

1. Availability: Seller makes electric energy, capacity and ancillary services available under this Tariff to any purchaser in the Southwest region, except as prohibited below.
2. Applicability: This Tariff is applicable to all wholesale sales of energy, capacity, and ancillary services by Seller, which are (1) subject to the jurisdiction of the Commission, and (b) not made pursuant to another tariff on file with the Commission.
3. Rates: All sales shall be made at rates established by agreement between the purchaser and Seller.
4. Other Terms and Conditions: All other terms and conditions shall be established by agreement between the purchaser and Seller.
5. Seller Category: Seller is a Category 2 seller in the Southwest region, as defined in 18 C.F.R. § 35.36(a).
6. Compliance with Commission Regulations: Seller shall comply with the provisions of 18 C.F.R. Part 35, Subpart H, as applicable, and with any conditions the Commission imposes in its orders concerning Seller's market-based rate authority, including orders in which the Commission authorizes Seller to engage in affiliate sales under this Tariff or otherwise restricts or limits Seller's market-based rate authority. Failure to comply with the applicable provisions of 18 C.F.R. Part 35, Subpart H, and with any orders of the Commission concerning Seller's market-based rate authority, will constitute a violation of this Tariff.
7. Limitations and Exemptions Regarding Market-Based Rate Authority: Seller has received waiver of: Subparts B and C of Part 35, except for sections 35.12(a), 35.13(b), 35.15 and 35.16; Part 41, Part 101, and Part 141, except sections 141.14 and 141.15; and received blanket approval under Part 34. *RE Barren Ridge 1 LLC*, Docket No. ER16- -000 (2016).
8. Ancillary Services: Seller may make available to any purchaser the following ancillary services:

California: Seller offers regulation service, spinning reserve service, and non-spinning reserve service to the California Independent System Operator Corporation ("CAISO") and to others that are self-supplying ancillary services to the CAISO.

Third-party ancillary services: Seller offers Regulation and Frequency Response Service, Reactive Supply and Voltage Control Service, Energy and Generator Imbalance Service, Operating Reserve-Spinning, and Operating Reserve-Supplemental. Sales will not include the following: (1) sales to an RTO or an ISO, *i.e.*, where that entity has no ability to self-supply ancillary services but instead depends on third parties; and (2) sales to a traditional, franchised public utility affiliated with the third-party supplier, or sales where the underlying transmission service is on the system of the public utility affiliated with the third-party supplier. Sales of Operating Reserve-Spinning and Operating Reserve-Supplemental will not include sales to a public utility that is purchasing ancillary services to satisfy its own open access transmission tariff requirements to offer ancillary

services to its own customers, except where the Commission has granted authorization. Sales of Regulation and Frequency Response Service and Reactive Supply and Voltage Control Service will not include sales to a public utility that is purchasing ancillary services to satisfy its own open access transmission tariff requirements to offer ancillary services to its own customers, except at rates not to exceed the buying public utility transmission provider's OATT rate for the same service or where the Commission has granted authorization.

9. Effective Date: This Tariff is effective on such date as set by the Commission.

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

RE Barren Ridge 1 LLC)
) Docket No. ER16- -000
)

**APPLICATION FOR MARKET-BASED RATE AUTHORITY AND REQUESTS FOR
WAIVERS AND BLANKET AUTHORIZATIONS**

Pursuant to Section 205 of the Federal Power Act (“FPA”),¹ Part 35 of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations,² and Rules 205 and 207 of the Commission’s Rules of Practice and Procedure,³ and Order No. 697,⁴ RE Barren Ridge 1 LLC (“Barren Ridge” or “Applicant”) submits this application (“Application”) requesting that the Commission (i) accept for filing its Market-Based Rate Schedule attached hereto as Appendix A (“Tariff”) to be effective February 29, 2016; (ii) grant Applicant the authority to sell energy, capacity and ancillary services in wholesale transactions within the Southwest region at negotiated, market-based rates;⁵ and (iii) grant the waivers of, and authorizations under, certain of the Commission’s regulations that are routinely accorded to entities with market-based rate authority.

¹ 16 U.S.C. § 824d (2012).

² 18 C.F.R. Part 35 (2015).

³ *Id.* §§ 385.205, 385.207.

⁴ *Market-Based Rates for Wholesale Sales of Elec. Energy, Capacity and Ancillary Servs. by Pub. Utils.*, Order No. 697, FERC Stats. & Regs. ¶ 31,252 (2007) (“Order No. 697”), *clarified*, 121 FERC ¶ 61,260 (2007), *order on reh’g*, Order No. 697-A, FERC Stats. & Regs. ¶ 31,268 (“Order No. 697-A”), *clarified*, 124 FERC ¶ 61,055, *order on reh’g and clarification*, Order No. 697-B, FERC Stats. & Regs. ¶ 31,285 (2008), *order on reh’g & clarification*, Order No. 697-C, FERC Stats. & Regs. ¶ 31,291 (2009) (“Order No. 697-C”), *order on reh’g & clarification*, Order No. 697-D, FERC Stats. & Regs. ¶ 31,305, *order on clarification*, 131 FERC ¶ 61,021 (2010), *aff’d sub nom. Mont. Consumer Council v. FERC*, 659 F.3d 910 (9th Cir. 2011), *cert denied sub nom. Pub. Citizen, Inc. v. FERC*, 133 S. Ct. 26 (2012).

⁵ The geographic region is defined in Appendix D to Order No. 697-A.

I. LIST OF DOCUMENTS SUBMITTED

In support of this Application, Barren Ridge provides the following:

1. Market-Based Rate Tariff in RTF format with metadata attached in compliance with Order No. 714;⁶
2. Appendix A: PDF of Market-Based Rate Tariff;
3. Appendix B: List of affiliated generation, transmission, and pipeline assets;
4. Appendix C: Corporate organization chart;
5. Appendix D: Pivotal Supplier and Market Share Analysis of Ms. Julie R. Solomon; and
6. Appendix E: Statement regarding passive Class A membership interests.

II. COMMUNICATIONS

All correspondence and communications regarding this Application should be addressed and directed to the following persons, who are also designated for service in this docket:

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Persons denoted with an asterisk (*) are those designated for service pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure.⁷ Applicant requests waiver of Rule 203(b)(3)⁸ so that a copy of any communications in the proceedings referenced above may be served on all persons listed above.

⁶ *Electronic Tariff Filings*, Order No. 714, FERC Stats. & Regs. ¶ 31,276 (2008).

⁷ 18 C.F.R. § 385.2010.

⁸ *Id.* § 385.203(b)(3).

III. DESCRIPTION OF APPLICANT AND ITS RELEVANT AFFILIATES

A. Applicant

Barren Ridge is a Delaware limited liability company that is developing, and will own and operate an approximately 60 megawatt (“MW”) (nameplate) solar photovoltaic (“PV”) project and related interconnection facilities (“Barren Ridge Facility”) located in Kern County, California. The Barren Ridge Facility will interconnect with the Southern California Edison Company (“SCE”) distribution system within the balancing authority area (“BAA”) controlled by the Los Angeles Department of Water and Power (“LADWP”). Barren Ridge is an exempt wholesale generator (“EWG”) under the Public Utility Holding Company Act of 2005 (“PUHCA”).⁹ All of the output from the Barren Ridge Facility will be sold at wholesale pursuant to a 20-year power purchase agreement (“PPA”) with LADWP.

B. Applicant’s Upstream Ownership

Barren Ridge is wholly owned by RE Barren Ridge 3 Holdings LLC (“BR3 Holdings”). RE Barren Ridge 2 Holdings LLC (“BR2 Holdings”) owns 100 percent of the controlling Class B membership interests in, and is the “Managing Member” of, BR3 Holdings. The remaining ownership interests in BR3 Holdings are Class A membership interests, which are passive and non-controlling, conveying only limited consent rights substantially similar to those of the passive tax equity investors in *AES Creative Resources, L.P.*¹⁰ Accordingly, the Class A membership interests convey no direct or indirect operational control over BR3 Holdings, Applicant, or Applicant’s FERC-jurisdictional facilities. Control over the day-to-day operations

⁹ See RE Barren Ridge 1 LLC, Notice of Self-Certification of Exempt Wholesale Generator Status, Docket No. EG15-41-000 (filed Jan. 9, 2015); *Old Mill Solar, L.L.C., et al.*, Docket Nos. EG15-36-000, *et al.* (Apr. 8, 2015) (notice of effectiveness of EWG status); RE Barren Ridge 1 LLC, Amendment to Notice of Self-Certification of Exempt Wholesale Generator Status, Docket No. EG15-41-000 (filed Apr. 28, 2015).

¹⁰ 129 FERC ¶ 61,239, at P 26 (2009). A statement providing additional information about the Class A interests in BR3 Holdings is attached hereto as Appendix E.

of the Barren Ridge Facility will reside with BR2 Holdings, as the owner of 100 percent of the Class B, voting, controlling and operating membership interests in BR3 Holdings.

BR2 Holdings is a wholly-owned subsidiary of RE Barren Ridge 1 Holdings LLC (“BR1 Holdings”). BR1 Holdings is a wholly-owned subsidiary of Recurrent Energy Development Holdings, LLC (“Development Holdings”). Recurrent Energy, LLC (“Recurrent”) owns all of the membership interests in Development Holdings. Each of Barren Ridge, BR3 Holdings, BR2 Holdings, BR1 Holdings, Development Holdings, and Recurrent is a Delaware limited liability company.

Based in San Francisco, Recurrent develops, owns, and manages utility scale solar projects throughout the United States. Recurrent is a wholly-owned subsidiary of Canadian Solar Energy Acquisition Co., which is a wholly-owned subsidiary of Canadian Solar, Inc. (“Canadian Solar”), a Canadian corporation. Canadian Solar is a publicly-traded company (NASDAQ: CSIQ), headquartered in Ontario, Canada. It has provided over 3,500 customers in more than 90 countries with more than 30 million PV modules over the past 13 years. The company is a vertically-integrated provider of ingot, wafer, solar cell, solar module and other solar applications. In addition to the generation and transmission that it owns and controls through its ownership of Recurrent, Canadian Solar is an indirect, minority owner of a number of qualifying small power production facilities (“QFs”), each of which is included in the attached Appendix B. Except as identified in Appendix B, and described herein, Canadian Solar does not own or control, directly or indirectly, any generation or transmission facilities within the United States other than such dedicated incidental transmission assets as may be necessary for the interconnection of generation projects. To the extent the Commission would consider

photovoltaic panels as “inputs to electricity products,”¹¹ Canadian Solar is one of many manufacturers in that highly competitive industry.

C. Energy Affiliates

Applicant and its affiliates control approximately 342 MW in the LADWP BAA and first-tier markets. All of Recurrent’s energy affiliates are identified in Appendix B.¹² Other than the Barren Ridge Facility, Recurrent does not own or control, directly or indirectly, any generation or transmission assets in the LADWP BAA. Recurrent’s public utility affiliates in the California Independent System Operator Corporation (“CAISO”) BAA are described below.¹³

- *Astoria*. RE Astoria LLC (“Astoria”) is developing and will own and operate an approximately 100 MW solar PV project and related interconnection facilities located in Kern County, California (“Astoria Facility”). The Astoria Facility will interconnect with the SCE transmission system within the CAISO BAA via a generation tie-line and related interconnection facilities (collectively, the “Astoria Shared Facilities”). The Astoria Shared Facilities will be owned and shared among Astoria, RE Astoria 2 LLC (“Astoria 2”), RE Garland LLC, RE Garland A LLC and RE Garland 2 LLC pursuant to a shared facilities agreement (“Astoria SFA”) and a Large Generator Interconnection Agreement Co-Tenancy Agreement (“Astoria CTA”). Astoria is an EWG¹⁴ that has applied for market-based rate authority.¹⁵ All of the output from the Astoria Facility will be sold at wholesale pursuant to a 15-year PPA with Pacific Gas and Electric Company (“PG&E”).

¹¹ 18 C.F.R. § 35.36 (defining “inputs to electric power production” as “intrastate natural gas transportation, intrastate natural gas storage or distribution facilities; sites for generation capacity development; physical coal supply sources and ownership of or control over who may access transportation of coal supplies”).

¹² Consistent with the conservative approach taken with respect to the competitive analysis in this application, including in Appendix D, Applicant assumed, in preparing Appendix B, that it and its affiliates control the facilities they own. This assumption is not, however, intended to limit the rights of Applicant or any of its affiliates to demonstrate in other proceedings that the facilities listed on Appendix B are controlled by another entity pursuant to a contractual agreement or other relevant facts, as provided in Order No. 697.

¹³ Certain affiliates described herein have not yet filed a rate schedule with the Commission but intend to do so in the near future. Accordingly, in preparing the competitive analysis set forth in this Application, Applicant has included the capacity to be owned by all of Recurrent’s subsidiary project companies described herein that are planning to apply for market-based rate authority within the next few months.

¹⁴ See RE Astoria LLC, Notice of Self-Certification of Exempt Wholesale Generator Status, Docket No. EG14-67-000 (filed June 19, 2014); *Danskammer Energy, LLC, et al.*, Docket Nos. EG14-59-000, *et al.* (Sept. 11, 2014) (notice of effectiveness of EWG status).

¹⁵ See RE Astoria LLC, *Application for Market-Based Rate Authority, And Requests for Waivers, Blanket Authorizations and Expedited Consideration*, Docket No. ER16-341-000 (filed Nov. 17, 2015) (as clarified Nov. 24, 2015, Dec. 4, 2015 and Dec. 9, 2015).

- *Astoria 2*. Astoria 2 is developing and will own and operate an approximately 75 MW solar PV project and related interconnection facilities located in Kern County, California (“Astoria 2 Facility”). The Astoria 2 Facility will interconnect with the SCE transmission system within the CAISO BAA via the Astoria Shared Facilities pursuant to the Astoria SFA and the Astoria CTA. Astoria 2 is an EWG¹⁶ that has applied for market-based rate authority.¹⁷ All of the output from the Astoria 2 Facility will be sold at wholesale pursuant to several PPAs, each with a term of 20 years, with the Southern California Public Power Authority, the Power and Water Resources Pooling Authority, and the cities of Lodi, Corona, Morena Valley and Rancho Cucamonga, California.
- *Mustang*. RE Mustang LLC (“Mustang”) is developing, and will own and operate an approximately 30 MW solar PV project and related interconnection facilities (“Mustang Facility”) located in Kings County, California. The Mustang Facility will interconnect with the transmission system owned by PG&E within the CAISO BAA via a generation tie-line and related interconnection facilities (“Mustang Shared Facilities”).¹⁸ The Mustang Shared Facilities will be owned and shared among Mustang RE Mustang 3 LLC (“Mustang 3”), and RE Mustang 4 LLC (“Mustang 4”) as tenants-in-common pursuant to a shared facilities agreement (“Mustang SFA”) and a Large Generator Interconnection Agreement Co-Tenancy Agreement (“Mustang CTA”). Mustang is an EWG under PUHCA¹⁹ that has applied for market-based rate authorization.²⁰ All of the output from the Mustang Facility will be sold at wholesale to Sonoma Clean Power (“SCP”) pursuant to a 20-year PPA.
- *Mustang 3*. Mustang 3 is developing and will own and operate an approximately 40 MW solar PV project and related interconnection facilities located in Fresno County, California (“Mustang 3 Facility”). The Mustang 3 Facility will interconnect with the PG&E transmission system within the CAISO BAA via the Mustang Shared Facilities pursuant to the Mustang SFA and the Mustang CTA. Mustang 3 is an EWG²¹ that has

¹⁶ See RE Astoria 2 LLC, Notice of Self-Certification of Exempt Wholesale Generator Status, Docket No. EG14-68-000 (filed June 19, 2014); *Danskammer Energy, LLC, et al.*, Docket Nos. EG14-59-000, *et al.* (Sept. 11, 2014) (notice of effectiveness of EWG status).

¹⁷ See RE Astoria 2 LLC, *Application for Market-Based Rate Authority, And Requests for Waivers, Blanket Authorizations and Expedited Consideration*, Docket No. ER16-343-000 (filed Nov. 18, 2015) (as clarified Nov. 24, 2015, Dec. 4, 2015 and Dec. 9, 2015).

¹⁸ The Commission uses a seller’s BAA or the RTO/ISO market, as applicable, as the default relevant geographic market for the purposes of evaluating an application for market-based rate authority. See Order No. 697, FERC Stats. & Regs. ¶ 31,252 at P 231.

¹⁹ See RE Mustang LLC, Notice of Self-Certification of Exempt Wholesale Generator Status, Docket No. EG15-74-000 (filed Apr. 27, 2015); *Seville Solar One LLC, et al.*, Docket Nos. EG15-71-000, *et al.* (Aug. 7, 2015) (notice of effectiveness of EWG status).

²⁰ See RE Mustang LLC, *Application for Market-Based Rate Authority and Requests for Waivers and Blanket Authorizations*, Docket No. ER16-498-000 (filed Dec. 10, 2015).

²¹ See RE Mustang 3 LLC, Notice of Self-Certification of Exempt Wholesale Generator Status, Docket No. EG15-75-000 (filed Apr. 27, 2015); *Seville Solar One LLC, et al.*, Docket Nos. EG15-71-000, *et al.* (Aug. 7, 2015) (notice of effectiveness of EWG status).

applied for market-based rate authorization.²² All of the output from the Mustang 3 Facility will be sold at wholesale pursuant to a 20-year PPA with SCP.

- Mustang 4.* Mustang 4 is developing and will own and operate an approximately 30 MW solar PV project and related interconnection facilities located in Fresno County, California (“Mustang 4 Facility”). The Mustang 4 Facility will interconnect with the PG&E transmission system within the CAISO BAA via the Mustang Shared Facilities pursuant to the Mustang SFA and the Mustang CTA. Mustang 4 is an EWG²³ that has applied for market-based rate authorization.²⁴ All of the output from the Mustang 4 Facility will be sold at wholesale to SCP pursuant to a 20-year PPA.
- Columbia.* RE Columbia LLC (“Columbia”) is a Delaware limited liability company that owns and operates an approximately eight mile generation tie-line (“Gen-Tie”) and related interconnection facilities (collectively, the “Columbia Shared Facilities”) in Kern County, California. Recurrent indirectly owns 35% of Columbia. Columbia is directly owned 45 percent by RE Camelot LLC (“Camelot”), 20 percent by RE Clearwater LLC (“Clearwater”), 20 percent by RE Yakima LLC (“Yakima”), and 15 percent by RE Columbia Two LLC (“Columbia Two”) (together, the “RE Project Companies”). Each of Clearwater and Yakima is a Delaware limited liability company that is an indirect, wholly-owned subsidiary of Recurrent. Each of Camelot and Columbia Two is a Delaware limited liability company that is a direct, wholly-owned subsidiary of Dominion Solar Holdings, Inc.²⁵ The RE Project Companies jointly own Columbia; however, Clearwater and Yakima are not affiliated with Camelot and Columbia Two. Columbia’s ownership and operation of the Columbia Shared Facilities is governed by a Shared Facilities Agreement (“Columbia SFA”) and the Amended and Restated CLGIA Co-Tenancy Agreement (“Columbia CTA”) by and among Columbia and the RE Project Companies, which have been filed with and accepted by the Commission.²⁶ Columbia owns and operates the Columbia Shared Facilities, including the Gen-Tie, which are used to interconnect generation owned by the RE Project Companies to the wholesale distribution system owned by SCE via the Gen-Tie, pursuant to the Columbia SFA and Columbia CTA.

²² See RE Mustang 3 LLC, *Application for Market-Based Rate Authority and Requests for Waivers and Blanket Authorizations*, Docket No. ER16-499-000 (filed Dec. 10, 2015).

²³ See RE Mustang 4 LLC, *Notice of Self-Certification of Exempt Wholesale Generator Status*, Docket No. EG15-76-000 (filed Apr. 27, 2015); *Seville Solar One LLC, et al.*, Docket Nos. EG15-71-000, *et al.* (Aug. 7, 2015) (notice of effectiveness of EWG status).

²⁴ See RE Mustang 4 LLC, *Application for Market-Based Rate Authority and Requests for Waivers and Blanket Authorizations*, Docket No. ER16-500-000 (filed Dec. 10, 2015).

²⁵ Dominion Solar Holdings, Inc. is a direct, wholly owned subsidiary of Dominion Energy, Inc., which is a direct, wholly-owned subsidiary of Dominion Resources, Inc. (“Dominion”). Applicant is not affiliated with any Dominion affiliate other than Columbia.

²⁶ See *Dominion Solar Gen-Tie, LLC, et al.*, 148 FERC ¶ 61,167 (2014) (accepting the Columbia SFA and the Columbia CTA and granting waiver of the Commission’s open access and standards of conduct requirements), *order on reh’g*, 152 FERC ¶ 61,014 (2015).

- *Exempt QFs.* Recurrent is affiliated with entities that own solar PV QFs that, pursuant to Section 292.601 of the Commission’s regulations,²⁷ are exempt from Commission regulation under Sections 205 and 206 of the FPA (“Exempt QFs”). Within the CAISO BAA, and first tier markets thereto, the Exempt QFs control a combined capacity of 7.1 MW (nameplate), all of which is fully committed under long-term PPAs.

Except as described herein, neither Recurrent nor any of its affiliates owns or controls, directly or indirectly, any generation assets within the relevant market or any transmission or inputs to electric power production in North America.²⁸ Recurrent controls sites in the CAISO market that have the cumulative potential for approximately 740 MW of commercially feasible new generation capacity.

IV. APPLICANT SATISFIES THE COMMISSION’S STANDARDS FOR MARKET-BASED RATE AUTHORIZATION

The Commission will grant authority to sell electric energy (including capacity and ancillary services) at market-based rates if the seller, and each of its affiliates (1) does not have, or has adequately mitigated, horizontal market power;²⁹ and (2) does not have (or has adequately mitigated) vertical market power.³⁰ As demonstrated below, Applicant satisfies these requirements and should be permitted to make wholesale sales of electric energy and electric capacity at negotiated, market-based rates under the attached Tariff.

²⁷ 18 C.F.R. § 292.602.

²⁸ Subsidiaries and affiliates of Recurrent own and are developing generation facilities located within the Electric Reliability Council of Texas BAA.

