes on a nondiscriminatory basis to all customers.

(c) Solicitation and imposition of data freezes.

(I) All utility-provided solicitation and other materials regarding data freezes must include:

(A) An explanation, in clear and neutral language, of what a data freeze is; and

(B) A description of the specific procedures necessary to lift a data freeze and an explanation that the customer will be unable to authorize third-party access to customer data unless he or she releases the freeze;

(II) No utility shall implement a data freeze unless the customer's request to impose a freeze has first been confirmed by obtaining the customer's written and signed authorization in a form provided for herein.

(d) A utility shall accept a customer's written and signed authorization to impose a freeze on his or her customer data. However, written authorization that does not conform to this paragraph (d) is invalid and may not be used to impose a data freeze.

(I) At a minimum, the written authorization must be viewable on-line and printed in 12 point or larger font and must contain clear and unambiguous language that confirms:

(A) The customer's name and service address to be covered by the data freeze;

(B) The decision to place a data freeze on customer data; and

(C) That the customer understands that he or she will be unable to authorize disclosure of customer data to a third party unless he or she releases the data freeze.

(e) All utilities who offer data freezes must accept a customer's written and signed authorization stating his or her intent to release a data freeze.

(f) Data freezes shall be offered to customers as part of basic utility service and shall be provided without additional charge.

(g) Forms for a customer to implement and release a data freeze will be prescribed and supplied by the Commission. A utility may use its own paper or electronic forms so long as the contents are clearly stated, include the same elements, and generally follow the same format as the Commission-prescribed forms.

(h) At a minimum, a utility shall include in its tariffs a description of a data freeze included as part of basic utility service, without additional charge.

3033. – 3099. [Reserved].

* * * * *

[indicates omission of unaffected rules]

3976. Regulated Electric Utility Rule Violations, Civil Enforcement, and Civil Penalties.

An admission to or Commission adjudication for liability for an intentional violation of the following may result in the assessment of a civil penalty of up to \$2,000.00 per offense. Fines shall accumulate up to, but shall not exceed, the applicable statutory limits set in § 40-7-113.5, C.R.S.

Citation	Description	Maximum Penalty Per Violation
	Articles 1-7 of Title 40, C.R.S.	\$2000
	Commission Order	\$2000
Rule 3005(a)-(c);(f)	Records and Record Retention	\$2000
<u>Rule 3026(a)</u>	<u>Collection and Use of Customer Data</u>	<u>\$1000</u>
<u>Rule 3026(b);(e)</u>	<u>Disclosure of Customer Data</u>	<u>\$2000</u>
<u>Rule 3026(c)</u>	<u>Tariff</u>	<u>\$1000</u>
<u>Rule 3026(d)</u>	<u>Disclosure of Customer Data</u>	<u>\$1000</u>
<u>Rule 3027(a)</u>	<u>Customer Notice</u>	<u>\$1000</u>
<u>Rule 3028(a);(b)</u>	<u>Consent Form</u>	<u>\$1000</u>
<u>Rule 3029(a)</u>	<u>Disclosure of Customer Data</u>	<u>\$2000</u>
<u>Rule 3029(b)</u>	<u>Records</u>	<u>\$1000</u>
<u>Rule 3030(a)</u>	<u>Disclosure of Customer Data</u>	<u>\$2000</u>
<u>Rule 3029(b)-(d)</u>	<u>Consent and Records</u>	<u>\$1000</u>
<u>Rule 3031(a)</u>	<u>Disclosure of Aggregated Data</u>	<u>\$2000</u>
<u>Rule 3031(c)</u>	<u>Tariff</u>	<u>\$1000</u>
<u>Rule 3032</u>	<u>Data Freeze</u>	<u>\$1000</u>
Rule 3100(a)	Obtaining a Certificate of Public Convenience and Necessity for a Franchise	\$2000

Rule 3101(a)	Obtaining a Certificate of Public Convenience and Necessity or Letter of Registration to Operate in a Service Territory	\$2000
Rule 3102(a)	Obtaining a Certificate of Public Convenience and Necessity for Facilities	\$2000
Rule 3103(a),(c),(d)	Amending a Certificate of Public Necessity for Changes in Service Territory or Facilities	\$2000
Rule 3108(a),(c)	Keeping a Current Tariff on File with the Commission	\$2000
Rule 3109	Filing a New or Changed Tariff with the Commission	\$2000
Rule 3110(b),(c)	Filing an Advice Letter to Implement a Tariff Change	\$2000
Rule 3200(a),(b)	Construction, Installation, Maintenance and Operation of Facilities in Compliance with Accepted Engineering and Industry Standards	\$2000
Rule 3204	Reporting Incidents Resulting in Death, Serious Injury, or Significant Property Damage	\$2000
Rule 3210	Line Extensions	\$2000
Rule 3251	Reporting Major Events	\$2000
Rule 3252	Filing a Report on a Major Event with the Commission	\$2000
Rule 3303(a)-(j)	Meter Testing	\$2000
Rule 3306	Record Retention of Tests and Meters	\$2000
Rule 3309	Provision of Written Documentation of Readings and Identification of When Meters Will be Read	\$2000
Rule 3401	Billing Information, Procedures, and Requirements	\$2000
Rule 3603	Resource Plan Filing Requirements	\$2000
Rule 3654(a),(d)	Renewable Energy Standards	\$2000

