

Minnesota Public Utilities Commission
Staff Briefing Papers

Meeting Date: November 7, 2013..... Agenda Item # ** 2

Company: All Investor-Owned Electric Utilities

Docket No. E-999/CI-13-542

In the Matter of the Implementation of Solar Energy Standards
Pursuant to 2013 Amendments to Minnesota Statutes, Section
216B.1691

Issue(s): Should the Commission establish criteria and procedures for identifying which utility customer sales are excluded when determining the utility's Solar Energy Standard?

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Relevant Documents

Notice Requesting Filings and Comments July 25, 2013
Otter Tail Power Info Filing & Comments (TS & Public) August 13, 2013
Interstate Power Info Filing & Comments (TS & Public) August 14, 2013
Xcel Energy Info Filing & Comments (TS & Public)..... August 15, 2013
Minnesota Power Info Filing & Comments (TS & Public) August 15, 2013
MCEA et al. Comments..... August 29, 2013
Xcel Energy Supplemental Comments..... August 29, 2013
Department of Commerce Comments..... August 29, 2013
Solar Exempt Group Comments August 29, 2013
Minnesota Chamber of Commerce Comments August 30, 2013

The attached materials are workpapers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless otherwise noted.

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October 30, 2013

Statement of the Issue

Should the Commission establish criteria and procedures for identifying which utility customer sales are excluded when determining the utility's Solar Energy Standard (SES)?

- How should excluded customers be identified—by NAICS code and/or other criteria?
- How should customer eligibility for exclusion be verified—self-identification, by the utility, by the Commission?
- Should utilities be required to file procedures and/or tariffs for Commission approval relating to customer exclusions which address verification procedures, reporting requirements, customer petitions, or other related issues?

Relevant Statute

Minn. Laws 2013, Chapter 85, was signed by the Governor on May 23, 2013. Article 10, Section 3, Solar Energy Standard, became effective on July 1, 2013. This section amends Minn. Stat. §216B.1691, to add a Solar Energy Standard (SES) for public electric utilities. The full text of Section 3 is Attachment 1 to these briefing papers.

This new law requires that:

- By the end of 2020, at least 1.5% of the public utility's total retail electric sales must be generated by solar energy. At least 10% of the 1.5% must be met by solar voltaic (PV) devices of 20 kW or less; and
- Retail sales from certain customers must be excluded from the base for calculating the utility's total retail electric sales. The retail rates for those customers must not include any costs of satisfying the SES. An excluded customer is a(n):
 - Iron mining extraction and processing facility, including a scam mining facility
 - Paper mill
 - Wood products manufacturer
 - Sawmill
 - Oriented strand board manufacturer

The SES applies only to public (investor-owned) electric utilities and is in addition to the Renewable Energy Standard (RES) obligations which apply to a broader group of electric utilities. Energy used to satisfy the RES may not be used to satisfy the SES. The law also sets an energy goal, but not a standard, of 10% solar by 2030.

Introductory Staff Comments

There are a large number of potential issues the Commission will face in implementing the Solar Energy Standard (SES), some of which overlap with other parts of the 2013 legislation. The

issues for which comments have been solicited to-date, and addressed in these briefing papers in the instant docket, are limited to understanding the SES obligations of each utility, with focus on determining how to identify which customer sales should be excluded from the SES base.

Why defining which customers are excluded from the SES obligation is important

Knowing which customer sales are to be excluded from the SES base is fundamental to knowing what the overall state and individual utility SES obligations are likely to be. In turn, and more problematic, the specific customers to be excluded need to be identified so that any costs of meeting the SES can be excluded from their utility rates.

The 1.5% SES obligation under the legislation is effective in 2020. Unlike the RES, the SES section of the statute does not have intermediate requirements or goals. However, as a practical matter, utilities have (or should have) already begun to make concrete plans for meeting their SES obligations; therefore, they will also likely start making expenditures related to meeting their SES obligations in the relatively near-term. Therefore, the Commission will need to determine what types of expenditures are to be excluded from customer rates, and the mechanics of doing so, in the not too distant future.

Why defining which customers are excluded from the SES obligation is problematic

Minn. Stat. 216B.1691, subd. 2f **Solar Energy Standard** states:

. . . .