²⁹ See Order No. 697, FERC Stats. & Regs. ¶ 31,252 at P 791.

³⁰ *Id.*

A. Applicant Lacks Horizontal Market Power

The Commission uses two indicative screens for assessing generation market power: the Pivotal Supplier Analysis (“PSA”) and the Wholesale Market Share Analysis (“MSA”).³¹ Under each screen, the Commission examines all of the generation owned or controlled by an applicant and its affiliates in the pertinent market.

The PSA is intended to determine if the BAA’s annual peak demand can be served without an applicant’s generation.³² Once the wholesale market is determined, the test is straightforward; regardless of the generation owned or controlled by an applicant, the only issue is whether there is sufficient rival generation to serve wholesale load; that is, annual peak load minus a native load proxy. The PSA is based on the peak hour of the year and essentially determines which suppliers are available to service demand in the relevant BAA market. In implementing the PSA, an applicant determines the net uncommitted supply available to compete at wholesale for the peak hour of the year for the relevant BAA market, which is equal to the total uncommitted capacity less the wholesale load for such peak hours. If the applicant's uncommitted capacity is less than the net uncommitted supply, then the applicant passes the PSA screen.

The MSA screen measures uncommitted capacity in each of the four seasons to determine whether a seller has a dominant position in the market based on the number of MW of uncommitted capacity it owns or controls relative to the uncommitted capacity of the entire relevant market.³³ An applicant satisfies the MSA screen if it has less than twenty (20) percent of the market share in the relevant market for all seasons.

³¹ *Id.* P 62.

³² *Id.* P 35.

³³ *Id.* P 34.

As noted above, Applicant is located in the LADWP BAA. Accordingly, Applicant uses the LADWP BAA as the relevant geographic market for purposes of its request for market-based rate authorization.³⁴ Because Applicant has a long-term PPA with LADWP, under which LADWP will purchase all of the Barren Ridge Facility's output, Applicant does not control any uncommitted capacity in the LADWP BAA. Thus, under both the PSA and MSA screens, Applicant's share of uncommitted capacity in the relevant market is zero.

Even under a conservative approach that ignores the control transferred to the purchasers under the PPAs, Applicant easily passes both the PSA and MSA screens in the relevant market, as demonstrated in Appendix D. Under this conservative approach, Applicant and its affiliates control 342 MW of installed capacity in the LADWP market and first-tier markets thereto. As reflected in Appendix D, the total uncommitted capacity in the LADWP market is 4,998 MW, and the wholesale load is 1,631 MW. Therefore, the net uncommitted supply in the LADWP market (the total uncommitted supply minus the wholesale load) is 3,367 MW. Applicant passes the PSA screen because its affiliated capacity (342 MW) is less than the net uncommitted supply in the CAISO market (3,367 MW). Applicant similarly passes the MSA screen because, as demonstrated in Appendix D, its affiliated capacity represents no more than approximately 7.1% of the seasonal uncommitted capacity in the LADWP market.

Thus, even under the conservative approach described above and in Appendix D, Applicant easily passes both the PSA and MSA screens in the relevant market.³⁵ Consequently,

³⁴ See *id.* P 231.

³⁵ Appendix D includes the calculations under the market power screens as prepared by Ms. Julie R. Solomon of Navigant Consulting. Ms. Solomon's analysis adopts a conservative approach that ignores the fact that generating capacity from the Barren Ridge Facility will be sold pursuant to a long-term PPA. If, however, such sales are taken into account, Applicant's market share is zero.

Applicant satisfies the Commission's criteria for demonstrating that it lacks horizontal market power.

B. Applicant Lacks Vertical Market Power

In determining whether an applicant possesses vertical market power, the Commission will consider whether the applicant has, or has adequately mitigated, transmission market power and whether the applicant can erect barriers to entry in the relevant market. Applicant satisfies both of the factors considered by the Commission in determining whether an applicant possesses vertical market power.

1. Applicant Lacks Transmission Market Power

Applicant does not own, operate or control, and is not affiliated with any entity that owns, operates or controls, transmission facilities (other than the limited interconnection facilities necessary to connect the facilities to the transmission grid). Accordingly, Applicant does not possess market power relating to the transmission of electric power. Consistent with the Commission's guidance in *Kingfisher Wind, LLC*,³⁶ Applicant further states that it satisfies the requirements under Section 35.28(d)(2) of Commission's regulations for a blanket waiver from the Commission's requirements to file an open access transmission tariff, to establish and maintain an open access same-time information system, and to comply with the Commission's standards of conduct.³⁷

2. Applicant Cannot Erect Other Barriers to Entry

The Commission has adopted a rebuttable presumption that the ownership or control of, or affiliation with an entity that owns or controls, intrastate natural gas transportation, intrastate natural gas storage or distribution facilities; sites for generation capacity development; and

³⁶ 151 FERC ¶ 61,276, at P 26 (2015).

³⁷ 18 C.F.R. § 35.28(d)(2).

sources or coal supplies and the transportation of coal supplies such as barges and rail cars do not allow a seller to raise entry barriers.³⁸ However, the Commission requires sellers with market-based rate authority to describe any such ownership, control or affiliation, and to make an affirmative statement that they have not erected barriers to entry into the relevant market and will not erect barriers to entry into the relevant market.³⁹ Sellers need not describe, or make an affirmative statement with regard to, natural gas and oil supply, including interstate natural gas transportation and oil transportation.⁴⁰

As noted above, Applicant is affiliated with entities that own and operate existing electric generation resources within the CAISO BAA. Additionally, as noted above, Applicant is affiliated with entities that own or control other potential inputs to electricity, including sites for the potential development of electricity generation. Generation sites acquired by Applicant's affiliates have been reported to the Commission in accordance with the Order No. 697-C reporting requirements.⁴¹ Under the Commission's rebuttable presumption, these affiliations do not allow Applicant to raise barriers to entry.

Applicant affirmatively states that neither it, nor any of its affiliates, has erected barriers to entry within the CAISO market and that neither it, nor any of its affiliates, will erect barriers to entry within the CAISO market.⁴² Consequently, Applicant satisfies the Commission's criteria for demonstrating that it lacks vertical market power.

³⁸ See Order No. 697, FERC Stats. & Regs. ¶ 31,252 at P 446.

³⁹ *Id.* PP 447-48.

⁴⁰ *Id.* PP 442-43.

⁴¹ See Order No. 697-C, FERC Stats. & Regs. ¶ 31,291 at P 18.

⁴² See 18 C.F.R. § 35.37(e)(4).

C. Applicant Does Not Engage in Affiliate Abuse

Order No. 697 requires that any seller with market-based rate authority must comply with the affiliate power sales restrictions and other affiliate restrictions. Applicant has included in its proposed Tariff a provision requiring compliance with the affiliate restrictions set forth in Section 35.39 of the Commission's regulations. However, neither Applicant, nor any of its affiliates, is a franchised public utility with captive customers. Therefore, the restrictions do not apply to Applicant.⁴³

V. ANCILLARY SERVICES

Applicant also seeks authorization to sell certain ancillary services in the market administered by CAISO. The Commission requires a separate study of the ancillary services markets to support a request to sell ancillary services at market-based rates. With respect to sales of ancillary services in the market operated by CAISO, Applicant relies, in the same manner as other sellers, on the studies accepted by the Commission in previous orders.⁴⁴ In addition, Applicant seeks authorization to sell ancillary services at market-based rates under requirements set forth in *Avista Corporation*,⁴⁵ as modified by Order No. 697,⁴⁶ in markets for which the Commission has not accepted a market power study and has not generally authorized the sale of ancillary services at market-based rates. Applicant has included in its Tariff the standard tariff provisions adopted in Order No. 697 for the proposed sales of ancillary services.

⁴³ See Order No. 697, FERC Stats. & Regs. ¶ 31,252 at P 552.

⁴⁴ See, e.g., *AES Redondo Beach, L.L.C.*, 83 FERC ¶ 61,358 (1998), *order on reh'g*, 87 FERC ¶ 61,208 (1999), *order on reh'g & clarification*, 90 FERC ¶ 61,036 (2000).

⁴⁵ 87 FERC ¶ 61,223, *order on reh'g*, 89 FERC ¶ 61,136 (1999).

⁴⁶ See Order No. 697, FERC Stats. & Regs. ¶ 31,252 at PP 1058-61.

VI. REPORTING REQUIREMENTS

Applicant will comply with the reporting requirements normally imposed on entities that are authorized to sell electric energy and capacity at market-based rates. Applicant will submit electric quarterly reports⁴⁷ and comply with other reporting requirements in accordance with Order No. 697. Additionally, pursuant to Order No. 652⁴⁸ and Order No. 697, Applicant will provide timely reports to the Commission of any change in status that would reflect a departure from the facts relied upon by the Commission in its market analysis, including affiliation with any entity that owns or controls generation or transmission facilities or inputs to electric power or an electric utility with a franchised service area.⁴⁹ Applicant also agrees to notify the Commission of any changes in ownership or control of generation or transmission facilities or inputs to electric power production.⁵⁰

VII. REQUEST FOR WAIVERS

In addition to its request for market-based rate authority, Applicant requests the following authorizations and waivers of various Commission regulations, consistent with those granted to other sellers of power at market-based rates:⁵¹

- (1) Waiver of the accounting, reporting and other requirements of Parts 41, 101, and 141 of the Commission's regulations, except sections 141.14 and 141.15;

⁴⁷ See *Revised Pub. Util. Filing Requirements*, Order No. 2001, FERC Stats. & Regs. ¶ 31,127, *reh'g denied*, Order No. 2001-A, 100 FERC ¶ 61,074, *reh'g denied*, Order No. 2001-B, 100 FERC ¶ 61,342, *order directing filing*, Order No. 2001-C, 101 FERC ¶ 61,314 (2002), *order directing filing*, Order No. 2001-D, 102 FERC ¶ 61,334 *order refining filing requirements*, Order No. 2001-E, 105 FERC ¶ 61,352 (2003), *order on clarification*, Order No. 2001-F, 106 FERC ¶ 61,060 (2004), *order revising filing requirements*, Order No. 2001-G, 120 FERC ¶ 61,270, *order on reh'g and clarification*, Order No. 2001-H, 121 FERC ¶ 61,289 (2007), *order revising filing requirements*, Order No. 2001-I, FERC Stats. & Regs. ¶ 31,282 (2008).

⁴⁸ *Reporting Requirement for Changes in Status for Pub. Utils. with Market-Based Rate Auth.*, Order No. 652, FERC Stats & Regs. ¶ 31,175, *order on reh'g*, 111 FERC ¶ 61,413 (2005).

⁴⁹ 18 C.F.R. § 35.42.

⁵⁰ *Id.*

⁵¹ See *GS Elec. Generating Coop., Inc.*, 81 FERC ¶ 61,042, at 61,230 (1997).

(2) Waiver of the filing requirements of Subparts B and C of Part 35 of the Commission's regulations, except the transmittal requirements of 18 C.F.R. § 35.12(a) and § 35.13(b), and the notification of the cancellation and succession of service requirements of 18 C.F.R. § 35.15 and § 35.16, respectively.

(3) Blanket authorization for all future issuances of securities or assumptions of liabilities pursuant to Section 204 of the FPA⁵² and Part 34 of the Commission's regulations.

(4) Other appropriate waivers and authorizations granted to other power marketers that may be necessary for Applicant's rate schedule to be made effective as requested by this application.

VIII. EFFECTIVE DATE

Pursuant to Section 35.3(a) of the Commission's regulations,⁵³ Applicant respectfully requests that the attached Tariff become effective February 29, 2016.

⁵² 16 U.S.C. § 824c.

⁵³ 18 C.F.R. § 35.3(a).

IX. CONCLUSION

Wherefore, for the foregoing reasons, Applicant respectfully requests that the Commission accept its Tariff for filing, to become effective February 29, 2016, and grant it authority to sell energy, capacity and ancillary services in wholesale transactions at negotiated, market-based rates. Applicant further requests that the Commission grant it the waivers and authorizations described herein.

Respectfully submitted,

/s/ Adam Wenner

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Date: December 29, 2015

APPENDIX A

Market-Based Rate Tariff

1. Availability: Seller makes electric energy, capacity and ancillary services available under this Tariff to any purchaser in the Southwest region, except as prohibited below.
2. Applicability: This Tariff is applicable to all wholesale sales of energy, capacity, and ancillary services by Seller, which are (1) subject to the jurisdiction of the Commission, and (b) not made pursuant to another tariff on file with the Commission.
3. Rates: All sales shall be made at rates established by agreement between the purchaser and Seller.
4. Other Terms and Conditions: All other terms and conditions shall be established by agreement between the purchaser and Seller.
5. Seller Category: Seller is a Category 2 seller in the Southwest region, as defined in 18 C.F.R. § 35.36(a).
6. Compliance with Commission Regulations: Seller shall comply with the provisions of 18 C.F.R. Part 35, Subpart H, as applicable, and with any conditions the Commission imposes in its orders concerning Seller's market-based rate authority, including orders in which the Commission authorizes Seller to engage in affiliate sales under this Tariff or otherwise restricts or limits Seller's market-based rate authority. Failure to comply with the applicable provisions of 18 C.F.R. Part 35, Subpart H, and with any orders of the Commission concerning Seller's market-based rate authority, will constitute a violation of this Tariff.
7. Limitations and Exemptions Regarding Market-Based Rate Authority: Seller has received waiver of: Subparts B and C of Part 35, except for sections 35.12(a), 35.13(b), 35.15 and 35.16; Part 41, Part 101, and Part 141, except sections 141.14 and 141.15; and received blanket approval under Part 34. *RE Barren Ridge 1 LLC*, Docket No. ER16- -000 (2016).
8. Ancillary Services: Seller may make available to any purchaser the following ancillary services:

California: Seller offers regulation service, spinning reserve service, and non-spinning reserve service to the California Independent System Operator Corporation ("CAISO") and to others that are self-supplying ancillary services to the CAISO.

Third-party ancillary services: Seller offers Regulation and Frequency Response Service, Reactive Supply and Voltage Control Service, Energy and Generator Imbalance Service, Operating Reserve-Spinning, and Operating Reserve-Supplemental. Sales will not include the following: (1) sales to an RTO or an ISO, *i.e.*, where that entity has no ability to self-supply ancillary services but instead depends on third parties; and (2) sales to a traditional, franchised public utility affiliated with the third-party supplier, or sales where the underlying transmission service is on the system of the public utility affiliated with the third-party supplier. Sales of Operating Reserve-Spinning and Operating Reserve-Supplemental will not include sales to a public utility that is purchasing ancillary services to satisfy its own open access transmission tariff requirements to offer ancillary

services to its own customers, except where the Commission has granted authorization. Sales of Regulation and Frequency Response Service and Reactive Supply and Voltage Control Service will not include sales to a public utility that is purchasing ancillary services to satisfy its own open access transmission tariff requirements to offer ancillary services to its own customers, except at rates not to exceed the buying public utility transmission provider's OATT rate for the same service or where the Commission has granted authorization.

9. Effective Date: This Tariff is effective on such date as set by the Commission.

APPENDIX B

Market-Based Rate Authority and Generation Assets
and
Electric Transmission Assets and/or Natural Gas Intrastate Pipelines
and/or Gas Storage Facilities

Recurrent Energy, LLC

Market-Based Rate Authority and Generation Assets

Filing Entity and its Energy Affiliates	Docket # where MBR authority granted	Generation Name	Owned By	Controlled By ¹	Date Control Transferred	Location		In-service Date	Nameplate and/or Seasonal Rating ²
						Balancing Authority Area	Geographic Region (per Appendix D)		
RE Mustang LLC	ER16-498 (pending)	Mustang	RE Mustang LLC	RE Mustang LLC	N/A	CAISO	Southwest	6/30/16 scheduled	30 MW
RE Mustang 3 LLC	ER16-499 (pending)	Mustang 3	RE Mustang 3 LLC	RE Mustang 3 LLC	N/A	CAISO	Southwest	6/30/16 scheduled	40 MW
RE Mustang 4 LLC	ER16-500 (pending)	Mustang 4	RE Mustang 4 LLC	RE Mustang 4 LLC	N/A	CAISO	Southwest	6/30/16 scheduled	30 MW
RE Astoria LLC	ER16-341 (pending)	Astoria	RE Astoria LLC	RE Astoria LLC	N/A	CAISO	Southwest	8/31/16 scheduled	100 MW
RE Astoria 2 LLC	ER16-343 (pending)	Astoria 2	RE Astoria 2 LLC	RE Astoria 2 LLC	N/A	CAISO	Southwest	8/31/16 scheduled	75 MW
RE Barren Ridge 1 LLC	ER16-___ (pending)	Barren Ridge	RE Barren Ridge 1 LLC	RE Barren Ridge 1 LLC	N/A	LADWP	Southwest	6/14/16 scheduled	60 MW
RE Cranbury Solar 1, LLC	N/A	RE Cranbury Solar 1, LLC	RE Cranbury Holdings LLC	RE Cranbury Holdings LLC	N/A	PJM	Northeast	1/31/2012	5.0 MW

¹ In order to present the most conservative case, the information provided in the "Controlled By" and "Date Control Transferred" columns takes the most conservative approach, *i.e.*, that the generation owner also controls the generation, even though, in many instances, the generation is committed to a wholesale purchaser under a long-term power sale agreement.

² Ratings are nameplate unless otherwise indicated.

Recurrent Energy, LLC

Market-Based Rate Authority and Generation Assets

Filing Entity and its Energy Affiliates	Docket # where MBR authority granted	Generation Name	Owned By	Controlled By ¹	Date Control Transferred	Location		In-service Date	Nameplate and/or Seasonal Rating ²
						Balancing Authority Area	Geographic Region (per Appendix D)		
RE-PRI, LLC	N/A	RE-PRI, LLC	RE Blocker LLC	RE Blocker LLC	N/A	CAISO	Southwest	3/31/09	0.2 MW
RE-VFO, LLC	N/A	RE-VFO, LLC	RE Blocker LLC	RE Blocker LLC	N/A	CAISO	Southwest	4/30/09	1.0 MW
RE-SDS, LLC	N/A	RE-SD, LLC	RE Blocker LLC	RE Blocker LLC	N/A	CAISO	Southwest	3/28/09	0.4 MW
RE Mohican, LLC	N/A	RE Mohican, LLC	RE Holdco CK 1 LLC	RE Holdco CK 1 LLC	N/A	CAISO	Southwest	9/1/10	1 MW
RE Santa Clara LLC	N/A	RE Santa Clara LLC	REK Holdings LLC	REK Holdings LLC	N/A	CAISO	Southwest	11/18/10	0.8 MW
RE Lancaster LLC	N/A	RE Lancaster LLC	RE Holdco CK 1 LLC	RE Holdco CK 1 LLC	N/A	CAISO	Southwest	12/31/10	0.8 MW
RE La Mesa LLC	N/A	RE La Mesa LLC	REK Holdings LLC	REK Holdings LLC	N/A	CAISO	Southwest	3/15/11	0.8 MW
RE Vallejo LLC	N/A	RE Vallejo LLC	RE Holdco CK 1 LLC	RE Holdco CK 1 LLC	N/A	CAISO	Southwest	3/22/11	0.3 MW
RE Vallejo 2 LLC	N/A	RE Vallejo 2 LLC	REK Holdings LLC	REK Holdings LLC	N/A	CAISO	Southwest	3/22/11	0.7 MW
Strata Roof 1, LLC	N/A	Strata Roof 1, LLC	Strata Roof 1, LLC	Strata Roof 1, LLC	N/A	SMUD/ BANC	Southwest	6/1/13	1.1 MW

Recurrent Energy, LLC

Market-Based Rate Authority and Generation Assets

Filing Entity and its Energy Affiliates	Docket # where MBR authority granted	Generation Name	Owned By	Controlled By ¹	Date Control Transferred	Location		In-service Date	Nameplate and/or Seasonal Rating ²
						Balancing Authority Area	Geographic Region (per Appendix D)		
Market Farm, LLC	N/A	Market Farm, LLC	Market Farm, LLC	Market Farm, LLC	N/A	Duke/Progress	Southeast	12/1/14	6.0 MW
Marshville Farm, LLC	N/A	Marshville Farm, LLC	Marshville Farm, LLC	Marshville Farm, LLC	N/A	Duke/Progress	Southeast	10/1/14	6.0 MW
Oakboro Farm, LLC	N/A	Oakboro Farm, LLC	Oakboro Farm, LLC	Oakboro Farm, LLC	N/A	Duke/Progress	Southeast	9/1/14	6.0 MW
Vickers Farm, LLC	N/A	Vickers Farm, LLC	Vickers Farm, LLC	Vickers Farm, LLC	N/A	Duke/Progress	Southeast	8/1/14	3.0 MW
Mile Farm, LLC	N/A	Mile Farm, LLC	Mile Farm, LLC	Mile Farm, LLC	N/A	Duke/Progress	Southeast	6/1/14	6.0 MW
New Bern Farm, LLC	N/A	New Bern Farm, LLC	New Bern Farm, LLC	New Bern Farm, LLC	N/A	Duke/Progress	Southeast	4/1/14	6.0 MW
Sigmon Catawba Farm, LLC	N/A	Sigmon Catawba Farm, LLC	Sigmon Catawba Farm, LLC	Sigmon Catawba Farm, LLC	N/A	Duke/Progress	Southeast	4/1/14	6.0 MW
Roxboro Farm, LLC	N/A	Roxboro Farm, LLC	Roxboro Farm, LLC	Roxboro Farm, LLC	N/A	Duke/Progress	Southeast	3/1/14	6.0 MW
Daniel Farm, LLC	N/A	Daniel Farm, LLC	Daniel Farm, LLC	Daniel Farm, LLC	N/A	Duke/Progress	Southeast	3/1/14	6.0 MW
Haynes Farm, LLC	N/A	Haynes Farm, LLC	Haynes Farm, LLC	Haynes Farm, LLC	N/A	Duke/Progress	Southeast	10/1/13	6.0 MW