Rule 3657(a)	QRU Compliance Plans	\$2000
Rule 3662	Annual Compliance Reports	\$2000
Rule 3803(c)	Master Meter Exemption Requirements	\$2000

Citation	Description	Maximum Penalty Per Violation
Rule 3004(b)-(f)	Disputes and Informal Complaints	\$1000
Rule 3202(a),(b),(f),(g)	Maintaining a Standard Voltage and Frequency	\$1000
Rule 3203(a),(b)	Trouble Report Response, Interruptions and Curtailments of Service	\$1000
Rule 3405	Provision of Service, Rate, and Usage Information to Customers	\$1000
Rule 3406	Provision of Source Information to Customers	\$1000
Rule 3253	Filing a Supplemental Report on a Major Event with the Commission	\$1000

Citation	Description	Maximum Penalty Per Violation
Rule 3208(a)-(c)	Poles	\$500
Rule 3403(a)-(q):(s)	Applications for Service, Customer Deposits, and Third Party Guarantees	\$500
Rule 3658	Standard Rebate Offer	\$500

Citation	Description	Maximum Penalty Per Violation
Rule 3006(a),(b),(e)-(m)	Annual Reporting Requirements	\$100
Rule 3304	Scheduled Meter Testing	\$100
Rule 3305	Meter Testing Upon Request	\$100
Rule 3402(a),(c),(d)	Meter and Billing Error Adjustments	\$100
Rule 3404(a)-(f)	Availability of Installation Payments to Customers	\$100
Rule 3407	Discontinuance of Service	\$100
Rule 3408(a)-(g);(i)	Notice of Discontinuance of Service	\$100
Rule 3409	Restoration of Service	\$100
Rule 3411(c)(IV),(d)(I),(d)(II),(e)	Low-Income Energy Assistance Act	\$100
Rule 3614	Filing of Annual Reports	\$100

3977. – 3999. [Reserved].

* * * * *

[indicates omission of unaffected rules]

[This page intentionally left blank]

Consent to Disclose Utility Customer Data

Please fill out the following information.

All requested information must be provided for the consent to be valid.

TO BE COMPLETED BY RECIPIENT OF CUSTOMER DATA:

Authorized Recipient of Customer Data ("Company"):

Company Name (including Trade Name): _____

Physical Address: _____

Mailing Address: _____

Name & Title of Customer Data Custodian: _____

Phone: _____ Email: _____

Please provide to the utility service provider prior to disclosure and make available to the customer upon request the following documents and information:

- The name and address of Company's Colorado agent for service of process
- A statement describing Company's business structure (corporation, limited liability company, partnership, sole proprietorship, etc.)
- If Company is a corporation: the name of the state in which Company is incorporated; the location of its principal office, if any, in Colorado; the names of its directors and officers; and a certified copy of its certificate of good standing authorizing it to do business in Colorado, certified within 6 months prior to the submission of this Consent Form
- If Company is a limited liability company: the name of the state in which Company is organized; the complete mailing address and physical address of its principal office; the name of its managers; and a certified copy of its certificate of good standing authorizing it to do business in Colorado, certified within 6 months prior to the submission of this Consent Form
- If Company is a partnership: the names, titles, and addresses of all general and limited partners; and a copy of the partnership agreement establishing the partnership and all subsequent amendments

Data To Be Released and Description of Use (Please be specific and fill in all blanks):

Instructions: Company should describe the customer data to be provided in a detailed and clear enough manner to inform the customers and the utility of (1) the specific types of data requested, and (2) the purposes for which the data will be used. (Example—"We seek monthly electricity usage data for the household, in order to show the net gain in efficiency resulting from our energy efficiency upgrades, and we will use this data, aggregated with other customers, to display the results in print and television marketing.")

Company's description, **in detail**, of the specific type of customer data requested: _____

Company's business purpose(s) for, and uses of, customer data: _____

Date(s) of disclosure (to/from): _____

This Consent to Disclose Utility Customer Data will be effective until terminated by the customer shown below. The customer must notify the utility service provider in writing of the customer's desire to terminate the consent for release of customer data.