(d) For the purposes of calculating the total retail electric sales of a public utility under this subdivision, there shall be excluded retail electric sales to customers that are:

(1) an iron mining extraction and processing facility, including a scam mining facility as defined in Minnesota Rules, part 6130.0100, subpart 16¹; or

(2) a paper mill, wood products manufacturer, sawmill, or oriented strand board manufacturer.

¹ Minnesota Rules, CHAPTER 6130, Ferrous Metallic Mineral Mining
Department of Natural Resources

6130.0100 DEFINITIONS.

Subp. 16. Scram mining operation.

"Scram mining operation" means a mining operation which produces natural iron ore or natural iron ore concentrates as defined by Minnesota Statutes, section [93.20](#), subdivisions 12 to 17, from previously developed stockpiles, tailings basins, underground mine workings, or open pits, which involves no more than 80 acres of land not previously affected by mining. Greater areas shall be allowed if the operator can demonstrate that impacts would be substantially the same as other scam operations. "Lands not previously affected by mining" means lands upon which mine wastes have not been deposited and lands from which materials have not been removed in connection with the production or extraction of metallic minerals.

Those customers may not have included in the rates charged to them by the public utility any costs of satisfying the solar standard specified by this subdivision.

While the statute identifies in general the types of businesses whose customers are to be excluded from the SES, it does not define the businesses in detail. For example, does a “wood products manufacturer” include only primary handling of wood such as making boards, secondary uses of the wood, such as making furniture, or also tertiary uses such as retail furniture sales?

The final legislation did not include any customer size criteria, although some earlier versions heard in committee were more limited. For example, the second engrossment of SF 901 excluded only mineral extraction or processing facilities and paper mills of 20 MW or more and iron concentrate producer of over 10 MW; essentially Minnesota Power’s Large Power customers who are also CIP exempt. The final legislation has a considerably broader scope of customers and no size limits. This makes it more difficult to identify the customers, verify that they are eligible, and ultimately to exclude costs from the rates of smaller customers in various customer classes.

The statute does not specify any process or procedures for verifying customer eligibility for exclusions. The Conservation Improvement Program (CIP) statute, 216B.241, allows exemptions from the CIP program, but sets out clear customer filing requirements, decision criteria, and approval process to be used in determining whether a large customer facility or a commercial gas customer is exempt. The SES statute is devoid of such requirements.

Other SES implementation issues that may need to be addressed in the future

As noted briefly above, the determination of what customer sales are excluded from the SES obligations is a prerequisite to implementing the statutory requirement that: “Those customers may not have included in the rates charged to them by the public utility any costs of satisfying the solar standard specified by this subdivision.” Both determining what costs should be excluded from rates, and the mechanics of doing so, will be difficult and time-consuming. Utility costs related to implementing the SES could show up in base rates, the fuel clause, and renewable riders. The customers to be excluded are a varying sizes and in multiple customers classes with different rate and tariff provisions. There are also potential utility system cost reductions/benefits from solar facilities: should these benefits somehow be restricted from accruing to excluded customers?

The law requires utilities to file reports with the Commission annually starting July 1, 2014 on their progress toward meeting their SES obligations. The Commission will likely want to specify the type of information to be included in those reports before the first report is due. The Commission may also want to establish criteria in advance for determining whether a utility is making reasonable progress toward achieving its SES obligations.

The new law states that:

Notwithstanding any law to the contrary, a solar renewable energy credit associated with a solar photovoltaic device installed and generating electricity in Minnesota after the effective date of this act but before 2020 may be used to meet the solar energy standard established under this subdivision.

This is arguably inconsistent with the Commission's current policy on renewable energy credit (REC) shelf-life, which allows a REC to be retired four years after the year of generation².

There are also other issues related to M-RETS registration and tracking of solar RECs, especially from small PV facilities.