Recurrent Energy, LLC

Market-Based Rate Authority and Generation Assets

Filing Entity and its Energy Affiliates	Docket # where MBR authority granted	Generation Name	Owned By	Controlled By ¹	Date Control Transferred	Location		In-service Date	Nameplate and/or Seasonal Rating ²
						Balancing Authority Area	Geographic Region (per Appendix D)		
Yanceyville Farm, LLC	N/A	Yanceyville Farm, LLC	Yanceyville Farm, LLC	Yanceyville Farm, LLC	N/A	Duke/Progress	Southeast	10/1/13	6.0 MW
Monroe Moore Farm, LLC	N/A	Moore Farm, LLC	Moore Farm, LLC	Moore Farm, LLC	N/A	Duke/Progress	Southeast	10/1/13	6.0 MW
Moorings Farm, LLC	N/A	Moorings Farm, LLC	Moorings Farm, LLC	Moorings Farm, LLC	N/A	Duke/Progress	Southeast	9/1/13	6.0 MW
White Cross Farm, LLC	N/A	White Cross Farm, LLC	White Cross Farm, LLC	White Cross Farm, LLC	N/A	Duke/Progress	Southeast	9/1/13	6.0 MW
Lenoir Farm, LLC	N/A	Lenoir Farm, LLC	Lenoir Farm, LLC	Lenoir Farm, LLC	N/A	Duke/Progress	Southeast	7/1/13	6.0 MW
Lenoir Farm 2, LLC	N/A	Lenoir Farm 2, LLC	Lenoir Farm 2, LLC	Lenoir Farm 2, LLC	N/A	Duke/Progress	Southeast	7/1/13	6.5 MW
Fuquay Farm, LLC	N/A	Fuquay Farm, LLC	Fuquay Farm, LLC	Fuquay Farm, LLC	N/A	Duke/Progress	Southeast	3/1/13	6.4 MW
Wilson Farm 1, LLC	N/A	Wilson Farm 1, LLC	Wilson Farm 1, LLC	Wilson Farm 1, LLC	N/A	Duke/Progress	Southeast	7/1/13	6.5 MW
Berkley East Solar, LLC	N/A	Berkley East Solar, LLC	Berkley East Solar, LLC	Berkley East Solar, LLC	N/A	ISO-NE	Northeast	8/18/13	4.0 MW
CES Sterling, LLC	N/A	CES Sterling, LLC	CES Sterling, LLC	CES Sterling, LLC	N/A	ISO-NE	Northeast	5/1/13	2.4 MW

Recurrent Energy, LLC

Market-Based Rate Authority and Generation Assets

Filing Entity and its Energy Affiliates	Docket # where MBR authority granted	Generation Name	Owned By	Controlled By ¹	Date Control Transferred	Location		In-service Date	Nameplate and/or Seasonal Rating ²
						Balancing Authority Area	Geographic Region (per Appendix D)		
Hunt Farm Solar, LLC	N/A	Hunt Farm, LLC	Hunt Farm, LLC	Hunt Farm, LLC	N/A	ISO-NE	Northeast	9/1/13	4.0 MW
SH Solarne2, LLC	N/A	SH Solarne2, LLC	SH Solarne2, LLC	SH Solarne2, LLC	N/A	ISO-NE	Northeast		
SE Solarne2 LLC	N/A	SE Solarne2 LLC	SE Solarne2 LLC	SE Solarne2 LLC	N/A	ISO-NE	Northeast		
SH Solarne7, LLC	N/A	SH Solarne7, LLC	SH Solarne7, LLC	SH Solarne7, LLC	N/A	ISO-NE	Northeast		

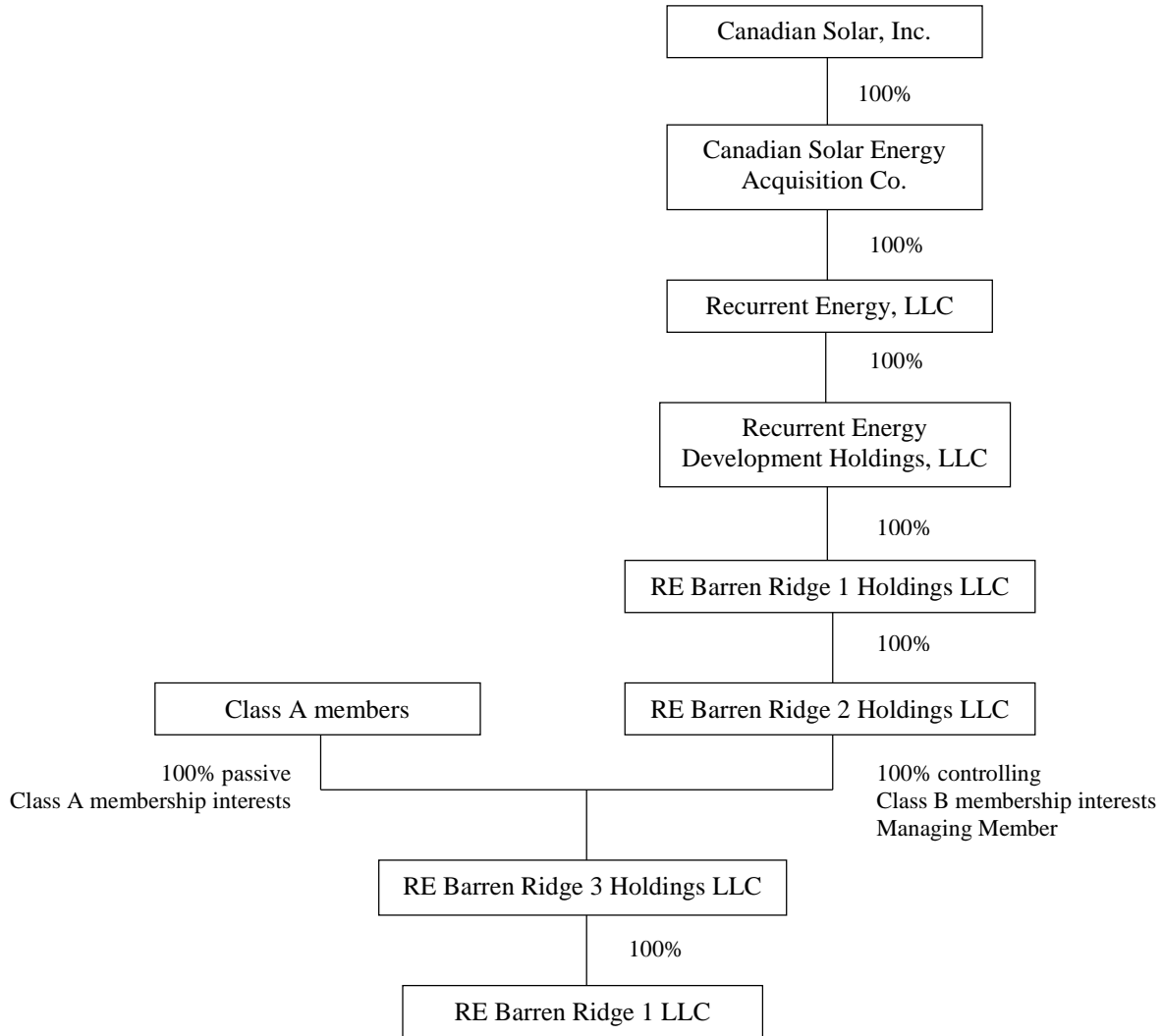
Recurrent Energy, LLC

Electric Transmission Assets and/or Natural Gas Intrastate Pipelines and/or Gas Storage Facilities

Filing Entity and its Energy Affiliates	Asset Name and Use	Owned By	Controlled By	Date Control Transferred	Location		Size
					Balancing Authority Area	Geographic Region (per Appendix D)	
RE Columbia, LLC	Generation Tie-Line	RE Columbia, LLC	RE Columbia, LLC	N/A	CAISO	Southwest	100 MW

APPENDIX C

Corporate Organization Chart



APPENDIX D

Pivotal Supplier and Market Share Analysis
Prepared by
Ms. Julie R. Solomon of Navigant Consulting

Part I -- Pivotal Supplier Analysis

Row	Generation	LADWP	
		MW	Reference December 13 - November 14
Seller and Affiliate Capacity			
A	Installed Capacity	60	Generation
B	Long-Term Firm Purchases	-	
C	Long-Term Firm Sales	-	
D	Imported Power	282	Affiliated capacity in first-tier markets
Non-Affiliate Capacity			
E	Installed Capacity	8,483	Wkp-LADWP Gen
F	Long-Term Firm Purchases	-	
G	Long-Term Firm Sales	-	
H	Imported Power	1,167	146 FERC ¶ 61,126 (2014) less Row E
I	Balancing Authority Area Reserve Requirement	(283)	Wkp-Oper Reserves
J	Amount of Line I Attributable to Seller, if any	-	
K	Total Uncommitted Capacity	4,998	SUM A,B,C,D,E,F,G,H,I,M
Load			
L	Balancing Authority Area Annual Peak Load	6,343	Wkp-LADWP Load
M	Average Daily Peak Native Load in Peak Month	(4,711)	Wkp-LADWP Load
N	Amount of Line M Attributable to Seller, if any	-	
O	Wholesale Load (SUM L,M)	1,631	
P	Net Uncommitted Supply (K-O)	3,367	
Q	Seller's Uncommitted Capacity	342	SUM A,B,C,D,J,N
Result of Pivotal Supplier Screen		PASS	Pass if Line Q < Line P Fail if Line Q > Line P

* See attached work papers for data supporting installed capacity and load figures for LADWP market.

LADWP MSA

Part II -- Market Share Analysis

Row		LADWP				Reference December 13 - November 14
		Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)	
Seller and Affiliate Capacity						
A	Installed Capacity	60	60	60	60	Generation
B	Long-Term Firm Purchases	-	-	-	-	
C	Long-Term Firm Sales	-	-	-	-	
D	Seasonal Average Planned Outages	-	-	-	-	
E	Imported Power	35	282	282	282	Affiliated capacity in first-tier markets (capped at SIL)
Capacity Deductions						
F	Average Peak Native Load in the Season	(3,317)	(3,589)	(4,383)	(3,971)	Wkp-LADWP Load
G	Amount of Line F Attributable to Seller, if any	-	-	-	-	
H	Amount of Line F Attributable to Others, if any	(3,317)	(3,589)	(4,383)	(3,971)	
I	Balancing Authority Area Reserve Requirement, if any	(199)	(215)	(263)	(238)	Wkp-Oper Reserves
J	Amount of Line I Attributable to Seller, if any	-	-	-	-	
K	Amount of Line I Attributable to Others, if any	(199)	(215)	(263)	(238)	
Non-Affiliate Capacity						
L	Installed Capacity	8,483	8,483	8,335	8,483	Wkp-LADWP Gen
M	Long-Term Firm Purchases	-	-	-	-	
N	Long-Term Firm Sales	-	-	-	-	
O	Local Seasonal Average Planned Outages	(910)	(719)	(300)	(557)	Wkp-LADWP Outages
P	Uncommitted Capacity Imports	-	657	1,119	1,167	146 FERC ¶ 61,126 (2014) less Row E
Supply Calculation						
Q	Total Competing Supply	4,056	4,616	4,508	4,883	SUM L,M,N,O,P,H,K
R	Seller's Uncommitted Capacity	95	342	342	342	SUM A,B,C,D,E,G,J
S	Total Seasonal Uncommitted Capacity	4,151	4,959	4,850	5,225	SUM Q,R
T	Seller's Market Share (R/S)	2.3%	6.9%	7.1%	6.5%	
	Results	PASS	PASS	PASS	PASS	Pass if < 20% Fail if > 20%

* See attached work papers for data supporting installed capacity and load figures for LADWP market.

APPENDIX E

Statement Regarding Passive Class A Membership Interests

FERC Staff regularly asks applicants identifying passive ownership interests in market-based rate applications to respond to data requests that are functionally identical to the data request propounded in *EquiPower Resources Management, LLC*.¹ The following responses to these questions are offered to demonstrate the passive nature of the Class A membership interests in RE Barren Ridge 3 Holdings LLC (“BR3 Holdings”).

(1) Do any of the passive interests in BR3 Holdings include voting rights (i.e., common stock or the equivalent of common stock)?

No, the passive upstream interests held by the Class A members include only limited consent and veto rights with respect to “Major Decisions” as described in Section 6.1(c) of the Third Amended and Restated Limited Liability Company Agreement (“LLCA”) of BR3 Holdings.

(2) If the passive interests are non-voting, please clarify the following:

a. Do they represent a separate class of security in BR3 Holdings’ ownership structure?

Yes. Ownership of BR3 Holdings is comprised of two classes of membership interests, Class A membership interests and Class B membership interests.

b. Is there a list describing the major corporate actions over which the holders of the passive or non-voting securities have consent/veto rights? If so, please file a publicly-available exhaustive list describing the major corporate actions over which the holder of the passive or non-voting securities has consent/veto rights.

Please see below for excerpts from the LCCA setting forth the consent rights of the Class A members.

....

“**Major Decision**” means (a) with respect to any period before the Cash Flip Point, a decision to take any of the following actions with respect to any Project Entity or the Project:

(i) Asset Dispositions. Sale, lease or other voluntary disposition of assets of any Project Entity, other than (A) sales of (1) energy, (2) related environmental attributes (such as renewable energy credits and carbon allowances), (3) related ancillary benefits (such as capacity credits), (B) transfers

¹ *EquiPower Resources Management, LLC*, Docket No. ER10-1089-000 (June 16, 2010) (unpublished letter order).

or other dispositions of state tax credits that remain in the Project Company and are not specifically allocated to the Class A Members, (C) transfers or other dispositions of unused land rights that are not necessary for the ownership, operation or maintenance of the Facility, and would not cause any material interruption to the operation of the Facility during the period before the Cash Flip Point, (D) transfers or other dispositions of spare parts and/or inventory of the Project Entities not used in or necessary for the operation of the Facility at the capacity contemplated under the Base Case Model to any Affiliate of the Class B Equity Investor, so long as such sale or exchange is on arm's length-terms, (E) transfers or other dispositions in connection with the replacement of assets or obsolete assets (as determined in the sole discretion of the Managing Member), and (F) those occurring in the ordinary course of business;

(ii) Material Contracts. Any Project Entity taking action to (A) cancel, suspend or terminate any Material Contract, (B) assign, release, relinquish, waive or replace the rights or obligations of any party to, or amend, any Material Contract (other than amendment of the Power Purchase Agreements, which is addressed in clause (iii) of this definition below) if any of the foregoing items in this clause (B) would have a Material Adverse Effect on any Project Entity or the Class A Members, (C) renew or enter into any replacement Material Contract unless such renewal or replacement is on terms not disadvantageous to the Class A Members when taken as a whole in any material respect as compared to the applicable contract as in effect on the Effective Date, or (D) enter into a new Material Contract; provided, that none of the following will be considered a Major Decision: (W) taking any action described in this clause (ii) if such action (1) is required by any Governmental Authority or (2) involves a Material Contract, the expense of which has been included in the annual operating budget for the Project or is within the limitations for expenditures above the annual operating budget that do not require approval as a Major Decision as provided in clause (iv) of this definition below, or that relates to the acquisition of goods or the provision of services permitted or required to be obtained under the Equity Holdings LLC Agreement or the Management Services Agreement, (X) the replacement of (1) any Governmental Approval or (2) any credit support for the Facility with other credit support on terms that are not disadvantageous to the Class A Members, when taken as a whole, in any material respect as compared to the applicable credit support as in effect on the Effective Date, (Y) the enforcement or management of contracts with suppliers and contractors, including settlement of liquidated damage claims with Construction Contractor, and declarations of substantial or final completion under the Installation Agreement or (Z) to the extent that there is a material Default under the Management Services Agreement, the MSA Sponsor Parent Guaranty or the MSA Guaranty, the termination of any of the foregoing and the entering into of a replacement agreement that satisfies the requirements of clause (b) of the definition of Management Services Agreement, the MSA Sponsor Parent Guaranty or MSA Guaranty, as applicable;

(iii) Power Purchase Agreement. Approval of any material amendment to the Power Purchase Agreement, which would reasonably be expected to (A) result in a reduction of net revenues from sales of energy by the Project Company, (B) shorten the term of the Power Purchase Agreement or (C) have a Material Adverse Effect;

(iv) Annual Operating Budget. Any Project Entity adopting, amending or exceeding the annual operating budget for the Facility, except for: (A) adopting an annual operating budget containing an aggregate expense amount for any Fiscal Year that is not more than 15% above the annual spending projected in the Base Case Model for such Fiscal Year; provided, that, the calculation of such excess percentage shall not take into account any increased costs or expenditures, or any other contractual obligations, set forth in any contract to which any Project Entity has become a party after the Effective Date that has been approved by the Class A Members, (B) spending up to 115% of the aggregate expense amount reflected in the annual operating budget for a Fiscal Year and (C) emergency spending above the 115% limit, except that non-recurring budget items and capital expenditures that are not included in the Base Case Model and that are not incurred or expected to be incurred in the ordinary course of business will be excluded when applying percentages in this paragraph;

(v) Affiliate Transactions. (A) Approval of any transaction (other than working capital loans and other transactions entered into pursuant to any of the Investment Documents) and (B) the amendment, waiver, extension, cancellation, suspension or termination of any transaction, in each case, between any Project Entity and any member thereof, the Managing Member, or any Affiliates thereof, other than those entered into on an arm's length basis or that do not require payments by any Project Entity;

(vi) Settlements. Any settlement of claims, litigation or arbitration (other than settlement of liquidated damages with Construction Contractor, which is addressed in clause (a)(ii)(Y) of this definition above if, as a result of such settlement, any Project Entity would be obligated to pay more than \$750,000 in the aggregate;

(vii) Tax-Exempt Bonds. Apply for or accept tax-exempt bonds within the meaning of Section 168(g) of the Code;

(viii) Company Purpose. Any action that would cause any Project Entity to engage in any business or activity that is not within the purpose of such entity, as set forth in such entity's organizational documents, or to change such purpose;

(ix) Exempt Wholesale Generator. Fail to maintain the status of the Project Company as an Exempt Wholesale Generator;

(x) Merger or Consolidation. (A) Any merger or consolidation of any Project Entity, (B) the acquisition of all or substantially all of the assets of another Person, (C) the sale of all or substantially all of the assets of any Project Entity and (D) the taking of any action by any Project Entity described in the definition of “Bankruptcy”;

(xi) Encumbrances. Grant of any Encumbrance on the assets of any Project Entity other than Permitted Encumbrances; provided that the grant of security interests created by the creditor support obligations and margin requirements under the Power Purchase Agreement or other power purchase agreement, power sales agreement, swap or hedge agreement shall be (in each case) considered a Major Decision only if the execution of the corresponding power purchase agreement, power sales agreement, swap or hedge agreement itself constitutes a Major Decision;

(xii) Equity Interests. Except as otherwise expressly permitted in the Equity Holdings LLC Agreement, any issuance or redemption by any Project Entity of any Membership Interests or other equity interest (or options, rights or securities convertible or exercisable into any equity interest) of any kind in such Project Entity, or the sale, lease or other voluntary disposition of any Membership Interest or other equity interest in any Project Entity;

(xiii) Organizational Documents. (A) Any cancellation of, or material amendment to, the certificate of formation of any Project Entity or (B) any restatement of, or material amendment to, the limited liability agreement of any Project Entity;

(xiv) Additional Member. The admission of any additional member in any Project Entity, other than pursuant to the terms of the Equity Holdings LLC Agreement;

(xv) Employees. The hiring by any Project Entity of any employees or entering into any bonus, profit sharing, thrift, compensation, option, pension, retirement, savings, welfare, deferred compensation, employment, termination, severance or other employee benefit plan, agreement, trust, fund, policy or arrangement for the benefit or welfare of any directors, officers or employees of any Project Entity;

(xvi) Legal Form. Any change in any Project Entity’s legal form or any recapitalization, liquidation, winding-up or dissolution of any Project Entity, except as permitted under the Equity Holdings LLC Agreement;

(xvii) Tax Classification. Electing that Equity Holdings be treated other than as a partnership for federal income tax purposes or any Project Entity be treated other than as a disregarded entity;

(xviii) Lending. Lending any funds from any Project Entity to any Person;

(xix) Indebtedness. The incurrence or guarantee of indebtedness for borrowed money or capitalized lease obligations, other than (A) working capital loans or (B) guarantee obligations pursuant to any of the Material Contracts;

(xx) O&M Expenditures. Notwithstanding anything herein to the contrary, any consent, approval, waiver or other action to allow the expenditure of more than \$7,500 per MW of rated capacity of the Facility by the Project Company in any fiscal year under any operation and maintenance agreement for the Facility; and

(xxi) Adverse Tax Consequences. If it would have an adverse Tax consequence on the Members, transfer any Company or Project Company service roads, land, or ground leases relating to parcels upon which the Project is located other than in connection with (A) a casualty or condemnation or other disposition where replacement "capital gain property" (within the meaning of Treasury Regulations Section 1.755-1(a)(1)) is required to be acquired in accordance with the standards imposed under Section 6.3 of the Equity Holdings LLC Agreement, (B) a disposition undertaken in order to comply with Applicable Law, or regulations or to comply with applicable requirements or standards relating to safety, zoning, or permitting (including any Governmental Approvals) or in connection with insurance requirements, or (C) a liquidation of Equity Holdings; and

(b) with respect to any period following the Cash Flip Point, a decision to take any of the following actions with respect to any Project Entity or the Facility:

(i) Merger or Consolidation. A transaction (A) for the merger or consolidation of any Project Entity or the sale by Equity Holdings of all or substantially all of its ownership interests in the Project Company, (B) for the sale or other disposition of all or substantially all of the assets of or membership interests in any Project Entity, or (C) between any Project Entity, on the one hand, and any member, manager or Affiliate of any thereof, on the other hand (other than working capital loans and other transactions specifically permitted by any of the Investment Documents);

(ii) Bankruptcy. Any Project Entity takes or files any action to institute any proceedings in Bankruptcy;

(iii) Disregarded Entity Status. Any act or omission that causes the Project Company to be treated as anything other than a disregarded entity;

(iv) Equity Interests. (A) Any issuance or redemption by any Project Entity of any membership interests or other equity interest (or options, rights or

securities convertible or exercisable into any equity interest) of any kind in such Project Entity, or (B) the sale, lease or other voluntary disposition by Equity Holdings of any membership interest or other equity interest in the Project Company, except, in each case, as otherwise expressly permitted in the Equity Holdings LLC Agreement;

(v) **Organizational Documents.** Any amendment or cancellation of the certificate of formation of any Project Entity or any restatement of, or material amendment to, the limited liability company agreement of any Project Entity;

(vi) **Tax Classification.** If a Class A Member has a deficit balance in its Capital Account, unless each Class A Member is indemnified for any adverse tax consequence it experiences as a result of such classification, any election that Equity Holdings be treated other than as a partnership for federal income tax purposes or that any other Project Entity be treated other than as a disregarded entity or partnership; and

(vii) **Adverse Tax Consequences.** If it would have an adverse Tax consequence on the Members, transfer any Company or Project Company service roads, land, or ground leases relating to parcels upon which the Project is located other than in connection with (A) a casualty or condemnation or other disposition where replacement “capital gain property” (within the meaning of Treasury Regulations Section 1.755-1(a)(1)) is required to be acquired in accordance with the standards imposed under Section 6.3 of the Equity Holdings LLC Agreement, (B) a disposition undertaken in order to comply with Applicable Law, or regulations or to comply with applicable requirements or standards relating to safety, zoning, or permitting (including any Governmental Approvals) or in connection with insurance requirements, or (C) a liquidation of Equity Holdings.