TO BE COMPLETED BY CUSTOMER:

I agree that I am the customer of record for my utility account. I understand that I have an expectation of privacy in my energy usage data except if disclosure is required by law as provided in 4 C.C.R 723-3 Section 3026(b) (available at the Colorado Public Utilities Commission's website) or if I authorize its disclosure. I agree to allow my utility service provider ("Utility") to release to Company the types of energy usage data described above for the purpose(s) described above. I understand and agree that such data may reveal information about the way I use energy at my premises. If my electric meter is one that is capable of measuring my energy usage in intervals of an hour or less, such data can be used to gain personal information, such as what appliances I use and when I use them as well as when I am at home and when I am away. I understand that once customer data has been provided to Company, Utility will have no control over and no responsibility for the Company's use of the data. The Utility shall not be responsible for monitoring or taking any steps to ensure that Company to whom the data is disclosed is maintaining the confidentiality of the data or using the data as intended by customer. If I refuse to agree to these terms of use consenting to release the data to Company, my utility services will not be affected. I may terminate my consent to the release of additional data by the Utility to Company at any time by sending a written request with my name and service address to Utility at the mailing and/or electronic mail address listed below.

By my signature, I affirm that I am customer of record and that everything in this document is true and correct. The undersigned and the Company agree that the Company may make agreements with me by electronic means. I agree that this consent, whether in paper or electronic form, has the same legal effect and is authentic and valid. Furthermore, if signing electronically, I agree to receiving information and other communications relating to my consent in electronic form. By applying a signature below, I agree to the above terms and conditions governing my consent.

Customer Account Number Service Address

Signature of Customer of Record Printed Name Date Signed

FOR PAPER FORM:

Sworn before me on this _____ day of _____, 20____

Notary Public

My Commission expires: _____

FOR ELECTRONIC FORM:

Electronic notarization and acknowledgment is governed by 24-71.3-111, C.R.S.

You have the option to receive a copy of this document in paper or other nonelectronic form. To obtain a paper copy of this electronic record, contact [INSERT COMPANY NAME] at [INSERT APPROPRIATE CONTACT INFORMATION].

You can terminate your consent electronically or through nonelectronic means. To terminate your consent you may submit a written request to: [INSERT UTILITY NAME] at [INSERT APPROPRIATE CONTACT INFORMATION]. You may also submit a written request electronically to [INSERT UTILITY NAME] at [INSERT APPROPRIATE WEB OR EMAIL INFORMATION].

In order to view this Agreement and receive electronic communications from [INSERT COMPANY NAME], you must have a valid email address and a computer equipped as described below. If your e-mail address changes, you will need to update it.

Hardware/Software*:

Workstation: Must be able to run Adobe Acrobat Reader.

Windows®: Intel® Pentium® II 450MHz, AMD Athlon™ 600MHz or faster processor (or equivalent), 128MB of RAM

Macintosh: PowerPC® G3 500MHz or faster processor, Intel Core™ Duo 1.33GHz or faster processor, 128MB of RAM

Internet connection: recommend broadband

Screen size: recommend minimum resolution 1024x768

Web browser: supports Flash Player and 128-bit encryption (e.g. Internet Explorer 6+, Firefox 1.5+, Safari, Google Chrome)

Adobe Acrobat Reader: recommend v7+ (download at <http://get.adobe.com/reader/>)

If you have a printer, you may also print a copy of this Agreement by simply selecting print from the file menu.

By electronically signing this document, you confirm that you have computer hardware and software that meets the requirements above.

Data Freeze Form

I authorize [INSERT UTILITY NAME] to put a Data Freeze on my utility customer data in order to prevent unauthorized disclosure to third parties.

I understand that if I wish to authorize a third party to access my utility customer data after the freeze is in place, I must first submit a written and signed authorization stating my intent to release the data freeze to:

[INSERT APPROPRIATE CONTACT INFORMATION]

Print Name _____ Date _____

Telephone Number(s) (not required): _____

Service Address: _____

Signature _____.

Data Freeze Release Form

I authorize [INSERT UTILITY NAME] to RELEASE the Data Freeze on my utility customer data.

I understand that releasing a data freeze alone does not authorize disclosure of my customer data to any third party. However, this release will permit me to authorize disclosure of my customer data to a third party.

This fully completed form must be submitted to the following:

[INSERT APPROPRIATE CONTACT INFORMATION]

Print Name _____ Date _____

Telephone Number(s) (not required): _____

Service Address: _____

Signature _____.