Other changes in 2013 legislation on distributed generation in general and solar in particular have highlighted uncertainty about the ownership of RECs in certain situations. For example, the new laws are clear that the utility owns the RECs from generation subject to a Value of Solar rate and from generation from facilities which have received a Made in Minnesota incentive. The new laws do not specify who owns the RECs in absence of a Value of Solar rate or if a facility receives the Xcel-only incentive but not the Made in Minnesota incentive. The issue of who owns the RECs generated by net-metered customers (solar, wind, or other eligible technologies) is also unclear, and being raised in several pending dockets. A separate docket, E-999/CI-13-720 has been established to deal with REC ownership issues; staff expects to issue a notice before the end of the year.

Procedural Background

On July 25, 2013, the Commission issued a Notice asking utilities to file information on their retail sales, potentially excluded customers, and resulting estimated SES obligations. The Notice also provided for comments on the utility filings, including:

- Should the Commission establish criteria to be used by utilities in determining customer exclusions, such as kW demand, kWh usage, NAICS codes?
- Should the Commission establish procedures and/or require utilities to file tariffs relating to customer exclusions which address verification procedures, reporting requirements, customer petitions, or other related issues?

By August 15, 2013, Otter Tail Power, Interstate Power, Minnesota Power, and Xcel Energy filed the requested information and related comments.

On August 29, 2013, The Minnesota Department of Commerce, Division of Energy Resources (DER or Department), Fresh Energy and the Minnesota Center for Environmental Advocacy (MCEA), Xcel Energy, and the Solar Exempt Group (SEG) filed comments on the utility filings. On August 30, 2013, the Minnesota Chamber of Commerce (Chamber) filed comments.

² December 18, 2007 ORDER ESTABLISHING INITIAL PROTOCOLS FOR TRADING RENEWABLE ENERGY CREDITS, Docket Nos. E-999/CI-03-869 and E-999/CI-04-1616.

Utility Informational Filings

The Commission's July 25, 2013 Notice asked Xcel, Minnesota Power, Otter Tail Power, and Interstate Power & Light to provide information on their actual total Minnesota retail sales for 2012, a list of potential excluded customers and associated kWh, the resulting base sales for calculating their SES obligation, and other related information. They were also asked to provide the same information estimated for 2020, the year the 1.5% SES obligation becomes effective. Staff put together the following two summary tables, based on the information provided by these utilities:

Utility SES Obligations - if 2012 were the base year

<i>Year 2012 in kWh</i>	<i>Xcel</i>	<i>MP</i>	<i>OTP</i>	<i>IPL</i>	<i>Total 2012 in kWh</i>
MN Retail Sales	31,319,198,000	9,388,538,146	2,072,980,371	839,465,957	43,620,182,474
# of excluded customers	1,031	60	9	6	1,106
Excluded kWh %	653,506,000 2.1%	6,546,064,586 70%	69,181,727 3.3%	11,430,160 1.4%	7,280,182,473 17%
SES Base sales	30,665,692,000	2,842,473,560	2,003,798,644	828,035,797	36,340,000,001
Required SES (1.5% of base sales)	459,985,000	42,637,103	30,056,980	12,420,537	545,099,620

Utility SES Obligations – 2020 projected

<i>Year 2020 in kWh</i>	<i>Xcel</i>	<i>MP</i>	<i>OTP</i>	<i>IPL</i>	<i>Total 2020 in kWh</i>
MN Retail Sales	30,872,518,000	10,386,689,633	2,746,000,000	901,264,000	44,906,471,633
Excluded kWh %	477,943,000 1.5%	6,664,068,038 64%	91,642,461 3.3%	12,272,000 1.4%	7,245,925,499 16%
SES Base sales	30,394,575,000	3,722,621,595	2,654,357,539	888,992,000	37,660,546,134
Required SES (1.5% of base sales)	455,919,000	55,839,324	39,815,363	13,334,880	564,908,567

There are a number of assumptions and estimates built into the above information that may be subject to challenge or disagreement, but it gives a general picture of the expected obligations

and exclusions. Sales to a large percentage of Minnesota Power customers are excluded from the SES base. If IPL receives approval to sell its retail electric business in Minnesota to a group of electric cooperatives, none of the sales to shown above associated with current IPL customers will be subject to the SES.