....

8.6 Tax Elections. The Managing Member shall make the following federal income tax elections on the appropriate Equity Holdings tax returns:

(a) To the extent permitted under Section 706 of the Code, to elect the Fiscal Year as Equity Holdings’ Taxable Year;

(b) To elect the accrual method of accounting;

(c) To elect to amortize any organizational and start-up expenses of Equity Holdings ratably over a period of one hundred eighty (180) months as permitted by Section 709(b) of the Code;

(d) To make any election necessary to claim an ITC equal to at least the ITC Amount;

(e) If a distribution of Equity Holdings' property as described in Section 734 of the Code occurs or a transfer of Membership Interest as described in Section 743 of the Code occurs to elect pursuant to Section 754 of the Code to adjust the basis of Equity Holdings' properties;

(f) If "bonus depreciation" is available with respect to any Facility, the election described in Section 168(k)(2)(D)(iii) of the Code to opt out of "bonus depreciation" for the class of property that includes a Circuit for each Taxable Year in which a Circuit is Circuit IRS Placed in Service; and

(g) To elect under Section 6231(a)(1)(B)(ii) of the Code and the Treasury Regulations thereunder to treat Equity Holdings as a partnership to which the provisions of Sections 6221 through 6234 of the Code, inclusive, apply.

For any period ending prior to the Tax Flip Point or including the Tax Flip Point, the Managing Member shall make no other tax elections for Equity Holdings, except as otherwise provided herein, without the written Consent of the Members, such consent not to be unreasonably withheld, conditioned or delayed; provided, however, that the Managing Member may, subject to the limitation that the Tax Return shall be filed no later than September 15th of the year following the end of each Taxable Year, elect to extend the time for filing any Tax Return as provided for under the Code and applicable State statutes; and provided, further, however, based upon current Knowledge of the facts pertaining to the transaction as of the date hereof, Equity Holdings will not report the transaction to the IRS as a "reportable transaction" pursuant to Section 6111 of the Code, the relevant Treasury Regulations and any other administrative authorities or pronouncements, in each case as they exist on the date hereof (provided, however, that if such facts or law change in a manner affecting the reportability of the transaction, the specific covenant within this proviso shall not be applicable to Equity Holdings). Neither Equity Holdings nor any Member may make an election for Equity Holdings to be excluded from the application of the provisions of subchapter K of chapter 1 of subtitle A of the Code or any similar provisions of Applicable Law of any state. No Member, Managing Member, officer or agent of Equity Holdings is authorized to, or may, file IRS Form 8832 (or such alternative or successor form) to elect to have Equity Holdings or the Project Company classified as a corporation for federal income tax purposes under Regulation Section 301.7701-3. The Managing Member shall, in addition, affirmatively take such action within its control as may be necessary or required to maintain the status of Equity Holdings as a partnership and the Project Company as a disregarded entity for federal, state and local income tax purposes.

8.7 Tax Matters Member and Equity Holdings Tax Filings.

(a) The Class B Equity Investor shall be, and so long as it continues to be a Member, shall continue to be, the "tax matters partner" of Equity Holdings pursuant to Section 6231(a)(7) of the Code (the "**Tax Matters Member**"); provided, that if the Class B Equity Investor is no longer a Member, the Members shall appoint a new Tax Matters Member by written Consent of the Members. At the request of any other Member, the Tax Matters Member shall take such action as may be necessary to cause, to the extent possible, such other Member to become a "notice partner" within the meaning of Sections

6231(a)(8) and 6223 of the Code. The Tax Matters Member shall provide the Members all notices and other written communications received by the Tax Matters Member from the IRS or sent by the Tax Matters Member to the IRS, relating to Equity Holdings. The Tax Matters Member shall provide the Members with reasonable opportunity to review and comment on any written communications to the IRS. The Tax Matters Member shall provide Members with prompt written notice of all meetings or conferences with the IRS and the Members shall have the right to attend all such meetings and conferences at their expense.

(b) Without the Consent of the Class A Members, the Tax Matters Member shall not (i) commence a judicial action (including filing a petition as contemplated in Section 6226(a) or 6228 of the Code) with respect to a federal income tax matter or appeal any adverse determination of a judicial tribunal; (ii) enter into a settlement agreement with the IRS; (iii) intervene in any action as contemplated by Section 6226(b) of the Code; (iv) file any request contemplated in Section 6227 of the Code; or (v) enter into an agreement extending the period of limitations as contemplated in Section 6229(b)(1)(B) of Code. Subject to the immediately preceding sentence, the Tax Matters Member shall have the right to defend against any proposed adjustments with respect to any “partnership item” (as defined in Section 6231(a)(3) of the Code) in the manner provided, and to the extent consistent with, Sections 6221 through 6223 of the Code and the Treasury Regulations issued thereunder. With respect to any other partnership item of Equity Holdings not covered by the two preceding sentences, if any Member intends to file, pursuant to Section 6227 of the Code, a request for an administrative adjustment of any such partnership item of Equity Holdings, or to file a petition under Sections 6226, 6228 or other Sections of the Code with respect to any such partnership item or any other tax matter involving Equity Holdings, such Member shall, at least thirty (30) days prior to any such filing, notify the other Members of such intent, which notification must include a reasonable description of the contemplated action and the reasons for such action. Any cost or expense incurred by the Tax Matters Member in connection with its duties, including, if relevant, the preparation for or pursuance of administrative or judicial proceedings, shall be paid by Equity Holdings.

(c) The Tax Matters Member shall prepare, or cause to be prepared, and timely file (on behalf of Equity Holdings) all federal, state and local tax returns required to be filed by Equity Holdings. Each Member shall furnish to the Tax Matters Member all pertinent information in its possession relating to Equity Holdings’ operations that is reasonably necessary to enable Equity Holdings’ tax returns to be timely prepared and filed. Unless otherwise required by law, the Tax Matters Member shall prepare, or cause to be prepared, Equity Holdings’ Tax Return on a basis consistent with this Agreement and the assumptions contained in the Base Case Model, except to the extent such inconsistency is the result of either (x) a Class A ITC Loss Event, or (y) any final determination under a federal income tax audit or administrative or judicial proceeding of such a federal income tax return for a prior period making an adjustment to an item of such federal income tax return (provided, that such audit or administrative or judicial proceeding is prosecuted by Equity Holdings materially in the manner required by this Section Error! Reference source not found.) (a “Consistent Return”). The Tax

Matters Member, in consultation with the other Members, may extend the time for filing any such Tax Returns as provided for under applicable statutes; provided that, in the event of any such extension, the Tax Matters Member shall provide the other Members with an estimate of the Taxes owed within twenty (20) days of the filing of such extension. In the event the Tax Matters Member does not intend to extend the time for filing Equity Holdings' Form 1065, Equity Holdings shall provide notice to the Class A Members of such intention on or prior to March 1. At Equity Holdings' expense, the Tax Matters Member shall cause Equity Holdings to retain a Certified Public Accountant to prepare or review and sign the necessary federal and state income Tax Returns, excluding information returns, for Equity Holdings. Each Member shall provide such information, if any, as may be reasonably needed by Equity Holdings for purposes of preparing such Tax Returns; provided that such information is readily available from regularly maintained accounting records. Any Form 1065 or Schedule K-1 will not be filed any later than the due date with one extension. No later than (i) March 1 each year if Equity Holdings does not intend to file an extension for filing such Tax Return or (ii) August 1 each year if Equity Holdings has filed an extension for filing such Tax Return, the Tax Matters Member shall deliver to the other Members for their review a copy of Equity Holdings' federal and state income Tax Returns, excluding information returns, in the form proposed to be filed for each Fiscal Year together with a notice of any inconsistencies with the Base Case Model, and shall incorporate all reasonable changes or comments to such proposed Tax Returns requested by the other Members at least ten (10) days prior to the filing date for such returns. In the event that the Tax Matters Member anticipates furnishing to the Members a Tax Return that is not a Consistent Return, the Tax Matters Member shall notify the Members in writing no less than thirty (30) days prior to the date on which it intends to furnish such Tax Return that such Tax Return will not be a Consistent Return, other than inconsistencies solely relating to variances in the anticipated operating results of the Facility. If a Tax Return is timely objected to by the Class A Members, the Tax Matters Member shall submit such Tax Return, together with copies of all relevant workpapers used in preparation thereof, to a nationally recognized firm (other than the Certified Public Accountant) of independent public accountants or, if related to a legal matter, a law firm, in each case, selected by the Class A Member. The determination of such independent expert, and the Tax Return as completed by such expert, shall be final and binding on the Members, and the Tax Matters Member shall cause such final Tax Return to be filed. Equity Holdings shall bear the costs of the preparation and filing of its returns, including the fees of the independent expert. In no event shall any Tax Return be filed later than September 15th of the year following the end of each Taxable Year (or the next following Business Day if such date is not a Business Day).

(d) The provisions of this Article **Error! Reference source not found.** will survive the termination of Equity Holdings or the termination of any Member's interest in Equity Holdings and will remain binding on the Member for the period of time necessary to resolve with the IRS or other federal tax agency any and all federal income tax matters relating to Equity Holdings that are subject to Sections 6221 through 6233 of the Code.

.....

9.1 Transfer and Encumbrances of Membership Interests.

(a) General Restriction. A Member may not Transfer or create or allow an Encumbrance (other than Permitted Encumbrances described in clause (i) of the definition of Permitted Encumbrance) on all or any portion of its Membership Interest, except in strict accordance with this Section **Error! Reference source not found.** References in this Agreement to Transfers or Encumbrances of a “Membership Interest” shall also refer to Transfers or Encumbrances of a portion of a Membership Interest. Any attempted Transfer or Encumbrance of any Membership Interest, other than in strict accordance with this Section **Error! Reference source not found.**, shall be, and is hereby declared, null and void *ab initio*. The Members agree that a breach of the provisions of this Section **Error! Reference source not found.** may cause irreparable injury to Equity Holdings and to the other Members for which monetary damages (or other remedy at law) are inadequate in view of (i) the complexities and uncertainties in measuring the actual damages that would be sustained by reason of the failure of a Member to comply with such provision and (ii) the uniqueness of Equity Holdings’ business and the relationship among the Members. Accordingly, the Members agree that the provisions of this Section **Error! Reference source not found.** may be enforced by specific performance.

(b) Transfers of Membership Interests.

(i) General Provision. A Member may not Transfer all or any portion of its Membership Interest except by complying with all of the following requirements:

(A) General Requirements Applicable to Transfers of Class B Interests. No Transfer of any Class B Interest may be made before the Final Funding Date, except for Permitted Transfers. Thereafter, no Transfer of Class B Interests (except for a Permitted Transfer) may be effected without the prior written Consent of the Class A Members (such consent not to be unreasonably withheld, conditioned or delayed). Any Transfer made pursuant to the immediately preceding sentence for which Consent is required shall be subject to the provisions of Section 9.1(d). In addition, a Transfer of up to fifty percent (50%) of the Class B Interests may be made to any Person without the prior written Consent of the Class A Members at any time following receipt by the Class B Equity Investor of the Class A Withdrawal Notice or the Conditional Class A Withdrawal Notice.

(B) General Requirements Applicable to Transfers of Class A Interests. No Transfer of any Class A Interest may be made before the Final Funding Date. Thereafter, no Transfer of Class A Interests may be effected without the prior written Consent of the Class B Members (such consent not to be unreasonably withheld, conditioned or delayed) unless

(1) such Transfer is of fifty percent (50%) or less of the Class A Equity Investor's Class A Units if such Transfer occurs prior to the Cash Flip Point and (2) the Transferee is not a Disqualified Transferee. Any Transfer made pursuant to the preceding sentence shall be subject to the provisions of Section 9.1(d).

(C) Compliance with Requirements. Any Transfer must comply with the requirements of Section 9.1(b)(iii) and, if the Transferee is to be admitted as a Member, Section 9.1(b)(ii).

(D) Permitted Transfers, Certain Other Transfers. Anything to the contrary in this Section 9.1 notwithstanding,

(1) the provisions of Section 9.1(d) shall not apply to any Permitted Transfer and any Transfer described in the last sentence of Section 9.1(b)(i)(A),

(2) the provisions of Sections 9.1(b)(i)(B) and 9.1(b)(iv) shall not apply in connection with any Transfer by Members holding Class A Interests at any time following the Cash Flip Point where the sum of all distributions under Section 5.1 to all Class A Members is less than the sum of all Capital Contributions made to Equity Holdings by the Class B Members, and

(3) subject to Section 9.1(b)(i)(D)(1), the provisions of Section 9.1(d) shall apply with respect to any Transfer of Class A Interests.

c. Do the holders of the asserted passive or non-voting securities have any power to remove the Managing Member of BR3 Holdings? If so, is their power to remove limited to "Cause", i.e., situations such as criminal activity/fraud on the part of the Managing Member? Or, under what circumstances can they remove the Managing Member?

Yes, under Section 6.4(a) of the LCCA, the Class A members can remove the Managing Member upon thirty (30) days' notice if the Managing Member:

(i) has engaged in gross negligence or willful misconduct in relation to the performance of its services as the Managing Member, or fraud, (ii) has performed any action or omitted to take any action that is in breach or violation of this Agreement and which could reasonably be expected to cause a Material Adverse Effect, or (iii) is declared Bankrupt; provided, however, that (x) in the case of clause (i) solely with respect to gross negligence and willful misconduct, the Managing Member shall have thirty (30) days after receiving such notice to reasonably show that it has not engaged in such gross negligence or willful

misconduct or to resolve such gross negligence or willful misconduct to the reasonable satisfaction of the Class A Members, and (y) in the case of clause (ii), the Managing Member shall have the opportunity to cure such breach or violation within thirty (30) days of receiving notice of such breach; provided, further, that if such breach or violation cannot be cured within such period, and the Managing Member is proceeding with diligence to cure such breach, the 30-day cure period shall be extended by an additional sixty (60) days, for a total cure period of ninety (90) days.

d. If it is asserted that the securities in question confer only limited approval/veto rights, who exercises day-to-day control over BR3 Holdings' jurisdictional facilities?

Section 6.1(a) of the LLCA states as follows:

... the Managing Member shall conduct, direct and exercise control over all activities of [BR3 Holdings], and shall have full power and authority on behalf of [BR3 Holdings] to manage and administer the business and affairs of [BR3 Holdings] and to do or cause to be done any and all acts considered by the Managing Member to be necessary or appropriate to conduct the business of [BR3 Holdings] (including, without limitation, taking all necessary actions to cause [BR3 Holdings] to cause the Project Company to perform its obligations and enforce its rights under the Project Documents to which it is a party and to otherwise carry out its purpose) without the need for approval by or any other consent from any Member, including, but not limited to, the authority to bind [BR3 Holdings] (or cause [BR3 Holdings] to bind the Project Company) in making contracts and incurring obligations in the Project Company's name in the course of its business and the power and authority to appoint the Independent Manager. Except to the extent that a Member is also the Managing Member or authority is delegated from the Managing Member to a Member, no Member shall have any authority to bind the Project Company or transact any business for the Project Company in its capacity as a Member.

RE Barren Ridge 2 Holdings LLC is the Managing Member.

e. Do the holders of the asserted passive or non-voting securities have any day-to-day input or control over the facility?

No. See the responses above in Sections 1 and 2(d). The Class A members do not have any direct or indirect control over BR3 Holdings or the FERC-jurisdictional facilities or activities of its subsidiary, the Applicant.

FERC rendition of the electronically filed tariff records in Docket No. ER16-00645-000

Filing Data:

CID: C005073

Filing Title: Application for MBR

Company Filing Identifier: 605

Type of Filing Code: 400

Associated Filing Identifier:

Tariff Title: FERC Electric Tariff

Tariff ID: 824

Payment Confirmation:

Suspension Motion:

Tariff Record Data:

Record Content Description, Tariff Record Title, Record Version Number, Option Code:

FERC Electric Tariff, Market Based Rate Schedule, 0.0.0, A

Record Narrative Name:

Tariff Record ID: 1

Tariff Record Collation Value: 1000000 Tariff Record Parent Identifier: 0

Proposed Date: 2016-02-29

Priority Order: 500

Record Change Type: NEW

Record Content Type: 1

Associated Filing Identifier:

1. **Availability:** Seller makes electric energy, capacity and ancillary services available under this Tariff to any purchaser in the Southwest region, except as prohibited below.
2. **Applicability:** This Tariff is applicable to all wholesale sales of energy, capacity, and ancillary services by Seller, which are (1) subject to the jurisdiction of the Commission, and (b) not made pursuant to another tariff on file with the Commission.
3. **Rates:** All sales shall be made at rates established by agreement between the purchaser and Seller.
4. **Other Terms and Conditions:** All other terms and conditions shall be established by agreement between the purchaser and Seller.
5. **Seller Category:** Seller is a Category 2 seller in the Southwest region, as defined in 18 C.F.R. § 35.36(a).
6. **Compliance with Commission Regulations:** Seller shall comply with the provisions of 18 C.F.R. Part 35, Subpart H, as applicable, and with any conditions the Commission imposes in its orders concerning Seller's market-based rate authority, including orders in which the Commission authorizes Seller to engage in affiliate sales under this Tariff or otherwise restricts or limits Seller's market-based rate authority. Failure to comply with the applicable provisions of 18 C.F.R. Part 35, Subpart H, and with any orders of the Commission concerning Seller's market-based rate authority, will constitute a violation of this Tariff.
7. **Limitations and Exemptions Regarding Market-Based Rate Authority:** Seller has received waiver of: Subparts B and C of Part 35, except for sections 35.12(a), 35.13(b), 35.15 and 35.16; Part 41, Part 101, and Part 141, except sections 141.14 and 141.15; and received blanket approval under Part 34. *RE Barren Ridge I LLC*, Docket No. ER16- -000 (2016).

8. Ancillary Services: Seller may make available to any purchaser the following ancillary services:

California: Seller offers regulation service, spinning reserve service, and non-spinning reserve service to the California Independent System Operator Corporation (“CAISO”) and to others that are self-supplying ancillary services to the CAISO.

Third-party ancillary services: Seller offers Regulation and Frequency Response Service, Reactive Supply and Voltage Control Service, Energy and Generator Imbalance Service, Operating Reserve-Spinning, and Operating Reserve-Supplemental. Sales will not include the following: (1) sales to an RTO or an ISO, *i.e.*, where that entity has no ability to self-supply ancillary services but instead depends on third parties; and (2) sales to a traditional, franchised public utility affiliated with the third-party supplier, or sales where the underlying transmission service is on the system of the public utility affiliated with the third-party supplier. Sales of Operating Reserve-Spinning and Operating Reserve-Supplemental will not include sales to a public utility that is purchasing ancillary services to satisfy its own open access transmission tariff requirements to offer ancillary services to its own customers, except where the Commission has granted authorization. Sales of Regulation and Frequency Response Service and Reactive Supply and Voltage Control Service will not include sales to a public utility that is purchasing ancillary services to satisfy its own open access transmission tariff requirements to offer ancillary services to its own customers, except at rates not to exceed the buying public utility transmission provider’s OATT rate for the same service or where the Commission has granted authorization.

9. Effective Date: This Tariff is effective on such date as set by the Commission.

Generation

Generation Affiliated with Recurrent in CAISO and Relevant First-Tier Markets

Balancing Authority Area/ RTO	Plant Name	Total Capacity (MW)	
		Summer	Winter
CAISO	Astoria	100.0	100.0
CAISO	Astoria 2	75.0	75.0
CAISO	Mustang	30.0	30.0
CAISO	Mustang 3	40.0	40.0
CAISO	Mustang 4	30.0	30.0
CAISO	RE-PRI, LLC	0.2	0.2
CAISO	RE-VFO, LLC	1.0	1.0
CAISO	RE-SD, LLC	0.4	0.4
CAISO	RE Mohican, LLC	1.0	1.0
CAISO	RE Santa Clara LLC	0.8	0.8
CAISO	RE Lancaster LLC	0.8	0.8
CAISO	RE La Mesa LLC	0.8	0.8
CAISO	RE Vallejo LLC	0.3	0.3
CAISO	RE Vallejo 2 LLC	0.7	0.7
Subtotal		281.0	281.0
LADWP	Barren Ridge	60.0	60.0
SMUD/BANC	Strata Roof 1, LLC	1.1	1.1

Part I -- Pivotal Supplier Analysis

Row	Generation	MW
	Seller and Affiliate Capacity	
A	Installed Capacity	281
B	Long-Term Firm Purchases	-
C	Long-Term Firm Sales	-
D	Imported Power	61
	Non-Affiliate Capacity	
E	Installed Capacity	57,950
F	Long-Term Firm Purchases	4,647
G	Long-Term Firm Sales	(4,647)
H	Imported Power	-
I	Balancing Authority Area Reserve Requirement	(2,557)
J	Amount of Line I Attributable to Seller, if any	-
K	Total Uncommitted Capacity	15,420
	Load	
L	Balancing Authority Area Annual Peak Load	46,360
M	Average Daily Peak Native Load in Peak Month	(40,315)
N	Amount of Line M Attributable to Seller, if any	-
O	Wholesale Load (SUM L,M)	6,045
P	Net Uncommitted Supply (K-O)	9,375
Q	Seller's Uncommitted Capacity	342
	Result of Pivotal Supplier Screen	PASS

NRG Power Marketing LLC , Notice of Non-Material Change In Status, Docket Nos. ER10-1569 Marketing LLC , Docket Nos. ER10-1569-007, et al. (Apr. 22, 2014) (unreported). See, also, Lr 2015; Letter order accepting Adelanto Solar II, LLC, Docket No. ER15-1418, June 26, 2015; an 26, 2015.