The SES obligations in the statute are stated in terms of energy (percentage of retail energy sales), not capacity. There are many assumptions needed to “translate” the kWh requirements into capacity estimates, including the PV capacity factor, which in turn depends on many factors, such as the mix of facility sizes, fixed-tilt versus single axis trackers, facility location, etc. From informal staff inquiries, it appears the SES energy requirements would translate into roughly 350 to 400 kW of PV capacity by 2020. The Commission may want to include a requirement for utilities to estimate needed PV capacity as part of their annual SES reports.

Party Comments and Staff Analysis

Sales to distribution utilities

Both OTP and MP noted an issue with respect to calculating the total retail sales before exclusions. For purposes of the RES, the Commission has determined that public utility wholesale sales to municipalities are counted in the sales base, given the definition of total retail sales in 216B.191, subd. 1 (c):

(c) "Total retail electric sales" means the kilowatt-hours of electricity sold in a year by an electric utility to retail customers of the electric utility or to a distribution utility for distribution to the retail customers of the distribution utility. . . . [Emphasis added]

However, while the RES applies to generation and transmission cooperatives, municipal power agencies, and public power districts as well as public utilities, the SES applies only to public utilities. Also, as MP pointed out, a practical difficulty of including sales to distribution entities would be excluding customers of those distribution entities who fit the statutory exclusion criteria.

Therefore, it may be reasonable to include only sales to their own retail customers in the SES base for public utilities. The numbers used in the staff tables above are based on that premise. The Commission does not necessarily need to make a finding on this issue. No party has argued against excluding Minnesota wholesale sales when calculating the SES base.

Identification of excluded customers

The much more problematic issues revolve around identifying which retail customer sales are subject to the exclusion when calculating the SES obligation of each utility³. The tables above used utility estimates, which the utilities themselves acknowledged are only preliminary. In

³ These same customers will also be exempted from paying for utility costs of complying with the SES.

providing its estimate of excluded customers, MP used NAICS codes; Xcel used SIC codes, and OTP and IPL relied on internal knowledge of their customers. The utilities and other commenters recognize that the statute does not provide clear guidance on the details of how to identify such customers.

The statute directs that retail electric sales to the following categories of customers be excluded:

- (1) an iron mining extraction and processing facility, including a scam mining facility as defined in Minnesota Rules, part 6130.0100, subpart 16; or
- (2) a paper mill, wood products manufacturer, sawmill, or oriented strand board manufacturer.

The facilities under (1) are relatively easy to identify, essentially MP's current taconite and future mining-related customers. The categories under (2) are much broader, harder to define, and affect the SES obligations of all the utilities, not just MP.

Most of the commenters recommended that the Commission establish criteria for determining customer exclusions and establish procedures for customers to qualify. Parties did not provide a lot in the way of specific processes and procedures that could be implemented.

Use of Size Criteria (kW or kWh)

The Commission's notice asked whether some sort of customer size criteria, such as kW or kWh, should be used as a factor in customer eligibility determinations. The Department, MP, and OTP recommended against this idea, noting that the statute does not include size as a factor, just type of industry. Xcel stated that further comment should be taken if the Commission wishes to pursue a size criterion.

Staff included the question in the Notice with the idea of exploring some sort of *de minimus* size criteria, as some very small customers could potentially be eligible for exclusion, which may not have been intended by the legislation. For example, is someone with a tree-trimming business using a portable saw mill eligible for the saw mill exclusion? If NAICS codes are used, that specific concern can be eliminated because such a facility is not included under the NAICS sawmill category. But other similar issues could arise.

Xcel has identified 1,031 customers who may be eligible for exclusion; 1,013 of them are in the Small Commercial/Industrial (C&I) class. Some of these Small C&I customers are not even demand-billed. In the trade secret list of customers, Xcel included a number of small customers who at least by name do not appear to be in the stated industries, and some who appear to be retail establishments. While the statute is not specific, the use of the word wood products "manufacturing" implies that the exclusion should apply to primary manufacturing using wood, not to finished products retail or wholesale operations. This issue could be addressed, at least in part, through the choice of NAICS codes as discussed below.

Use of NAICS Codes

The Commission's Notice asked whether the North American Industry Classification System (NAICS) should be used in determining which customers qualify for the SES exclusion. The NAICS is the standard used by U.S. Federal statistical agencies, including the U.S. Census, for classifying businesses for collecting, analyzing, and publishing statistical data. This system was adopted in 1997 to replace the Standard Industrial Classification (SIC) system.

Most commenters agreed that NAICS codes could play some role in making determinations on customer eligibility for exclusion, but differed on just what that role should be. MP, Xcel⁴, and MCEA noted that the NAICS classifications are self-reported by the business, and thus may be somewhat subjective and not verified. Xcel further contended that field verification of all potential customers could be resource intensive, especially with respect to smaller customers for whom Xcel does not assign dedicated account managers.

The Department recommended that NAICS codes be used to identify excluded customers, and stated that the following code categories appear to correspond to the statutory categories:

NAICS Code	Category
212210	Iron Ore Mining
321113	Sawmills
321114	Wood Preservation
321211	Hardwood Veneer and Plywood Manufacturing
321212	Softwood Veneer and Plywood Manufacturing
321213	Engineered Wood member (Except truss) Mfg.
321214	Truss Manufacturing
321219	Reconstituted Wood Product Mfg.
321911	Wood Window and Door Mfg.
321912	Cut Stock, Resawing Lumber and Planning
321918	Other Millwork (incl. flooring)
321920	Wood Container and Pallet Mfg.
321991	Manufactured Home (mobile Home) Mfg.
321992	Prefabricated Wood Building Mfg.
321999	All Other Misc. Wood Product Mfg.
322110	Pulp Mills
322121	Paper (except Newsprint) Mills
322122	Newsprint Mills
322130	Paperboard Mills

⁴ Xcel stated that its customer information system uses SIC codes rather than NAICS codes, and that mapping between them could be time consuming and could provide inconsistent results across utilities. Staff notes that NAICS codes have been used for more than 15 years, and that the official NAICS website provides detailed mapping tools from SIC to NAICS.

322211	Corrugated and Solid Fiber Box Mfg.
322212	Folding Paperboard Box Mfg.
322219	Other Paperboard Container Mfg.
322220	Paper Bag and Coated and Treated Paper Mfg.
322230	Stationery Product Mfg.
322291	Sanitary Paper Product Mfg.
322299	All Other Converted Paper Product Mfg.

The Department stated that the statute specifically excludes only manufacturing entities; therefore retail establishments such as lumber yards, and retail home improvement companies should not qualify for the exclusion under the statute.

Minnesota Power also provided a list of NAICS codes, somewhat smaller than that of the Department but overlapping, which MP used for its estimates of exclusions:

NAI CS Code	NAI CS Label
212210	Iron Ore Mining
321113	Sawmills
321114	Wood Preservation
321211	Hardwood Veneer and Plywood
321212	Softwood Veneer and Plywood
321113	Sawmills
321214	Truss Manufacturing
321219	Reconstituted Wood Product
321911	Wood Window and Door M
321912	Cut Stock, Resawing Lumber, and
321918	Other Millwork (including Flooring)
321920	Wood Container and Pallet
321991	Manufactured Home (Mobile Home)
322121	Paper (except Newsprint) Mills
322122	Newsprint Mills
322130	Paperboard Mills

Table 5: NAICS Codes Queried

MCEA agreed with the Department that the Commission should identify the specific NAICS categories that are potentially excluded from the SES.

Staff believes that using NAICS categories as the primary determinant of customer eligibility for exclusion from the SES obligations is the most objective manner of implementing the statute. The Commission may need to decide which specific NAICS categories should be specified. Attachment 2 to these briefing papers contains some additional information on the NAICS.

Verification of eligibility

Xcel, OTP, and MCEA recommend that customers seeking exclusion from the SES be required to file petitions with the Commission. Minnesota Power states that the Commission, with the input of the Department and other stakeholders, should establish processes and procedures relating to customer exclusions and verification procedures, up to and including a rulemaking proceeding. Companies will need to know when and how periodic recalculation, reporting, applications, etc., will occur. Public utilities will also need guidance on the customer notification and application process.

MCEA also recommended that customers be required to substantiate their SES-exclusion requests with information about their full range of business activities, and identify that portion of their business activities (and associated energy usage) to which the SES-exclusion may apply.