CAISO

Reference

December 11 - November 12

Generation

Affiliated capacity in first-tier markets

NRG CIS Filing, Exhibit NRG-6, Row A+E less Row A above (exc new MBR entities)

NRG CIS Filing, Exhibit NRG-6, Row B+F plus offset Row C above

NRG CIS Filing, Exhibit NRG-6, Row C+G

Conservatively assumed to be zero

NRG CIS Filing, Exhibit NRG-6, Row I

SUM A,B,C,D,E,F,G,H,I,M

NRG CIS Filing, Exhibit NRG-6, Row L

NRG CIS Filing, Exhibit NRG-6, Row M

SUM A,B,C,D,J,N

Pass if Line Q < Line P

Fail if Line Q > Line P

15-007, et al. (filed Dec. 31, 2013), Exhibit NRG-6, accepted, NRG Power Letter order accepting Shafter Solar, LLC, Docket No. ER15-1016, June 11, 2015, and Letter order accepting McCoy Solar, LLC, Docket No. ER15-1375, June 11, 2015.

Part II -- Market Share Analysis

Row		Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
	Seller and Affiliate Capacity				
A	Installed Capacity	281	281	281	281
B	Long-Term Firm Purchases	-	-	-	-
C	Long-Term Firm Sales	-	-	-	-
D	Seasonal Average Planned Outages	-	-	-	-
E	Imported Power	61	61	61	61
	Capacity Deductions				
F	Average Peak Native Load in the Season	(26,943)	(27,265)	(33,324)	(30,080)
G	Amount of Line F Attributable to Seller, if any	-	-	-	-
H	Amount of Line F Attributable to Others, if any	(26,943)	(27,265)	(33,324)	(30,080)
I	Balancing Authority Area Reserve Requirement, if any	(1,886)	(1,909)	(2,333)	(2,106)
J	Amount of Line I Attributable to Seller, if any	-	-	-	-
K	Amount of Line I Attributable to Others, if any	(1,886)	(1,909)	(2,333)	(2,106)
	Non-Affiliate Capacity				
L	Installed Capacity	58,697	58,324	57,950	58,324
M	Long-Term Firm Purchases	4,929	4,788	4,647	4,788
N	Long-Term Firm Sales	(4,929)	(4,788)	(4,647)	(4,788)
O	Local Seasonal Average Planned Outages	(8,430)	(9,181)	(4,874)	(6,926)
P	Uncommitted Capacity Imports	-	-	-	-
	Supply Calculation				
Q	Total Competing Supply	21,438	19,969	17,419	19,212
R	Seller's Uncommitted Capacity	342	342	342	342
S	Total Seasonal Uncommitted Capacity	21,781	20,311	17,761	19,554
T	Seller's Market Share (R/S) Results	1.6% PASS	1.7% PASS	1.9% PASS	1.7% PASS

NRG Power Marketing LLC, Notice of Non-Material Change In Status, Docket Nos. ER10-1569-007, et al. (filed Dec. 31, 2013), ER10-1569-007, et al. (Apr. 22, 2014) (unreported). See, also, Letter order accepting Shafter Solar, LLC, Docket No. ER15-101, Docket No. ER15-1418, June 26, 2015; and Letter order accepting McCoy Solar, LLC, Docket No. ER15-1375, June 26, 2015.

CAISO

Reference

December 11 - November 12

Generation

Affiliated capacity in first-tier markets

NRG CIS Filing, Exhibit NRG-7, Row F

NRG CIS Filing, Exhibit NRG-7, Row I

NRG CIS Filing, Exhibit NRG-7, Row A+L less Row A above
(excluding new MBR entities)

NRG CIS Filing, Exhibit NRG-7, Row B+M plus offset Row C above

NRG CIS Filing, Exhibit NRG-7, Row C+N

NRG CIS Filing, Exhibit NRG-7, Row D+O

Conservatively assumed to be zero

SUM L,M,N,O,P,H,K

SUM A,B,C,D,E,G,J

SUM Q,R

Pass if < 20%

Fail if > 20%

Exhibit NRG-7, accepted, NRG Power Marketing LLC , Docket Nos.
6, June 11, 2015; Letter order accepting Adelanto Solar II, LLC,

Part I -- Pivotal Supplier Analysis

Row	Generation	MW
	Seller and Affiliate Capacity	
A	Installed Capacity	60
B	Long-Term Firm Purchases	-
C	Long-Term Firm Sales	-
D	Imported Power	282
	Non-Affiliate Capacity	
E	Installed Capacity	8,483
F	Long-Term Firm Purchases	-
G	Long-Term Firm Sales	-
H	Imported Power	1,167
I	Balancing Authority Area Reserve Requirement	(283)
J	Amount of Line I Attributable to Seller, if any	-
K	Total Uncommitted Capacity	4,998
	Load	
L	Balancing Authority Area Annual Peak Load	6,343
M	Average Daily Peak Native Load in Peak Month	(4,711)
N	Amount of Line M Attributable to Seller, if any	-
O	Wholesale Load (SUM L,M)	1,631
P	Net Uncommitted Supply (K-O)	3,367
Q	Seller's Uncommitted Capacity	342
	Result of Pivotal Supplier Screen	PASS

LADWP PSA

LADWP

Reference

December 13 - November 14

Generation

Affiliated capacity in first-tier markets

Wkp-LADWP Gen

146 FERC ¶ 61,126 (2014) less Row E

Wkp-Oper Reserves

SUM A,B,C,D,E,F,G,H,I,M

Wkp-LADWP Load

Wkp-LADWP Load

SUM A,B,C,D,J,N

Pass if Line Q < Line P

Fail if Line Q > Line P

LADWP MSA

Part II -- Market Share Analysis

Row		Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
	Seller and Affiliate Capacity				
A	Installed Capacity	60	60	60	60
B	Long-Term Firm Purchases	-	-	-	-
C	Long-Term Firm Sales	-	-	-	-
D	Seasonal Average Planned Outages	-	-	-	-
E	Imported Power	35	282	282	282
	Capacity Deductions				
F	Average Peak Native Load in the Season	(3,317)	(3,589)	(4,383)	(3,971)
G	Amount of Line F Attributable to Seller, if any	-	-	-	-
H	Amount of Line F Attributable to Others, if any	(3,317)	(3,589)	(4,383)	(3,971)
I	Balancing Authority Area Reserve Requirement, if any	(199)	(215)	(263)	(238)
J	Amount of Line I Attributable to Seller, if any	-	-	-	-
K	Amount of Line I Attributable to Others, if any	(199)	(215)	(263)	(238)
	Non-Affiliate Capacity				
L	Installed Capacity	8,483	8,483	8,335	8,483
M	Long-Term Firm Purchases	-	-	-	-
N	Long-Term Firm Sales	-	-	-	-
O	Local Seasonal Average Planned Outages	(910)	(719)	(300)	(557)
P	Uncommitted Capacity Imports	-	657	1,119	1,167
	Supply Calculation				
Q	Total Competing Supply	4,056	4,616	4,508	4,883
R	Seller's Uncommitted Capacity	95	342	342	342
S	Total Seasonal Uncommitted Capacity	4,151	4,959	4,850	5,225
T	Seller's Market Share (R/S)	2.3%	6.9%	7.1%	6.5%
	Results	PASS	PASS	PASS	PASS

LADWP MSA

LADWP

Reference

December 13 - November 14

Generation

Affiliated capacity in first-tier markets (capped at SIL)

Wkp-LADWP Load

Wkp-Oper Reserves

Wkp-LADWP Gen

Wkp-LADWP Outages

146 FERC ¶ 61,126 (2014) less Row E

SUM L,M,N,O,P,H,K

SUM A,B,C,D,E,G,J

SUM Q,R

Pass if < 20%

Fail if > 20%

Filing Entity and its Energy Affiliates	Docket # where MBR authority granted	Generation Name
RE Mustang LLC	[to be filed]	Mustang
RE Mustang 3 LLC	[to be filed]	Mustang 3
RE Mustang 4 LLC	[to be filed]	Mustang 4
RE Astoria LLC	[to be filed]	Astoria
RE Astoria 2 LLC	[to be filed]	Astoria 2
RE Barren Ridge LLC	[to be filed]	Barren Ridge
RE Cranbury Solar 1, LLC	N/A	RE Cranbury Solar 1, LLC
RE-PRI, LLC	N/A	RE-PRI, LLC
RE-VFO, LLC	N/A	RE-VFO, LLC
RE-SDS, LLC	N/A	RE-SD, LLC
RE Mohican, LLC	N/A	RE Mohican, LLC
RE Santa Clara LLC	N/A	RE Santa Clara LLC
RE Lancaster LLC	N/A	RE Lancaster LLC
RE La Mesa LLC	N/A	RE La Mesa LLC
RE Vallejo LLC	N/A	RE Vallejo LLC
RE Vallejo 2 LLC	N/A	RE Vallejo 2 LLC
Strata Roof 1, LLC	N/A	Strata Roof 1, LLC
Market Farm, LLC	N/A	Market Farm, LLC
Marshville Farm, LLC	N/A	Marshville Farm, LLC
Oakboro Farm, LLC	N/A	Oakboro Farm, LLC
Vickers Farm, LLC	N/A	Vickers Farm, LLC
Mile Farm, LLC	N/A	Mile Farm, LLC

New Bern Farm, LLC	N/A	New Bern Farm, LLC
Sigmon Catawba Farm, LLC	N/A	Sigmon Catawba Farm, LLC
Roxboro Farm, LLC	N/A	Roxboro Farm, LLC
Daniel Farm, LLC	N/A	Daniel Farm, LLC
Haynes Farm, LLC	N/A	Haynes Farm, LLC
Yanceyville Farm, LLC	N/A	Yanceyville Farm, LLC
Monroe Moore Farm, LLC	N/A	Moore Farm, LLC
Moorings Farm, LLC	N/A	Moorings Farm, LLC
White Cross Farm, LLC	N/A	White Cross Farm, LLC
Lenoir Farm, LLC	N/A	Lenoir Farm, LLC
Lenoir Farm 2, LLC	N/A	Lenoir Farm 2, LLC
Fuquay Farm, LLC	N/A	Fuquay Farm, LLC
Wilson Farm 1, LLC	N/A	Wilson Farm 1, LLC
Berkley East Solar, LLC	N/A	Berkley East Solar, LLC
CES Sterling, LLC	N/A	CES Sterling, LLC
Hunt Farm Solar, LLC	N/A	Hunt Farm, LLC
SH Solarne2, LLC	N/A	SH Solarne2, LLC
SE Solarne2 LLC	N/A	SE Solarne2 LLC
SH Solarne7, LLC	N/A	SH Solarne7, LLC

Owned By	Controlled By	Date Control Transferred	Location	
			Balancing Authority Area	Geographic Region (per Appendix D)
RE Mustang LLC	RE Mustang LLC	N/A	CAISO	Southwest
RE Mustang 3 LLC	RE Mustang 3 LLC	N/A	CAISO	Southwest
RE Mustang 4 LLC	RE Mustang 4 LLC	N/A	CAISO	Southwest
RE Astoria LLC	RE Astoria LLC	N/A	CAISO	Southwest
RE Astoria 2 LLC	RE Astoria 2 LLC	N/A	CAISO	Southwest
RE Barren Ridge LLC	RE Barren Ridge LLC	N/A	LADWP	Southwest
RE Cranbury Holdings LLC	RE Cranbury Holdings LLC	N/A	PJM	Northeast
RE Blocker LLC	RE Blocker LLC	N/A	CAISO	Southwest
RE Blocker LLC	RE Blocker LLC	N/A	CAISO	Southwest
RE Blocker LLC	RE Blocker LLC	N/A	CAISO	Southwest
RE Holdco CK 1 LLC	RE Holdco CK 1 LLC	N/A	CAISO	Southwest
REK Holdings LLC	REK Holdings LLC	N/A	CAISO	Southwest
RE Holdco CK 1 LLC	RE Holdco CK 1 LLC	N/A	CAISO	Southwest
REK Holdings LLC	REK Holdings LLC	N/A	CAISO	Southwest
RE Holdco CK 1 LLC	RE Holdco CK 1 LLC	N/A	CAISO	Southwest
REK Holdings LLC	REK Holdings LLC	N/A	CAISO	Southwest
Strata Roof 1, LLC	Strata Roof 1, LLC	N/A	SMUD/BANC	Southwest
Market Farm, LLC	Market Farm, LLC	N/A	Duke/Progress	Southeast
Marshville Farm, LLC	Marshville Farm, LLC	N/A	Duke/Progress	Southeast
Oakboro Farm, LLC	Oakboro Farm, LLC	N/A	Duke/Progress	Southeast
Vickers Farm, LLC	Vickers Farm, LLC	N/A	Duke/Progress	Southeast
Mile Farm, LLC	Mile Farm, LLC	N/A	Duke/Progress	Southeast

New Bern Farm, LLC	New Bern Farm, LLC	N/A	Duke/ Progress	Southeast
Sigmon Catawba Farm, LLC	Sigmon Catawba Farm, LLC	N/A	Duke/ Progress	Southeast
Roxboro Farm, LLC	Roxboro Farm, LLC	N/A	Duke/ Progress	Southeast
Daniel Farm, LLC	Daniel Farm, LLC	N/A	Duke/ Progress	Southeast
Haynes Farm, LLC	Haynes Farm, LLC	N/A	Duke/ Progress	Southeast
Yanceyville Farm, LLC	Yanceyville Farm, LLC	N/A	Duke/ Progress	Southeast
Moore Farm, LLC	Moore Farm, LLC	N/A	Duke/ Progress	Southeast
Moorings Farm, LLC	Moorings Farm, LLC	N/A	Duke/ Progress	Southeast
White Cross Farm, LLC	White Cross Farm, LLC	N/A	Duke/ Progress	Southeast
Lenoir Farm, LLC	Lenoir Farm, LLC	N/A	Duke/ Progress	Southeast
Lenoir Farm 2, LLC	Lenoir Farm 2, LLC	N/A	Duke/ Progress	Southeast
Fuquay Farm, LLC	Fuquay Farm, LLC	N/A	Duke/ Progress	Southeast
Wilson Farm 1, LLC	Wilson Farm 1, LLC	N/A	Duke/ Progress	Southeast
Berkley East Solar, LLC	Berkley East Solar, LLC	N/A	ISO-NE	Northeast
CES Sterling, LLC	CES Sterling, LLC	N/A	ISO-NE	Northeast
Hunt Farm, LLC	Hunt Farm, LLC	N/A	ISO-NE	Northeast
SH Solarne2, LLC	SH Solarne2, LLC	N/A	ISO-NE	Northeast
SE Solarne2 LLC	SE Solarne2 LLC	N/A	ISO-NE	Northeast
SH Solarne7, LLC	SH Solarne7, LLC	N/A	ISO-NE	Northeast

In-service Date	Nameplate and/or Seasonal Rating[1]	
6/30/2016	30 MW	30
6/30/2016	40 MW	40
6/30/2016	30 MW	30
8/31/2016	100 MW	100
8/31/2016	65 MW	65
6/14/2016	60 MW	60
1/31/2012	5.0 MW	
3/31/2009	0.2 MW	0.2
4/30/2009	1.0 MW	1
3/28/2009	0.4 MW	0.4
9/1/2010	1 MW	1
11/18/2010	0.8 MW	0.8
12/31/2010	0.8 MW	0.8
3/15/2011	0.8 MW	0.8
3/22/2011	0.3 MW	0.3
3/22/2011	0.7 MW	0.7
6/1/2013	1.1 MW	1.1
12/1/2014	6.0 MW	
10/1/2014	6.0 MW	
9/1/2014	6.0 MW	
8/1/2014	3.0 MW	
6/1/2014	6.0 MW	

4/1/2014	6.0 MW
4/1/2014	6.0 MW
3/1/2014	6.0 MW
3/1/2014	6.0 MW
10/1/2013	6.0 MW
10/1/2013	6.0 MW
10/1/2013	6.0 MW
9/1/2013	6.0 MW
9/1/2013	6.0 MW
7/1/2013	6.0 MW
7/1/2013	6.5 MW
3/1/2013	6.4 MW
7/1/2013	6.5 MW
8/18/2013	4.0 MW
5/1/2013	2.4 MW
9/1/2013	4.0 MW

Project	Nameplate Capacity	EWG	MBR Filing Date
Astoria	100	EG14-67	12/8/2015
Astoria 2	65	EG14-68	12/8/2015
Mustang	30	EG15-74	12/1/2015
Mustang 3	40	EG15-75	12/1/2015
Mustang 4	30	EG15-76	12/1/2015
Barren Ridge	60	EG15-41	12/18/2015
TOTAL	325		

Pivotal Supplier Assessment - CAISO

Row	Description	(MW)	Source
<i>Applicant and Affiliate Capacity</i>			
[A]	Installed Generation	8,652	NRG
[B]	Long-term Firm Purchases	0	NRG
[C]	Long-term Firm Sales	-4,647	NRG
[D]	Available Imports	92	Calculated: PSA Calcs
<i>Non-Affiliate Capacity</i>			
[E]	Installed Generation	49,304	Energy Velocity
[F]	Long-term Firm Purchases	4,647	Calculated: PSA Calcs
[G]	Long-term Firm Sales	0	Calculated: PSA Calcs
[H]	Available Imports	12,218	Calculated
[I]	Balancing authority reserve requirement	-2,557	FERC Form 714
[J]	Applicant reserve requirement	0	Conservative Assumption
[K]	Total uncommitted supply	27,394	Sum [A] through [I] plus [M]
<i>Load</i>			
[L]	Balancing area annual peak load	46,360	California ISO
[M]	Average daily peak native load in peak month	-40,315	California ISO
[N]	Amount in [M] attributable to Applicant	0	Conservative Assumption
[O]	Wholesale Load	6,045	[L] + [M]
[P]	Net Uncommitted Supply	21,349	[K] - [O]
[Q]	Applicant's Uncommitted Capacity	4,097	Sum [A], [B], [C], [D], [J], [N]
[R]	PSA Screen Result	Pass	

Wholesale Market Share Assessment - CA

Row	Description	Season			
		Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
<i>Applicant and Affiliate Capacity</i>					
[A]	Installed Generation	8,934	8,793	8,652	8,793
[B]	Long-term Firm Purchases	0	0	0	0
[C]	Long-term Firm Sales	-4,929	-4,788	-4,647	-4,788
[D]	Seasonal Average Planned Outages	0	0	0	0
[E]	Available Imports	92	92	92	92
<i>Capacity Deductions</i>					
[F]	Average peak native load in season	-26,943	-27,265	-33,324	-30,080
[G]	Amount of [F] attributable to Applicant	0	0	0	0
[H]	Amount of [F] attributable to Others	-26,943	-27,265	-33,324	-30,080
[I]	Balancing area reserve requirement	-1,886	-1,909	-2,333	-2,106
[J]	Amount of [I] attributable to Applicant	0	0	0	0
[K]	Amount of [I] attributable to Others	-1,886	-1,909	-2,333	-2,106
<i>Non-Affiliated Capacity</i>					
[L]	Installed Generation	49,769	49,537	49,304	49,537
[M]	Long-term Firm Purchases	4,929	4,788	4,647	4,788
[N]	Long-term Firm Sales	0	0	0	0
[O]	Seasonal Average Planned Outages	-8,430	-9,181	-4,874	-6,926
[P]	Available Imports	11,632	10,900	12,218	11,561
<i>Supply Calculation</i>					
[Q]	Total competing supply	29,072	26,871	25,638	26,774
[R]	Applicant's uncommitted capacity	4,097	4,097	4,097	4,097
[S]	Total seasonal uncommitted capacity	33,168	30,967	29,735	30,871
[T]	Applicant's Market Share	12.4%	13.2%	13.8%	13.3%
[U]	Results	Pass	Pass	Pass	Pass

Source

NRG
NRG
NRG
Conservative Assumption
Calculated

Load Workpapers
Conservative Assumption

FERC Form 714 Minus Applicant
Conservative Assumption
FERC Form 714

Generation Workpapers

FERC Form 714
Calculated

Sum [H], [K], [L], [M], [N], [O], [P]
Sum [A], [B], [C], [D], [E], [G], [J]
Sum [Q], [R]

= [R] / [S]