Based on the preliminary customer numbers estimated by the utilities, more than 1,000 customers could be eligible for exclusion. It could be difficult for the Commission to manage such a process if all exclusions need to be filed with and approved by, the Commission. It could be unmanageable if the MCEA suggestion to examine which business activities at each customer site may qualify and which activities may not.

Staff suggests a possible alternative to consider is for customers to send specified information to the utility, and require the utility to make the first determination on whether the customer qualifies for exclusion. There could be a process for the utility to request Commission guidance in unclear situations and for the customer to appeal to the Commission if it disagrees with the utility. Such a process would require very clear criteria to be adopted by the Commission (specific NAICS categories) and require utilities to have clear customer notification processes, to develop standard forms/templates for customers to use in filing for exclusion, and clear internal procedures for making determinations. The list of customers could be filed in each utility's annual SES report.

Concluding Staff Comments

The Chamber, the Solar Exempt Group, and Minnesota Power recommended that stakeholders work on further defining processes; several other commenters stated or implied that further work is needed.

When staff developed the notice and comment process in this docket, it was hoped that the results would allow the Commission to adopt specific criteria and processes for identifying customer sales to be excluded from the SES. However, it appears there are too many issues in question for the Commission to adopt a complete process at this time.

Further development of the record could be done through a stakeholder workgroup or further written comments. Staff believes either process would be more successful with clear, specific

questions/issues set out in advance, and with as much Commission guidance as possible.

For example, the Commission could make a determination at this time that NAICS codes should be the primary determinant of customer eligibility, and ask for comments on which specific codes should be adopted. The Commission could also decide whether customers should be required to file with the Commission or the utility for exclusion, and ask for comments on the specifics of how the process should work.

Staff recommends that the Commission provide as much guidance as it feels comfortable with at this time, but no final decisions, and direct staff to issue a further notice for comments that is specific and detailed as to the issues that need to be addressed.

Decision Alternatives

1. Make no specific findings at this time. Delegate to the Executive Secretary the authority to issue further notices and to establish other procedures and timelines necessary to address issues on customer exclusions.
2. Make a finding that NAICS codes should be the primary basis for determining exclusion from the SES. Request additional comments on the specific NAICS categories that qualify for exclusions.
3. Find that customers must file requests with the Commission for exclusion from the SES.
 - a. Direct each utility to file a proposal for notifying its customers of potential eligibility for exclusion
 - b. Direct each utility to file a proposed form or template document for customers to use in applying for an exclusion, in consultation with interested stakeholders
4. Find that customers must file requests with their utility for exclusion from the SES.
 - a. Direct each utility to file a proposal for notifying its customers of potential eligibility for exclusion
 - b. Direct each utility to file a proposed form or template document for customers to use in applying for an exclusion, in consultation with interested stakeholders

Attachment 1

(This law has since been codified by the Revisor in Minnesota Statutes, 2013)

Minn. Laws 2013, Chapter 85, Article 10:

Sec. 3. Minnesota Statutes 2012, section 216B.1691, is amended by adding a subdivision to read:

Subd. 2f. Solar energy standard. (a) In addition to the requirements of subdivisions 2a and 2b, each public utility shall generate or procure sufficient electricity generated by solar energy to serve its retail electricity customers in Minnesota so that by the end of 2020, at least 1.5 percent of the utility's total retail electric sales to retail customers in Minnesota is generated by solar energy. At least ten percent of the 1.5 percent goal must be met by solar energy generated by or procured from solar photovoltaic devices with a nameplate capacity of 20 kilowatts or less.

(b) The solar energy standard established in this subdivision is subject to all the provisions of this section governing a utility's standard obligation under subdivision 2a .

(c) It is an energy goal of the state of Minnesota that by 2030, ten percent of the retail electric sales in Minnesota be generated by solar energy.

(d) For the purposes of calculating the total retail electric sales of a public utility under this subdivision, there shall be excluded retail electric sales to customers that are:

(1) an iron mining extraction and processing facility, including a scam mining facility as defined in Minnesota Rules, part 6130.0100, subpart 16; or

(2) a paper mill, wood products manufacturer, sawmill, or oriented strand board manufacturer.