Max	6343
Max Month	9
PST	4711
Winter	3317
Spring	3589
Summer	4383
Fall	3971

Season	Month	Max	Date	1	2	3	4	5
Winter	12	3134.47	12/1/2013	2344.1	2218.46	2139.54	2084.52	2090.33
Winter	12	3430.44	12/2/2013	2282.78	2196.05	2128.97	2114.34	2177.79
Winter	12	3473.75	12/3/2013	2383.72	2275.3	2194.51	2158.38	2211.24
Winter	12	3469.68	12/4/2013	2443.44	2306.33	2240.46	2218.76	2253.26
Winter	12	3517.05	12/5/2013	2519.66	2403.49	2325.73	2315.55	2358.51
Winter	12	3531.75	12/6/2013	2595.78	2459.64	2382.77	2372.38	2416.29
Winter	12	3370.5	12/7/2013	2641.99	2528	2427.92	2373.15	2382.41
Winter	12	3423.91	12/8/2013	2715.32	2590.09	2498.31	2452.11	2448.93
Winter	12	3798.25	12/9/2013	2696.22	2604.52	2533.89	2510.09	2564.01
Winter	12	3659.88	12/10/2013	2776.46	2650.47	2589.31	2542.8	2578.83
Winter	12	3561.57	12/11/2013	2739.43	2597.94	2518.61	2499.27	2554.23
Winter	12	3504.26	12/12/2013	2583.52	2455.6	2360.29	2342.36	2383.51
Winter	12	3472.99	12/13/2013	2573.19	2456.49	2374.46	2345.11	2393.39
Winter	12	3181.56	12/14/2013	2621.03	2483.43	2391.08	2345.6	2347.01
Winter	12	3242.42	12/15/2013	2505.44	2391.95	2305.19	2254.17	2258.94
Winter	12	3573.99	12/16/2013	2336.9	2237.13	2163.01	2155.91	2207.15
Winter	12	3621.2	12/17/2013	2433.62	2318.64	2243.67	2192.87	2235.76
Winter	12	3509.84	12/18/2013	2458.43	2305.38	2216.32	2170.33	2214.1
Winter	12	3544.44	12/19/2013	2406.2	2291.48	2204.64	2178.38	2204.85
Winter	12	3498.76	12/20/2013	2585.63	2426.39	2330.04	2314.92	2354.62
Winter	12	3208.59	12/21/2013	2629.79	2479.06	2384.39	2334.08	2343.37
Winter	12	3167.48	12/22/2013	2562.37	2431.13	2337.15	2279.3	2268.16
Winter	12	3392.82	12/23/2013	2466.26	2349.13	2271.09	2246.26	2293.06
Winter	12	3280.62	12/24/2013	2490.81	2351.33	2255.17	2211.71	2223.76
Winter	12	2922.44	12/25/2013	2400.05	2285.96	2178.54	2117.04	2118.1
Winter	12	3342.33	12/26/2013	2250.88	2148.73	2090.33	2076.18	2117.9
Winter	12	3348.61	12/27/2013	2403.03	2270.44	2202.4	2174.77	2207.96
Winter	12	3077.65	12/28/2013	2413.02	2262.45	2179.78	2144.98	2132.72
Winter	12	3077.78	12/29/2013	2381.74	2263.75	2194.92	2146.93	2142.27
Winter	12	3379.49	12/30/2013	2356.99	2238.96	2166.76	2163.75	2200.82
Winter	12	3308.17	12/31/2013	2472.24	2343.41	2248.56	2216.45	2249.89
Winter	1	3016.64	1/1/2014	2531.14	2414.1	2341.04	2256.88	2238.86
Winter	1	3382.3	1/2/2014	2333.93	2228.64	2167.91	2136.52	2185.32
Winter	1	3391.23	1/3/2014	2418.2	2280.11	2217.91	2176.32	2218.19
Winter	1	3109.72	1/4/2014	2443.71	2308.24	2216.53	2174.36	2160.91
Winter	1	3064.51	1/5/2014	2399.06	2270.48	2192.37	2162.41	2149.45
Winter	1	3348.8	1/6/2014	2343.64	2243.39	2179.39	2163.98	2206.53
Winter	1	3441.09	1/7/2014	2418.87	2292.94	2214.15	2187.95	2242.35

Winter	1	3427.19	1/8/2014	2429.08	2325.83	2239.7	2215.3	2253.02
Winter	1	3446.46	1/9/2014	2454.4	2328.28	2245.69	2213.17	2251.4
Winter	1	3377.6	1/10/2014	2458.11	2333.08	2249.13	2236.84	2320.87
Winter	1	3135.61	1/11/2014	2522.07	2370.15	2286.95	2219.02	2240.84
Winter	1	3102.77	1/12/2014	2364.17	2241.25	2155.97	2110.17	2111.59
Winter	1	3462.25	1/13/2014	2298.67	2217.84	2158.62	2136.73	2218.98
Winter	1	3472.25	1/14/2014	2354.05	2248.63	2178.18	2155.23	2201.91
Winter	1	3455.92	1/15/2014	2353.54	2225.78	2154.59	2133.39	2179.51
Winter	1	3464.37	1/16/2014	2369.39	2252.85	2167.45	2144.5	2192.21
Winter	1	3416.86	1/17/2014	2368.86	2257.66	2189.52	2152.52	2178.31
Winter	1	3051.75	1/18/2014	2394.84	2278.87	2183.72	2141.87	2141.71
Winter	1	3071.59	1/19/2014	2349.5	2234.63	2158.21	2107.94	2108.62
Winter	1	3365.88	1/20/2014	2298.53	2208.13	2144.93	2124.21	2172.37
Winter	1	3417.13	1/21/2014	2354.1	2262.16	2183.36	2152.65	2187.68
Winter	1	3385.06	1/22/2014	2375.14	2268.41	2176.27	2154.07	2185.17
Winter	1	3398.99	1/23/2014	2360.22	2240.18	2176.23	2141.52	2187.81
Winter	1	3329.68	1/24/2014	2380.14	2262.89	2196.15	2173.62	2207.63
Winter	1	3061.71	1/25/2014	2372.52	2274.56	2186.44	2130.63	2134.7
Winter	1	3080.89	1/26/2014	2332.14	2233.22	2162.33	2109.03	2110.04
Winter	1	3333.77	1/27/2014	2276.48	2160.08	2124.66	2109	2169.88
Winter	1	3374.04	1/28/2014	2326.83	2221.62	2158.98	2127.81	2188.81
Winter	1	3394.1	1/29/2014	2358.91	2258.88	2180.4	2142.21	2179.23
Winter	1	3395.09	1/30/2014	2355.78	2244.45	2161.63	2140.5	2185.95
Winter	1	3272.65	1/31/2014	2399.95	2281.5	2207.98	2176.7	2223.31
Winter	2	2989.38	2/1/2014	2455.68	2341.29	2239.33	2211.87	2212.38
Winter	2	3009	2/2/2014	2380.87	2289.52	2221.43	2168.31	2170.23
Winter	2	3374.14	2/3/2014	2348.17	2259.95	2196.26	2186.2	2212.28
Winter	2	3381.36	2/4/2014	2490.08	2390.12	2312.02	2293.47	2327.7
Winter	2	3349.54	2/5/2014	2442.32	2329.97	2232	2231.75	2277.22
Winter	2	3442.39	2/6/2014	2408.83	2283.75	2214.29	2181.71	2231.77
Winter	2	3320.97	2/7/2014	2455.72	2350.28	2264.62	2228.99	2263.99
Winter	2	3061.68	2/8/2014	2514.72	2375.57	2324.58	2262.71	2254.33
Winter	2	3032.74	2/9/2014	2419.43	2305.15	2218.71	2170.54	2143.28
Winter	2	3330.79	2/10/2014	2360.66	2228.74	2149.15	2153.28	2190.88
Winter	2	3365.09	2/11/2014	2382.7	2264.67	2197.2	2156.07	2185.96
Winter	2	3355.45	2/12/2014	2389.91	2276.57	2217.86	2192.31	2211.48
Winter	2	3370.42	2/13/2014	2326.13	2219.35	2155.46	2120.34	2185.09
Winter	2	3324.89	2/14/2014	2338.17	2225.61	2152.83	2121.83	2157.17
Winter	2	3021.95	2/15/2014	2364.97	2232.98	2140.17	2100.31	2096.91
Winter	2	3016.51	2/16/2014	2322.4	2197.58	2130.62	2075.74	2066.69
Winter	2	3259.68	2/17/2014	2281.31	2186.69	2118.63	2087.62	2127.26
Winter	2	3358.37	2/18/2014	2322.51	2222.51	2142.97	2125.41	2171.17
Winter	2	3348.83	2/19/2014	2387.32	2272.59	2188.26	2177.87	2197.51
Winter	2	3458.17	2/20/2014	2407.88	2301.36	2220.81	2195.09	2230.67
Winter	2	3288.16	2/21/2014	2398.46	2278.57	2197.02	2172.55	2197.9
Winter	2	2976.78	2/22/2014	2351.84	2224.54	2158.85	2083.38	2070.83
Winter	2	2958.45	2/23/2014	2267.3	2178.38	2097.89	2065.94	2043.66

Winter	2	3290.19	2/24/2014	2225.32	2124.89	2076.08	2059.46	2098.61
Winter	2	3323.9	2/25/2014	2399.84	2271.35	2162.22	2127.65	2149.46
Winter	2	3325.95	2/26/2014	2332.67	2221.99	2150.09	2121.57	2151.88
Winter	2	3340.81	2/27/2014	2357.32	2249.48	2205.96	2168.56	2189.96
Winter	2	3413.39	2/28/2014	2341.67	2235.36	2171.64	2163.79	2175.46
Spring	3	3084.05	3/1/2014	2412.8	2292	2211.9	2185.13	2173.17
Spring	3	3121.47	3/2/2014	2395.8	2295.05	2199.78	2149.06	2160.46
Spring	3	3419.74	3/3/2014	2338.81	2246.1	2175.82	2153.18	2213.11
Spring	3	3446.27	3/4/2014	2400.5	2279.78	2205.14	2175.59	2225.51
Spring	3	3530.26	3/5/2014	2436.99	2312.43	2230.29	2208.6	2259.12
Spring	3	3535.33	3/6/2014	2512.85	2387.21	2325.38	2271.26	2343.64
Spring	3	3485.27	3/7/2014	2528.44	2417.79	2321.9	2273.42	2313.78
Spring	3	3265.51	3/8/2014	2559.23	2437.86	2326.35	2276.63	2261.8
Spring	3	3364.24	3/9/2014	2573.22	2439.63	0	2356.48	2332.24
Spring	3	3636.51	3/10/2014	2566.17	2437.87	2343.58	2291.14	2332.52
Spring	3	3516.52	3/11/2014	2611.88	2482.42	2282.76	2263.52	2268.24
Spring	3	3521.73	3/12/2014	2612.31	2476.36	2388.09	2358.83	2372.79
Spring	3	3469.06	3/13/2014	2633.19	2493.32	2440.9	2377.67	2380.96
Spring	3	3442.87	3/14/2014	2585.49	2459.61	2367.28	2307.62	2356.88
Spring	3	3217.37	3/15/2014	2569.67	2428.88	2361.28	2292.07	2285.88
Spring	3	3327.43	3/16/2014	2563.76	2434.05	2341.16	2273.42	2255.9
Spring	3	3561.88	3/17/2014	2517.59	2359.49	2292.62	2273.33	2322.64
Spring	3	3528.16	3/18/2014	2593.07	2449.15	2371.55	2320.7	2375.55
Spring	3	3536.19	3/19/2014	2573.37	2455.77	2374.59	2322.17	2370.86
Spring	3	3492.43	3/20/2014	2607.11	2478.58	2379.33	2344.78	2380.18
Spring	3	3286.5	3/21/2014	2536.99	2437.42	2368.46	2320.5	2357.37
Spring	3	3054.22	3/22/2014	2534.5	2402.71	2327.02	2276.98	2271.58
Spring	3	3132.06	3/23/2014	2494.38	2344.28	2269.18	2236.02	2229.33
Spring	3	3433.05	3/24/2014	2475.53	2321.32	2313.57	2285.56	2285.97
Spring	3	3419.49	3/25/2014	2598.38	2453.29	2380.88	2332.44	2377.32
Spring	3	3207.66	3/26/2014	2600.44	2522.67	2440.58	2417.31	2415.61
Spring	3	3325.18	3/27/2014	2591.02	2470.82	2397.77	2356.16	2384.11
Spring	3	3327.51	3/28/2014	2588.06	2456.68	2376.78	2330.67	2381.25
Spring	3	3089.78	3/29/2014	2430.32	2451.44	2398.06	2323.31	2327.03
Spring	3	3089.9	3/30/2014	2544.05	2422.41	2332.49	2254.94	2217.46
Spring	3	3356.16	3/31/2014	2491.3	2389.57	2325.82	2301.17	2349.08
Spring	4	3398.64	4/1/2014	2546.41	2444.49	2349.02	2287.83	2286.15
Spring	4	3421.48	4/2/2014	2625.24	2520.8	2454.03	2427.98	2463
Spring	4	3351.21	4/3/2014	2656.35	2476.64	2419.16	2374.58	2462.14
Spring	4	3279.82	4/4/2014	2590.38	2487.16	2428.13	2393.82	2420.6
Spring	4	3084.24	4/5/2014	2618.18	2542.89	2483.05	2371.68	2287.66
Spring	4	3218.8	4/6/2014	2562.67	2450.95	2355.53	2306.18	2300.03
Spring	4	3712.41	4/7/2014	2463.41	2351.37	2257.37	2214.82	2258.74
Spring	4	3990.23	4/8/2014	2581.08	2442.13	2366.45	2314.07	2333.19
Spring	4	3966.1	4/9/2014	2622.14	2468.54	2394.71	2334.57	2348.12
Spring	4	3688.45	4/10/2014	2554.38	2406.55	2300.47	2264.11	2279.55
Spring	4	3538.64	4/11/2014	2526.96	2365.57	2285.98	2268.95	2287.02

Spring	4	2934.6	4/12/2014	2459.6	2287.11	2203.21	2115.29	2147.4
Spring	4	2952.37	4/13/2014	2386.46	2230.6	2151.5	2086.68	2115.11
Spring	4	3647.16	4/14/2014	2090.9	2295.78	2238.79	2232.98	2260.78
Spring	4	3780.13	4/15/2014	2621.26	2485.4	2397.66	2367.56	2386.58
Spring	4	3458.87	4/16/2014	2572.59	2417.42	2357.7	2269.32	2318.77
Spring	4	3438.09	4/17/2014	2590.23	2392.6	2379.61	2321.91	2351.54
Spring	4	3352.56	4/18/2014	2629.38	2510.17	2403.27	2365.01	2376.97
Spring	4	3183.29	4/19/2014	2586.7	2463.9	2381.37	2326.11	2303.62
Spring	4	3217.77	4/20/2014	2568.98	2454.42	2352.39	2286.28	2259.48
Spring	4	3756.35	4/21/2014	2501.47	2367.71	2268.51	2273.87	2310.25
Spring	4	3403.8	4/22/2014	2592.07	2431.75	2372.04	2289.12	2338.9
Spring	4	3414.32	4/23/2014	2520.79	2382.16	2262.48	2220.29	2258.9
Spring	4	3577.23	4/24/2014	2465.66	2298.8	2248.69	2205.37	2226.15
Spring	4	3294.75	4/25/2014	2537.36	2428.63	2354.75	2320.98	2322.89
Spring	4	2973.91	4/26/2014	2502.53	2410.79	2306.03	2255.52	2237.67
Spring	4	3070.05	4/27/2014	2406.66	2293.78	2230.29	2172.75	2154.56
Spring	4	3587.61	4/28/2014	2415.37	2309.06	2268.52	2221.1	2259.6
Spring	4	4227.9	4/29/2014	2625.44	2476.17	2385.94	2345.5	2381.93
Spring	4	4320	4/30/2014	2833.33	2660.37	2560.69	2504.24	2499.32
Spring	5	4595.3	5/1/2014	2867.72	2732.09	2583.37	2536.92	2545.11
Spring	5	4848.78	5/2/2014	2949.16	2767.37	2666.97	2556.67	2575.1
Spring	5	4138.35	5/3/2014	3051.97	2834.78	2685.26	2582.77	2543.15
Spring	5	3586.68	5/4/2014	2886.35	2696.9	2574.91	2485.68	2438.4
Spring	5	3635.71	5/5/2014	2643.64	2512.04	2424.54	2369.56	2399.82
Spring	5	3339.74	5/6/2014	2565.1	2420.61	2341.61	2308.52	2335.55
Spring	5	3176.97	5/7/2014	2518.32	2395.83	2331.28	2295.79	2331.35
Spring	5	3235.85	5/8/2014	2495.37	2364.13	2299.35	2274.51	2300.51
Spring	5	3552.77	5/9/2014	2548.37	2459.93	2374.19	2330.72	2361.71
Spring	5	3115.11	5/10/2014	2602.64	2477.67	2387.63	2341.89	2323.6
Spring	5	3214.86	5/11/2014	2539.84	2418.34	2339.46	2265.7	2255.73
Spring	5	4280.21	5/12/2014	2527.67	2411.98	2350.52	2325.41	2365.61
Spring	5	4715.17	5/13/2014	2625.84	2504.43	2459.47	2449.15	2508.02
Spring	5	5234.45	5/14/2014	3022.33	2809.75	2686.22	2618.43	2603.42
Spring	5	5611.63	5/15/2014	3270.7	3070.61	2880.96	2783.45	2748.29
Spring	5	5344.74	5/16/2014	3454.01	3171.93	3009.02	2882.53	2854.4
Spring	5	4180.72	5/17/2014	3298.56	3056.9	2880.96	2759.69	2707.87
Spring	5	3531.54	5/18/2014	2874.42	2701.6	2582.11	2497.14	2473.69
Spring	5	3762.43	5/19/2014	2645.54	2523.59	2452.01	2408.89	2479.41
Spring	5	3474.85	5/20/2014	2646.5	2519.95	2428.46	2379.26	2418.84
Spring	5	3477.01	5/21/2014	2572.24	2437.16	2342.41	2284.31	2324.24
Spring	5	3336.77	5/22/2014	2572.54	2418.22	2364.97	2315.21	2340.28
Spring	5	3465.91	5/23/2014	2570.37	2445.79	2374.44	2317.84	2345.55
Spring	5	3051.33	5/24/2014	2568.98	2445.5	2366.92	2306.06	2301.29
Spring	5	3237.9	5/25/2014	2529.62	2413.66	2337.9	2271.59	2288.08
Spring	5	3680.75	5/26/2014	2605.78	2452.02	2385.93	2309.17	2315.68
Spring	5	4415.29	5/27/2014	2692.92	2574.68	2453.96	2416.13	2429.56
Spring	5	4323.59	5/28/2014	2787.6	2641.82	2536.27	2473.08	2488.61

Spring	5	4149.92	5/29/2014	2804.71	2660.44	2543.79	2493.94	2489.67
Spring	5	4281.53	5/30/2014	2755.12	2618.19	2505.59	2436.48	2473.34
Spring	5	3731.34	5/31/2014	2782.72	2596.21	2507.02	2411.47	2392.29
Summer	6	3658.9	6/1/2014	2696.85	2544.42	2427.51	2369.28	2328.44
Summer	6	3996.98	6/2/2014	2693	2536.67	2438.48	2405.86	2438.64
Summer	6	4198.28	6/3/2014	2723.71	2557.02	2450.19	2384.32	2390.72
Summer	6	4259.24	6/4/2014	2798.91	2643.97	2519.36	2482.59	2492.3
Summer	6	4304.3	6/5/2014	2826	2673.1	2563.95	2488.38	2525.68
Summer	6	3989.31	6/6/2014	2866.84	2699	2589.8	2512.7	2551.84
Summer	6	3345.55	6/7/2014	2752.91	2622.48	2515	2444.59	2427.84
Summer	6	3621.67	6/8/2014	2715.66	2559.01	2467.33	2398.64	2371.61
Summer	6	4443.49	6/9/2014	2792.24	2650.64	2547.81	2492.51	2549.6
Summer	6	3979.4	6/10/2014	2849.35	2695.15	2597.21	2547.46	2566.87
Summer	6	3954.03	6/11/2014	2735.2	2593.55	2474.18	2433.61	2442.75
Summer	6	4001.23	6/12/2014	2729.43	2581.49	2470.28	2434.5	2470.49
Summer	6	3890.28	6/13/2014	2736.97	2578.87	2487.05	2422.48	2459.96
Summer	6	3529.96	6/14/2014	2766.54	2605.45	2473.96	2397.53	2384.86
Summer	6	3306.25	6/15/2014	2617.92	2485.55	2376.37	2320.82	2307.6
Summer	6	3796.26	6/16/2014	2563.96	2428.11	2319.97	2296.24	2327.99
Summer	6	3810.18	6/17/2014	2655.5	2488.37	2373.13	2291.73	2352.38
Summer	6	3851.74	6/18/2014	2672.46	2519.4	2433.31	2360.46	2397.77
Summer	6	4261.39	6/19/2014	2796.18	2640.41	2515.49	2473.11	2482.99
Summer	6	4534.39	6/20/2014	2855.24	2701.15	2570.51	2497.55	2537.9
Summer	6	3931.24	6/21/2014	2974.56	2794.49	2641.3	2564.9	2516.04
Summer	6	3668.91	6/22/2014	2882.64	2688.84	2572.67	2488.25	2455.81
Summer	6	4164.47	6/23/2014	2767.94	2587.59	2513.67	2444.76	2498.89
Summer	6	4220.2	6/24/2014	2823.51	2677.25	2560.23	2499.02	2510.22
Summer	6	4136.87	6/25/2014	2866.14	2680.32	2575.31	2528.99	2552.05
Summer	6	4168.7	6/26/2014	2944.89	2729.34	2603.43	2565.73	2573.87
Summer	6	4368.16	6/27/2014	2815.14	2705.59	2598.45	2536.54	2548.97
Summer	6	4017.55	6/28/2014	3037.29	2862.18	2718.19	2634.85	2603.75
Summer	6	4179.54	6/29/2014	2975.7	2786.18	2664.47	2569.73	2549.06
Summer	6	4575.51	6/30/2014	2997.35	2826.41	2693.53	2669.74	2701.08
Summer	7	4486.42	7/1/2014	3017.39	2835.82	2713.9	2650.8	2657.83
Summer	7	4507.63	7/2/2014	2980.96	2807.75	2678.5	2619.48	2646.47
Summer	7	4909.65	7/3/2014	3009.91	2812.97	2662.49	2621.83	2638.7
Summer	7	4397.06	7/4/2014	3174.02	2967.54	2843.6	2727	2687.01
Summer	7	4520.79	7/5/2014	3168.27	2965.48	2805.57	2708.93	2644.24
Summer	7	4449.02	7/6/2014	3174.29	2983.78	2799.9	2696.33	2652.68
Summer	7	5146.75	7/7/2014	3161.34	2954.3	2826.91	2741.25	2761.63
Summer	7	5077.15	7/8/2014	3255.43	3032.95	2915.96	2806	2846.78
Summer	7	4924.88	7/9/2014	3183.84	3015.29	2863	2805.11	2789.75
Summer	7	4630.47	7/10/2014	3108.76	2946.5	2804.63	2743.33	2736.12
Summer	7	4496.06	7/11/2014	3036.25	2878.29	2743.59	2680.96	2678.27
Summer	7	4122.42	7/12/2014	3018.51	2879.38	2737.69	2628.71	2598.5
Summer	7	4359.27	7/13/2014	2929.44	2776.72	2646.83	2554.93	2517.6
Summer	7	4283.56	7/14/2014	3045.05	2850.17	2755.97	2704.69	2745.21