Those customers may not have included in the rates charged to them by the public utility any costs of satisfying the solar standard specified by this subdivision.

(e) A public utility may not use energy used to satisfy the solar energy standard under this subdivision to satisfy its standard obligation under subdivision 2a. A public utility may not use energy used to satisfy the standard obligation under subdivision 2a to satisfy the solar standard under this subdivision.

(f) Notwithstanding any law to the contrary, a solar renewable energy credit associated with a solar photovoltaic device installed and generating electricity in Minnesota after the effective date of this act but before 2020 may be used to meet the solar energy standard established under this subdivision.

(g) Beginning July 1, 2014, and each July 1 through 2020, each public utility shall file a report with the commission reporting its progress in achieving the solar energy standard established under this subdivision.

Attachment 2

North American Industrial Classification System (NAICS)

Official federal government website for NAICS:

<http://www.census.gov/eos/www/naics/>

212210 Iron Ore Mining

This industry comprises establishments primarily engaged in (1) developing mine sites, mining, and/or beneficiating (i.e., preparing) iron ores and manganiferous ores valued chiefly for their iron content and/or (2) producing sinter iron ore (except iron ore produced in iron and steel mills) and other iron ore agglomerates.

321 Wood Product Manufacturing

Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile homes), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planing, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers. The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.

3211 Sawmills and Wood Preservation^T

32111 Sawmills and Wood Preservation^T

321113 Sawmills

321114 Wood Preservation

3212 Veneer, Plywood, and Engineered Wood Product Manufacturing^T

32121 Veneer, Plywood, and Engineered Wood Product Manufacturing^T

321211 Hardwood Veneer and Plywood Manufacturing

321212 Softwood Veneer and Plywood Manufacturing

321213 Engineered Wood Member (except Truss) Manufacturing

321214 Truss Manufacturing

321219 Reconstituted Wood Product Manufacturing (*Staff Note: This category*

includes oriented strand board (OSB) manufacturing)

3219 Other Wood Product Manufacturing^T

32191 Millwork^T

321911 Wood Window and Door Manufacturing

321912 Cut Stock, Resawing Lumber, and Planing

321918 Other Millwork (including Flooring)

32192 Wood Container and Pallet Manufacturing^T

321920 Wood Container and Pallet Manufacturing

32199 All Other Wood Product Manufacturing^T

321991 Manufactured Home (Mobile Home) Manufacturing

321992 Prefabricated Wood Building Manufacturing

321999 All Other Miscellaneous Wood Product Manufacturing

322 Paper Manufacturing

Industries in the Paper Manufacturing subsector make pulp, paper, or converted paper products. The manufacturing of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single establishment. There are essentially three activities. The manufacturing of pulp involves separating the cellulose fibers from other impurities in wood or used paper. The manufacturing of paper involves matting these fibers into a sheet. Converted paper products are made from paper and other materials by various cutting and shaping techniques and includes coating and laminating activities.

The Paper Manufacturing subsector is subdivided into two industry groups, the first for the manufacturing of pulp and paper and the second for the manufacturing of converted paper products.

3221 Pulp, Paper, and Paperboard Mills^T

32211 Pulp Mills^T

322110 Pulp Mills

32212 Paper Mills^T

322121 Paper (except Newsprint) Mills

322122 Newsprint Mills

32213 Paperboard Mills^T

[322130](#) Paperboard Mills

[3222](#) Converted Paper Product Manufacturing^T

[32221](#) Paperboard Container Manufacturing^T

[322211](#) Corrugated and Solid Fiber Box Manufacturing

[322212](#) Folding Paperboard Box Manufacturing

[322219](#) Other Paperboard Container Manufacturing

[32222](#) Paper Bag and Coated and Treated Paper Manufacturing^T

[322220](#) Paper Bag and Coated and Treated Paper Manufacturing

[32223](#) Stationery Product Manufacturing^T

[322230](#) Stationery Product Manufacturing

[32229](#) Other Converted Paper Product Manufacturing^T

[322291](#) Sanitary Paper Product Manufacturing

[322299](#) All Other Converted Paper Product Manufacturing