Summer	7	4602.24	7/15/2014	2987.77	2847.83	2729.11	2661.62	2699.42
Summer	7	4351.18	7/16/2014	2978.12	2838.07	2741.57	2672.57	2694.63
Summer	7	4098.51	7/17/2014	2860.26	2725.58	2577.41	2533.05	2532.78
Summer	7	4095.65	7/18/2014	2776.69	2636.46	2513.31	2433.4	2450.58
Summer	7	3338.66	7/19/2014	2821.25	2642.72	2522.16	2458.03	2419.41
Summer	7	3521.81	7/20/2014	2668.62	2534.15	2446.97	2389.94	2365.01
Summer	7	4371.1	7/21/2014	2717.96	2582.59	2480.04	2447.44	2459.59
Summer	7	4726.13	7/22/2014	2785.21	2613.3	2486.74	2418.77	2434.16
Summer	7	5082.87	7/23/2014	2992.66	2775.73	2622.3	2531.5	2546.22
Summer	7	5517.33	7/24/2014	3168.05	2941.1	2763.12	2667.04	2659.73
Summer	7	5082.45	7/25/2014	3319.77	3062.85	2862.65	2746.48	2721.94
Summer	7	4388.53	7/26/2014	3181.79	2927.61	2750.78	2651.26	2589.94
Summer	7	4006.09	7/27/2014	2994.19	2806.07	2641.54	2549.44	2494.81
Summer	7	4942.98	7/28/2014	2936.21	2772.8	2652.79	2588.52	2617.84
Summer	7	5067.98	7/29/2014	3101.22	2894.26	2740.54	2652.65	2653.32
Summer	7	5218.26	7/30/2014	3141.62	2925.04	2764.94	2665.69	2670.32
Summer	7	5235.35	7/31/2014	3144.37	2982.1	2816.7	2729.84	2717.91
Summer	8	5060.85	8/1/2014	3159.05	2857.88	2688.92	2633.76	2590.25
Summer	8	4220.44	8/2/2014	3120.79	2890.13	2723.85	2623.69	2559.94
Summer	8	3787.62	8/3/2014	3262.63	3053.31	2886.94	2795.35	2762.58
Summer	8	4833.24	8/4/2014	2999.22	2809.69	2701.4	2620.08	2652.16
Summer	8	4480.74	8/5/2014	2893.25	2726.25	2575.56	2470.13	2522.05
Summer	8	4214.77	8/6/2014	2807.06	2643.92	2546.76	2457.01	2473.78
Summer	8	4248.53	8/7/2014	2792.78	2604.61	2506.06	2433.54	2465.67
Summer	8	4477.77	8/8/2014	2802.4	2613.38	2499.31	2448.24	2483.27
Summer	8	4114.72	8/9/2014	2865.79	2706.83	2598.98	2507.01	2482.39
Summer	8	4124.4	8/10/2014	2825.96	2651.12	2532.74	2421.51	2376.88
Summer	8	4801.87	8/11/2014	2842.53	2648.16	2512.83	2440.53	2478.07
Summer	8	4894.33	8/12/2014	2964.93	2746.71	2616.72	2558.51	2570.25
Summer	8	4623.7	8/13/2014	2868.61	2707.54	2539.48	2479.24	2505.85
Summer	8	4726.43	8/14/2014	2813.4	2628.49	2498.63	2442.18	2452.27
Summer	8	5026.71	8/15/2014	2857.41	2659.65	2537.25	2451.38	2456.33
Summer	8	4538	8/16/2014	3017.75	2790.81	2638.69	2524.89	2469.44
Summer	8	4492.68	8/17/2014	2958.24	2734.25	2559.26	2462.44	2391.76
Summer	8	5147.56	8/18/2014	2923.32	2703.68	2579.39	2512.88	2540.53
Summer	8	4469.77	8/19/2014	2974.38	2804.25	2677.61	2629.57	2628.4
Summer	8	4547.19	8/20/2014	2882.04	2719.65	2625.42	2578.38	2579.73
Summer	8	4663.76	8/21/2014	2857.46	2684.15	2562.4	2501.83	2510.23
Summer	8	4700.02	8/22/2014	2907.03	2734.32	2610.71	2535.3	2539.55
Summer	8	3912.07	8/23/2014	2864.74	2703.43	2573.31	2507.23	2459.28
Summer	8	3752.5	8/24/2014	2736.19	2554.58	2457.21	2377.56	2349.38
Summer	8	4116.71	8/25/2014	2663.35	2498.86	2402.01	2357.55	2410.29
Summer	8	4548.15	8/26/2014	2686.63	2520.14	2421.03	2362.68	2363.02
Summer	8	5055.58	8/27/2014	2801.99	2636.82	2513.2	2442.09	2460.97
Summer	8	5327.41	8/28/2014	3011.11	2789.73	2644.67	2572.59	2550.7
Summer	8	5107.28	8/29/2014	3048.29	2813.76	2689.53	2591.02	2568.67
Summer	8	4646.83	8/30/2014	3010.99	2788.11	2637.5	2532.15	2489.93

Summer	8	4427.98	8/31/2014	3040.03	2849.2	2682.7	2580.3	2516.46
Fall	9	4544.49	9/1/2014	2987.59	2802.06	2676.96	2578.19	2562.93
Fall	9	5095.44	9/2/2014	2919.18	2746.46	2616.67	2553.66	2578.89
Fall	9	4868.29	9/3/2014	2935.16	2756.58	2652.44	2604.54	2616.06
Fall	9	4485.67	9/4/2014	2820.57	2671.83	2557.38	2487.53	2512.21
Fall	9	4755.86	9/5/2014	2761.96	2578.04	2482.42	2432.13	2444.54
Fall	9	4703.23	9/6/2014	2858.93	2670.38	2539.22	2441.58	2435
Fall	9	4822.07	9/7/2014	2962.16	2755.95	2614.96	2504.33	2457.98
Fall	9	4725.4	9/8/2014	3056.77	2872.04	2774.53	2716.69	2747.5
Fall	9	4966.5	9/9/2014	2971.75	2808.36	2657.8	2598.16	2598.9
Fall	9	5037.83	9/10/2014	2858.53	2671.67	2544.36	2460.2	2462.05
Fall	9	5265.88	9/11/2014	2975.37	2779.63	2642.08	2551.94	2551.66
Fall	9	5462.59	9/12/2014	3101.06	2894.75	2744.13	2648.71	2647.27
Fall	9	5122.28	9/13/2014	3217.33	2987.05	2813.99	2692.61	2635.7
Fall	9	5364.11	9/14/2014	3342.45	3092.1	2928.89	2783.24	2712.51
Fall	9	6155.6	9/15/2014	3480.45	3253.56	3070.04	2989.97	3040.63
Fall	9	6342.61	9/16/2014	3770	3508.98	3306.78	3188.04	3143.53
Fall	9	5963.18	9/17/2014	3749.72	3491	3302.47	3190.34	3183.97
Fall	9	4791.33	9/18/2014	3368.38	3112.74	2924.48	2821.94	2786.21
Fall	9	4416.4	9/19/2014	2917.82	2736.83	2599.72	2535.14	2584.93
Fall	9	3576.65	9/20/2014	2831.39	2671.48	2549.6	2461.59	2439.67
Fall	9	3570.07	9/21/2014	2629.65	2495.4	2380.03	2305.1	2278.75
Fall	9	4396.4	9/22/2014	2560.77	2420.1	2341.14	2312.45	2364.62
Fall	9	4538.48	9/23/2014	2714.9	2554.7	2432.4	2389.03	2396.56
Fall	9	4742.93	9/24/2014	2699.14	2527.54	2416.36	2354.77	2377.58
Fall	9	4877.46	9/25/2014	2877.41	2678.75	2537.89	2465.46	2484.4
Fall	9	4304.76	9/26/2014	2911.25	2726.44	2603.03	2528.41	2506.69
Fall	9	3258.26	9/27/2014	2674.85	2530.01	2406.81	2315.93	2303.18
Fall	9	3229.42	9/28/2014	2488.14	2367.32	2261.92	2197.95	2172.3
Fall	9	3818.91	9/29/2014	2410.18	2288.87	2211.83	2196.15	2231.09
Fall	9	4131.63	9/30/2014	2530.07	2372.85	2259.38	2207.91	2232.72
Fall	10	4133.15	10/1/2014	2582.52	2440.45	2316	2269.81	2296.09
Fall	10	4695.62	10/2/2014	2610.61	2462.42	2347.6	2284.83	2312.06
Fall	10	4837.74	10/3/2014	2757.7	2570.9	2449.88	2377.66	2387.88
Fall	10	4670.24	10/4/2014	2849.5	2647	2515.53	2409.18	2378.49
Fall	10	4411.74	10/5/2014	2872.3	2681.41	2526.83	2420.15	2368.03
Fall	10	4829.3	10/6/2014	2827.42	2642.28	2493.15	2456.94	2469.43
Fall	10	4765.48	10/7/2014	2840.37	2625.13	2493.35	2428.36	2440
Fall	10	4393.99	10/8/2014	2789.92	2606.48	2487.03	2402.61	2410.57
Fall	10	4111.1	10/9/2014	2713.72	2554.15	2459.04	2399.48	2427.99
Fall	10	4014.17	10/10/2014	2652.26	2491.04	2379.35	2338.54	2359.16
Fall	10	3609.69	10/11/2014	2591.59	2435.96	2344.72	2257.56	2279.76
Fall	10	3522.67	10/12/2014	2657.06	2503.3	2384.62	2312.35	2289.02
Fall	10	4210.54	10/13/2014	2554.14	2424.26	2352.24	2323.34	2355.93
Fall	10	3790.15	10/14/2014	2627.08	2497.86	2397.28	2368.64	2389.85
Fall	10	3658.93	10/15/2014	2539.71	2398.26	2306.66	2255.21	2283.04
Fall	10	3641.84	10/16/2014	2523.7	2363.96	2282.25	2233.01	2249.49

Fall	10	3527.41	10/17/2014	2493.88	2349.95	2273.59	2217.18	2247.08
Fall	10	3170.82	10/18/2014	2500.16	2373.1	2265.04	2216.95	2185.62
Fall	10	3241.39	10/19/2014	2461.56	2326.8	2232.64	2152.22	2146.35
Fall	10	3686.35	10/20/2014	2469.13	2359.12	2282.71	2236.69	2285.09
Fall	10	3661.81	10/21/2014	2472.33	2347.97	2264.86	2239.09	2257.37
Fall	10	3825.33	10/22/2014	2488.55	2345.49	2243.65	2205.53	2219.91
Fall	10	3948.13	10/23/2014	2550.16	2379.83	2286.9	2242.9	2265.62
Fall	10	3917.04	10/24/2014	2527.13	2391.76	2281.69	2222.58	2267.52
Fall	10	3257.33	10/25/2014	2585.98	2434.19	2316.86	2251.34	2221.09
Fall	10	3174.18	10/26/2014	2438.15	2324.37	2201.68	2151.42	2105.48
Fall	10	3601.55	10/27/2014	2324.33	2217.33	2164.33	2123.3	2174.24
Fall	10	3628.66	10/28/2014	2432.84	2295.03	2214.29	2061.3	1848.24
Fall	10	3787.26	10/29/2014	2459.74	2319.59	2228.81	2184.02	2210.74
Fall	10	3653.75	10/30/2014	2501.45	2355.12	2254.19	2216.31	2229.64
Fall	10	3340.82	10/31/2014	2501.26	2360.77	2254.93	2214.69	2245.03
Fall	11	2957.01	11/1/2014	2470.87	2321.85	2203.6	2156.41	2121.27
Fall	11	2996.59	11/2/2014	2313.09	2204.29	2061	2032.27	2031.23
Fall	11	3380.23	11/3/2014	2206.9	2134.51	2086.93	2097.81	2143.29
Fall	11	3414.82	11/4/2014	2318.52	2212.85	2155.92	2125.99	2183.95
Fall	11	3609.99	11/5/2014	2367.78	2246.92	2170.24	2161.45	2189.86
Fall	11	3886.55	11/6/2014	2420.52	2300.57	2227.32	2189.18	2244.2
Fall	11	3852.21	11/7/2014	2440.87	2319.27	2242.35	2198.69	2242.6
Fall	11	3397.49	11/8/2014	2466.85	2333.24	2240.41	2171.65	2166.98
Fall	11	3193.82	11/9/2014	2411.91	2281.93	2183.29	2123.52	2111.79
Fall	11	3426.87	11/10/2014	2306.3	2216.19	2166.69	2139.88	2197.66
Fall	11	3376.98	11/11/2014	2383.41	2254.54	2181.2	2150.01	2203.25
Fall	11	3332.43	11/12/2014	2359.57	2253.59	2172.54	2143.2	2195.41
Fall	11	3351.28	11/13/2014	2281	2172.14	2110.53	2078.31	2114.12
Fall	11	3360.51	11/14/2014	2312.31	2176.9	2110.56	2103.36	2123.75
Fall	11	3012.77	11/15/2014	2354.84	2232.68	2156.29	2109.38	2085.96
Fall	11	2963.4	11/16/2014	2271.21	2160.28	2101.89	2047.57	2037.8
Fall	11	3376.47	11/17/2014	2199.23	2099.1	2050.68	2042.84	2110.94
Fall	11	3299.42	11/18/2014	2301.31	2174.76	2112.78	2077.64	2122.98
Fall	11	3393.35	11/19/2014	2328.46	2194.79	2115.7	2086.15	2131.63
Fall	11	3401.87	11/20/2014	2329.86	2204.89	2140.39	2095.66	2146.26
Fall	11	3360.32	11/21/2014	2335.44	2231.88	2141.99	2108.28	2138.6
Fall	11	3053.42	11/22/2014	2339.96	2224.71	2156.76	2095.5	2090.48
Fall	11	3074.91	11/23/2014	2297.47	2220.36	2160.54	2100.07	2104.17
Fall	11	3431.54	11/24/2014	2262.75	2175.7	2110.28	2085.57	2143.46
Fall	11	3455.96	11/25/2014	2384.36	2250.09	2176.67	2138.05	2179.55
Fall	11	3475.09	11/26/2014	2399.95	2277.8	2189.61	2184.09	2203.92
Fall	11	3112.53	11/27/2014	2419.24	2312.91	2209.99	2153.01	2161.08
Fall	11	3233.43	11/28/2014	2290.49	2190.4	2117.1	2091.74	2114.74
Fall	11	3066.28	11/29/2014	2317.83	2223.69	2142.2	2084.43	2101.62
Fall	11	3099.44	11/30/2014	2338.92	2198.54	2099.18	2075	2048.96

6	7	8	9	10	11	12	13	14	15
2118.4	2136.63	2173.58	2308.85	2451.29	2551.5	2594.84	2639.35	2667.34	2678.13
2348.06	2615.17	2811.04	2977.74	3075.7	3142.2	3196.34	3192.53	3196.84	3168.19
2364.4	2644.29	2818.46	2966.84	3060.1	3138.07	3147.35	3152.69	3142.82	3155.09
2414.98	2702.89	2889.2	3042.6	3086.06	3141.53	3161.54	3118.69	3127.39	3115.83
2517.72	2809.46	2977.32	3098.63	3181.22	3205.82	3196.81	3184.42	3146.28	3142.32
2575.98	2847.76	3031.97	3163.71	3229.51	3269.14	3269.78	3233.79	3218.17	3177.75
2433.75	2543	2652.13	2841.11	3038.52	3149.33	3143.16	3070.55	2992.88	2925.77
2483.06	2531.17	2581.14	2710.44	2799.9	2849.36	2850.56	2810.78	2782.58	2768.61
2730.78	3026.36	3228.56	3369.67	3336.46	3244.52	3381.3	3352.59	3313.46	3254.68
2754.28	3056.7	3245.92	3325.6	3373.96	3388.2	3358.36	3298.15	3259.94	3246.28
2729.79	3040.28	3222.28	3298.22	3333.31	3340.03	3321.76	3283.18	3065.84	3237.69
2552.19	2852.8	3019.26	3135.98	3195.43	3220.92	3237.02	3193.55	3188.45	3168.03
2560.94	2860.92	2931.42	3130.93	3206	3214.21	3212.47	3182.06	3153.94	3123.84
2394.94	2501.28	2560.06	2692.96	2803.77	2827.74	2824.91	2797.81	2734.25	2721.24
2273.74	2337.72	2371.3	2496.98	2579.84	2643.47	2661.89	2656.19	2676.74	2680.41
2386.82	2657.23	2840.57	2978.95	3136.4	3203.1	3284.25	3316.71	3313.65	3301.21
2380.72	2696.52	2861.94	3014.37	3159.56	3245.46	3322.77	3365.89	3392.58	3413.23
2371.08	2663.47	2871.89	2991.42	3134.3	3193.77	3245.72	3229.53	3236.6	3230.96
2350.49	2668.88	2862.29	3024.32	3179.39	3277.3	3314.21	3287.69	3258.64	3204.67
2525.98	2803.8	2999.41	3103.1	3152.33	3182.6	3179.47	3137.5	3109.68	3099.98
2394.47	2496.4	2566.88	2732.13	2838.13	2877.7	2877.67	2817.89	2759.69	2725.56
2324.71	2366.16	2413.39	2499.96	2588.36	2614.69	2599.67	2593.41	2581.64	2574.03
2443.82	2666.95	2811.41	2971.65	3078.59	3136.54	3134.8	3127.92	3079.6	3058.04
2344.68	2520.91	2640.3	2810.35	2920.81	2968.61	2983.79	2974.41	2947.63	2935.51
2137.07	2189.47	2193.24	2293.78	2386.51	2458.12	2486.18	2515.46	2510.39	2516.08
2246.89	2468.3	2597.58	2771.94	2905.59	3008.79	3059.47	3050.81	3078.75	3075.63
2308.11	2517.26	2649.49	2817.01	2947.31	3041.62	3095.51	3108.54	3105.04	3098.48
2175.34	2247.16	2293.04	2445.35	2586.15	2674.8	2703.15	2690.68	2660.9	2647.27
2167.85	2241.99	2232.35	2341.28	2444.09	2521.63	2538.61	2563.08	2565.96	2573.62
2346.7	2557.99	2705.54	2858.56	2974.09	3057.79	3070.69	3068.84	3064.62	3051.75
2369.55	2572.93	2702.31	2844.99	2922.61	3004.12	3002.25	2999.4	2954.17	2907.58
2257.02	2281.29	2258.92	2314.55	2399.97	2473.36	2503.73	2506.45	2485.84	2508.56
2315.93	2542.92	2672.6	2846.95	2991.39	3074.9	3119.93	3142.66	3164.15	3169.87
2346.18	2571.1	2723.69	2862.05	2972.43	3063.31	3107.74	3102.55	3119.9	3098.74
2221.88	2308.44	2350.75	2478.37	2627.58	2703.91	2721.81	2723.37	2691.19	2671.86
2196.97	2238.26	2258.22	2367.36	2480.61	2545.21	2569.61	2578.05	2580.53	2585.07
2379.04	2631.72	2814.47	2954.29	3053.33	3121.13	3167.68	3181.57	3180.25	3147.65
2399.01	2678.35	2832.68	2969.23	3068.75	3133.62	3175.43	3176.85	3155.51	3146.78

2435.66	2720.44	2884.87	3019.8	3088.93	3144.48	3155.64	3157.14	3136.66	3147.51
2410.57	2722.07	2863.47	3046.8	3169.85	3236.39	3232.41	3207.28	3202.22	3166.71
2480.46	2788.14	2915.06	3034.39	3114.24	3173.95	3185.09	3176.25	3189.7	3157.96
2299.68	2423.62	2475.13	2611.1	2755.8	2804.23	2850.88	2812.02	2772.79	2742.42
2148.48	2219.11	2219.87	2318.02	2435.04	2536.76	2591.82	2564.29	2557.04	2548.02
2381.35	2727.29	2897.6	3031.63	3135.34	3186.65	3233.06	3240.26	3253.37	3258.55
2364.94	2708.69	2894.34	2974.53	3085.04	3190.44	3247.41	3284.68	3285.37	3290.54
2346.02	2697.45	2835.28	2951.44	3095.03	3214.14	3303.62	3335.21	3390.85	3401.93
2346.74	2643.84	2834.98	2967.02	3117.78	3227.03	3307.8	3364.6	3414.21	3420.11
2297.74	2597.23	2767.98	2940.27	3085.25	3208.68	3293.86	3332.5	3386.24	3416.86
2182.87	2280.37	2318.93	2500.47	2691.52	2779.76	2845.24	2871.32	2866.67	2856.8
2150.21	2206.89	2228.82	2364.13	2493.72	2595.03	2644.66	2654.1	2695.48	2688.03
2291.27	2532.48	2654.61	2809.82	2980.05	3060.74	3102.68	3138.75	3137.44	3159.49
2363.01	2686.07	2884.32	2986.3	3107.58	3206.09	3245.48	3263.59	3245.81	3238.42
2341.81	2624.03	2824.57	2950.64	3089.14	3198.37	3266.2	3292.26	3334.92	3326.35
2330.23	2665.17	2836.67	2944.12	3056.49	3130.69	3184.97	3194.64	3208.17	3216
2355.52	2672.21	2829.91	2973.22	3104.88	3174.37	3205.17	3200.21	3173.13	3152.34
2197.11	2315.28	2379.12	2534.6	2692.01	2792.21	2825.93	2849.11	2823.22	2791.1
2141.07	2184.31	2192.13	2335.9	2453.65	2546.5	2587.57	2614.8	2619.41	2619.56
2325.03	2613.49	2789.81	2923.39	3049.75	3126.94	3165.43	3174.39	3192.42	3172.64
2338.31	2657.83	2840.1	2963.16	3076.05	3137.31	3181.85	3187.76	3199.77	3203.43
2327.14	2665.44	2837.39	2976.1	3089.37	3167.98	3216.79	3252.45	3273.33	3263.86
2339	2642.53	2828.54	2971.5	3070.27	3128.06	3183.52	3189.83	3196.29	3179.06
2355.79	2645.57	2826.67	2937.68	3035.27	3074.53	3080.18	3090.24	3070.94	3046.55
2255.34	2348.09	2391.76	2538.69	2652.73	2687.66	2703.96	2664.63	2606.43	2594.46
2198.33	2251.42	2281.44	2394.04	2525.51	2617.87	2618.97	2621.88	2614.02	2600.62
2398.62	2687.52	2870.42	2997.59	3089.53	3131.88	3135.48	3119.85	3112.33	3066.12
2481.89	2792.16	2991	3083.29	3183.53	3208.39	3215.48	3196.33	3145.54	3127.78
2438.53	2719.05	2898.99	3014.67	3084.45	3117.48	3151.3	3123.96	3081.65	3060.07
2401.53	2673.42	2857.38	2957.68	3058.38	3152.54	3202.03	3194.59	3208.33	3180.26
2425.76	2693.99	2863.91	3010.64	3126.66	3123.88	3159.58	3147.19	3122.68	3103.55
2309.43	2394.39	2474.61	2601.73	2734.88	2803.1	2791.63	2769.9	2720.84	2695.93
2196.98	2255.04	2293.98	2446.09	2566.54	2633.91	2658.55	2623.2	2618.56	2602.76
2354.46	2607.51	2792.01	2919.2	3001.43	3082.09	3132.2	3119.8	3137.61	3136.09
2315.14	2592.81	2751.3	2901.53	3018.01	3107.56	3171.93	3208.77	3192.5	3190.42
2381.55	2688.13	2878.62	2941.22	3061.83	3149.75	3211.46	3256.16	3269.86	3269.89
2306.41	2584.77	2725.34	2873.82	3018.43	3127.86	3194.54	3232.34	3298.07	3306.77
2286.75	2548.68	2719.72	2874.3	3000.35	3115.08	3190.49	3246.91	3312.07	3324.89
2139.21	2219.53	2277.39	2444.43	2607.44	2730.47	2770.43	2822.26	2814.52	2774.26
2107.57	2132.54	2125.66	2245.44	2369.54	2476.99	2543.81	2587.22	2595.86	2630.23
2227.87	2358.16	2487.43	2705.51	2847.5	2949.77	3028.72	3028.24	3034.6	3025.87
2321.88	2636.04	2810.7	2959.22	3065.07	3134.64	3171.71	3181.36	3187.36	3197.43
2366.05	2661.65	2850.83	2971.24	3067.93	3135.32	3190.63	3176.06	3188.94	3187.82
2367.45	2648.42	2834	2975.64	3107.1	3210.77	3275.69	3324.16	3364.26	3387.31
2335.75	2595.01	2778.62	2928.96	3075.04	3160.92	3203.91	3242.98	3275.14	3288.16
2120.89	2192.56	2275.47	2435.68	2578.56	2668.61	2740.48	2752.8	2730.79	2718.44
2081.11	2111.75	2134.48	2245.16	2380.05	2461.65	2527.09	2535.09	2539.04	2548.35

2243.56	2565.3	2700.14	2856.91	2972.77	3071.42	3152.86	3161.55	3193.01	3199.29
2293.72	2591.24	2747.87	2894.46	3000.61	3079.52	3166.24	3182.57	3185.68	3173.82
2290.94	2588.56	2770.97	2913.56	3039.83	3138.24	3165.53	3164.39	3154.05	3132.8
2309.42	2596.65	2745.94	2885.62	3010.52	3095.58	3142.64	3157.87	3175.96	3169.16
2318.22	2612.96	2810.03	2963.7	3140.24	3175.99	3201.95	3221.21	3228.86	3235.01
2209.3	2273.52	2369.19	2524.18	2676.29	2767.02	2803.09	2791.15	2767.33	2761.31
2154.68	2210.13	2227.32	2399.32	2533	2660.17	2715.9	2719.24	2706.05	2671.63
2371.06	2628.55	2866.39	2981.66	3065.72	3121.06	3151.22	3171.6	3170.43	3154.02
2428.92	2760.73	2959.36	3118.24	3161.19	3208.04	3202.78	3195.79	3207.94	3226.39
2461.71	2751.7	2942.95	3074.84	3221.3	3261.68	3326.66	3356.69	3380.68	3397.23
2516.39	2773.76	2935.97	3067.72	3188.42	3293.93	3362.46	3370.28	3406.48	3422.98
2466.48	2728.54	2909.96	3061.39	3166.5	3301.15	3327.46	3324.64	3322.42	3330.87
2348.07	2360.2	2428.6	2614.74	2789.63	2898.74	2968.14	2976.2	2945.45	2982.64
2341.53	2382.65	2381.1	2501.12	2641.26	2759.16	2882.28	2879.14	2908.17	2979.26
2490.41	2802.05	2976.83	3118.12	3256.89	3387.86	3492.64	3551.27	3598.57	3624.19
2515.37	2806.64	2972.22	3070.14	3211.01	3298.88	3352.69	3405.04	3440.24	3471.5
2499.46	2707.38	2918.23	3041.22	3210.82	3340.86	3385.7	3419.03	3459.22	3490.27
2531.58	2829.58	2974.45	3092.61	3212.13	3339.54	3385.86	3420.65	3452.4	3469.06
2474.76	2785.63	2968.54	3091.48	3182.3	3305.58	3341.57	3384.76	3413.38	3441.27
2321.24	2445.24	2505.51	2641.03	2801.35	2923.06	2996.14	3038.66	3043.17	3066.03
2275.89	2330.58	2312.24	2435.32	2603.3	2729.37	2882.56	2910.65	3060.79	3149.46
2476.76	2845.11	3001.15	3128.11	3285.84	3402.31	3514.4	3561.88	3532.78	3532.81
2490.13	2746.97	2794.36	2926	3163.47	3281.95	3352.61	3409.16	3462.85	3525.5
2460.55	2747.5	2907.89	2990.67	3157.39	3314.67	3404.51	3455.75	3520.32	3536.19
2500.59	2784.98	2927.95	3054.1	3204.64	3307.05	3418.38	3453.78	3486.16	3492.43
2430.78	2664.2	2788.44	2928.94	3142.91	3186.24	3273.85	3279.4	3277.92	3286.5
2288.65	2323.33	2384.66	2506.1	2729.73	2758.41	2776.69	2838.61	2858.44	2841.4
2264.05	2338.3	2313.55	2433.74	2558.12	2664.15	2720.04	2702.62	2738.97	2729.15
2410.98	2628.57	2771.02	2915.98	3082.4	3224.82	3252.09	3283.88	3396.49	3369.31
2530.47	2785.54	2890.48	3042.11	3191.96	3320.74	3389.27	3419.49	3393.31	3402.04
2454.32	2590.66	2725.82	2843.59	2959.24	3092.55	3128.83	3124.88	3099.4	3040.29
2538.55	2797.43	2938.93	3066.9	3184.56	3230.79	3298.44	3282.63	3325.18	3294.64
2487.82	2691.41	2840.02	2956.04	3090.04	3219.72	3280.93	3322.98	3327.51	3303.1
2374.46	2462.84	2493.24	2639.62	2776.02	2869.86	2955.6	2991.93	2952.89	2959.24
2247.01	2295.06	2317.43	2429.31	2545.08	2617.1	2674.05	2707.54	2724.63	2696.59
2467.12	2659.97	2772.33	2949.3	3090.56	3217.16	3282.46	3283.6	3273.34	3272.32
2381.6	2624	2788.36	2924.03	2979.94	3072.19	3105.35	3124.07	3161.78	3074.69
2578.74	2835.42	2942.14	3017.81	3159.18	3230.94	3261.57	3253.36	3238.26	3254.64
2633.27	2810.32	2979.42	3102.27	3192.91	3237.21	3231.44	3252.63	3241.89	3217.21
2556.31	2813.54	2968.14	3123.14	3247.01	3279.82	3257.58	3276.75	3244.69	3206.32
2380.03	2396.38	2486.53	2599.15	2738.24	2767.23	2790.11	2759.77	2729.79	2671.37
2324.98	2330.81	2344.34	2452.2	2582.56	2682.93	2803.15	2827.15	2865.11	2897.2
2435.33	2624.01	2822.55	3032.06	3142.36	3330.89	3436.22	3543.96	3619.77	3687.86
2465.92	2699.48	2872.44	3087.38	3287.54	3462.92	3592.08	3713.03	3834.52	3945.96
2483.1	2714.38	2881.8	3062.68	3253.89	3442.72	3587.53	3703.73	3816.85	3917.08
2443.29	2554.09	2732.93	2879.03	3035.98	3316.42	3439.76	3550.48	3684.32	3688.45
2439.5	2650.08	2863.6	3041.43	3225.96	3366.81	3456.27	3480.79	3507.19	3536.19

2188.25	2281.24	2432.34	2511.36	2664.28	2790.31	2797.69	2750.37	2752.68	2666.36
2149.04	2161.87	2195.2	2303.9	2443.74	2567.1	2642.16	2683.84	2687.6	2673
2392.62	2496.2	2673.1	2841.4	3001.38	3271.32	3404.1	3485.91	3517.65	3605.87
2492.11	2686.73	2866.06	3050	3219.25	3354.09	3433.04	3499.96	3564.86	3599.38
2461.43	2573.31	2726.55	2913.16	3029.26	3195.97	3300.55	3371.79	3428.16	3458.87
2474.06	2571.99	2743.45	2939.84	3132.85	3263.09	3364.36	3404.46	3408.69	3438.09
2473.74	2675.74	2821.84	2975.09	3111.81	3234.83	3323.52	3352.45	3350.83	3352.56
2354.43	2322.68	2416.97	2639.72	2829.25	2941.4	2988.16	3036.67	3014.8	3014.58
2303.9	2291.83	2350.36	2473.57	2585.25	2720.33	2800.58	2856.2	2920.38	2956.88
2449.7	2613.5	2807.13	2940.24	3129.19	3370.67	3491.49	3623.09	3660.85	3709.36
2464.24	2614.02	2826.48	2973.76	3184.41	3214.69	3287.62	3308.16	3339.67	3341.62
2443.66	2498.56	2697.07	2887.14	2995.1	3180.86	3274.56	3365.19	3365.3	3367.65
2398.84	2483.82	2705.78	2924.26	3071.79	3269.92	3361.14	3447.86	3530.66	3559.78
2424.62	2566.12	2789.33	2976.64	3068.71	3190.99	3194.69	3284.31	3294.75	3277.35
2291.58	2281.08	2385.73	2551.83	2684.72	2733.02	2748.37	2730	2721.84	2732
2214.27	2179.38	2216.01	2309.81	2432.8	2435.42	2497.68	2505.14	2557.94	2553.9
2353.77	2505.44	2728.44	2922.46	3093.54	3228.44	3334.08	3358.98	3408.21	3475.79
2454.31	2592	2871.81	3137.69	3417.95	3626.6	3730.98	3849.2	3950.44	4098.29
2616.79	2723.01	2983.48	3254.14	3504.49	3752.21	3788.81	3919.89	4120.28	4142.16
2654.92	2799.26	3066.57	3421.78	3650.46	3836.79	4014.3	4166.42	4325.03	4498.98
2678.3	2785.46	3088.66	3412.74	3683.91	3984.54	4228.79	4444.68	4639.64	4745.4
2544.02	2559.39	2719.34	2988.04	3290.44	3536.82	3714.58	3872.49	3996.28	4095.05
2422.27	2391.8	2466.01	2642.72	2822.21	2983.98	3155.47	3273.06	3366.36	3479.83
2531.06	2649.72	2922.85	3141.03	3322.98	3471.08	3516.41	3577.09	3622.99	3600.89
2454.1	2595.51	2807.15	3016.72	3101.89	3203.79	3259.02	3284.43	3261.65	3288.53
2538.02	2443.02	2666.56	2850.24	2954.69	2950.5	3119.7	3139.52	3172.62	3176.97
2469.04	2502.64	2691.11	2860.49	2972.82	3081.52	3158.44	3181.97	3211.53	3235.85
2486.8	2653.12	2860.35	3041.77	3250.93	3371.33	3448.55	3476.94	3517.33	3552.77
2348.93	2349.98	2438.09	2609.42	2778.32	2908.37	2949.56	3031.28	2993.72	2951.25
2248.8	2200.82	2292.07	2418.28	2534.98	2645.22	2719.07	2750.95	2776.22	2838.84
2442.49	2556.9	2828.68	3113.03	3378.98	3611.6	3739.27	3863.36	3977.44	4138.55
2553.03	2716.88	3023.37	3299.84	3562.56	3808.93	4038.3	4190.18	4332.36	4549.7
2652.2	2947.67	3161.79	3463.73	3766.13	4061.89	4293.74	4511.99	4777.3	4974.06
2840.68	3038.06	3345.18	3756.32	4037.55	4435.19	4732.33	5015.46	5277.72	5450.32
2954.79	3066.79	3416.91	3800.61	4136.65	4451.16	4709.27	4945.51	5148.39	5267.58
2689.46	2667.14	2822.07	3108.44	3397.44	3639.31	3830.38	3948.93	4080.3	4158.44
2477.04	2420.13	2452.27	2629.15	2823.15	2985.35	3133.37	3240.57	3350.98	3416.24
2616.85	2809.97	3070.37	3216.87	3377.16	3515.71	3638.08	3691.97	3722	3748.95
2501.22	2647.6	2910.58	3060.82	3231.99	3291.05	3379.32	3424.63	3446.33	3474.85
2460.29	2578.51	2811.19	2990.08	3154.75	3254.79	3386.72	3432.35	3477.01	3465.92
2454.78	2580.32	2814.09	2997.65	3142.59	3245.4	3326.03	3307.8	3310.2	3331.26
2445.43	2565.89	2762.02	2937.04	3097.25	3231.2	3336.29	3373.11	3396.11	3465.91
2339.19	2285.73	2437.4	2627.75	2788.91	2884.98	2946.89	2935.7	2904.34	2864.4
2285.9	2261.34	2294.71	2443.67	2623.25	2750.73	2884.01	2953.54	3040.45	3120.18
2325.45	2336.77	2431.32	2604.03	2846.75	3013.35	3170.66	3277.23	3399.35	3526.46
2557.84	2694.45	2981.26	3229.89	3507.92	3738.64	3924.75	4066.12	4202.29	4325.53
2618.28	2836.23	3088.17	3306.82	3522.23	3729.59	3896.68	4018.7	4137.7	4244.93

2602.7	2712.89	2962.9	3139.72	3327.28	3564.5	3722.64	3826.49	3960.73	4096.91
2516.39	2633.01	2899.84	3160.58	3414.8	3580.64	3751.63	3950.34	4078.33	4188.36
2376.55	2287.78	2475.86	2707.42	2989.01	3173.62	3318.2	3421.31	3489	3592.05
2314.93	2276.65	2360.15	2550	2737.88	2948.74	3098.83	3222.39	3345.63	3488.86
2552.99	2651.87	2918.41	3180.78	3386.17	3556.55	3693.61	3773.63	3847.64	3947.21
2527.08	2696.75	2885.93	3146.56	3365.41	3527.71	3715.52	3817.88	3917.77	4049.08
2595.19	2763.84	2949.31	3187.29	3433.07	3634.43	3782.31	3872.8	4049.14	4182.76
2637.78	2795.1	3089.75	3337.49	3537.76	3725.95	3852.23	3977.47	4059.61	4229.35
2660.2	2766.07	2940.22	3213.17	3439.76	3616.09	3782.15	3771.51	3844.09	3922.77
2459.62	2462.85	2581.72	2790.95	2960.92	3065.74	3066.37	3101.67	3153.91	3226.4
2374.99	2332.98	2408.38	2557.36	2712.1	2893.03	3018.64	3093.31	3236.68	3374.39
2663.26	2808.17	3009.55	3276.86	3459.78	3634.52	3737.09	3846.58	4018.34	4166.04
2681.03	2756.92	3024.37	3233.17	3415.46	3559.09	3653.82	3706	3824.29	3919.19
2584.35	2707.03	2933.47	3132.26	3311.67	3468.09	3621.96	3723.4	3816.46	3892.76
2561.32	2706.96	2946.94	3199.15	3390.09	3619.63	3747.27	3844.39	3885.28	3982.77
2555.39	2691.67	2920.32	3149.79	3344.68	3471.57	3594.85	3667.28	3731.68	3830.32
2429.57	2370.88	2501.77	2697.13	2931.43	3087.38	3216.9	3297.48	3353.92	3449.37
2303.32	2229.51	2325.73	2511.2	2677.98	2827.53	2960.43	3082.18	3136.31	3216.29
2550.09	2664.46	2903.87	3084.85	3276.46	3440.51	3568.94	3627.99	3714.43	3747.84
2431.06	2620.97	2851.94	3064.96	3245.27	3398.24	3553.38	3595.12	3677.11	3748.35
2511.54	2607.21	2868.57	3079.69	3260.76	3411.7	3543.24	3596	3668.35	3743.52
2566.77	2628.87	2867.79	3104.79	3337.62	3515.05	3703.03	3841.33	3923.73	4062.72
2605.1	2674.98	2935.78	3231.42	3466.85	3706.81	3892.01	4033.12	4193.71	4331.87
2528.71	2419.48	2604.66	2871.24	3115.45	3359.58	3536.1	3660.57	3805.97	3902.42
2434.32	2360.78	2418.33	2610.75	2860.42	3066.93	3188.42	3335.39	3455.71	3564.96
2642.27	2782.51	2999.47	3236.25	3445.85	3648.91	3766.12	3886.52	3960.56	4059.73
2670.46	2784.43	3024.87	3251.01	3439.41	3628.86	3784.54	3905.05	4012.34	4127.35
2656.23	2775.34	2996.08	3248.59	3403.05	3553.49	3671.17	3807.43	3890.11	4010.97
2715.81	2816.36	3063.09	3270.1	3480.71	3625.18	3767.04	3851.28	3973.22	4073.19
2503.25	2675.55	2965.34	3296.75	3460.8	3642.39	3824.09	3918.13	4060.38	4212.08
2619.07	2591.21	2713.47	2912.38	3190.05	3374.78	3536.3	3711.7	3835.26	3931.65
2530.71	2487.86	2548.07	2743.58	3010.4	3267.54	3498.45	3697.36	3888.92	4055.41
2861.59	2953.79	3179.01	3397.73	3562.52	3710.54	3885.47	4038.68	4247.02	4430.3
2800.02	2999.66	3178.85	3409.16	3613.32	3734.73	3878.33	4028.49	4207.21	4373.19
2753.97	2955.52	3167.6	3391.6	3551.12	3790.88	3973.76	4097.8	4260.71	4453.26
2719.65	2887.53	3151.05	3434.18	3711.8	3974.6	4210.16	4424.28	4608.78	4773.79
2682.55	2663.89	2758.32	2919.51	3191.55	3486.7	3746.69	3958.32	4199.52	4353.97
2629.15	2568.49	2782.9	3072.64	3304.46	3618.66	3873.6	4151.92	4327.87	4427.73
2615.67	2589.04	2690.97	2911.77	3196.7	3465.43	3759.13	3938.81	4140.47	4282.76
2885.34	3036.92	3368.91	3677.28	3964.69	4237.97	4474.98	4697.57	4898.59	5057.8
2917.35	3116.29	3371.03	3624.59	3879.09	4118.55	4343.6	4535.7	4771.11	4942.86
2903.14	3117.64	3413.95	3703.4	3932.5	4170.48	4426.36	4552.35	4710.67	4862.98
2834.43	2979.27	3200.73	3406.75	3600.55	3792.47	3975.03	4148.02	4303.58	4443.04
2738.05	2921.43	3143.69	3367.02	3633.98	3851.16	4026.88	4158.95	4275.02	4414.77
2600.99	2567.19	2699.88	2975.28	3215.3	3380.81	3555.87	3733.32	3897.11	3995.24
2492.94	2425.54	2551.39	2754.34	3042.03	3344.74	3630.05	3896.28	4092.2	4213.24
2881.14	3077.98	3305.92	3569.64	3772.47	3923.96	3988.44	4001.11	4016.23	4069.59

2758.42	3001.05	3279.33	3529.58	3782.47	3999.06	4188.66	4304.43	4446.4	4578.41
2811.32	2999.71	3192.66	3436.75	3601.62	3759.85	3853.37	3997.16	4104.42	4210.92
2658.41	2816.4	3031.37	3247.62	3428.84	3589.41	3761.74	3826.07	3938.8	4041.53
2557.45	2711.14	2939.5	3216.15	3432.64	3656.02	3754.87	3858.5	3936.34	4014.81
2446.6	2467.52	2625.88	2840.9	3098.42	3253.32	3309.95	3309.18	3299.63	3338.66
2369.59	2353.73	2401.6	2558.2	2704.94	2849.2	2944.54	3027.06	3088.09	3215.5
2618.6	2761.91	3014.83	3300.69	3516	3664.1	3839.03	4005.85	4158.57	4276.71
2523.6	2723.89	3069.26	3325.05	3589.82	3833	4091.46	4270.96	4423.68	4594.81
2643.11	2835.67	3077.92	3390.11	3739.9	4023.36	4310.14	4565.91	4820.05	4985.13
2761.91	2921.69	3258.39	3591.49	3944.41	4309.86	4650.2	4951.52	5206.58	5420.85
2818.31	3024.04	3272.59	3604.93	3938.15	4275.47	4552.85	4808.66	5018.7	5082.45
2608.52	2576.13	2734.54	3051.54	3344.63	3610.93	3843.72	4036.01	4168.7	4299.44
2488.21	2439.54	2499.97	2658.37	2871.4	3107.91	3300.73	3412.98	3528.91	3628.74
2760.83	2999.23	3255.64	3593.65	3865.62	4087.44	4301.13	4537.78	4727.38	4873.39
2758.46	2896.98	3189.54	3501.75	3791.31	4045.38	4254.12	4486.8	4711.21	4898.47
2817.96	2976.08	3259.83	3631.09	3914.6	4251.19	4541.57	4800.98	4992.99	5170.44
2802.01	2989.17	3267.53	3577.37	3879.26	4210.31	4491.18	4724.36	4978.88	5128.64
2725.03	2965.21	3146.55	3456.23	3767.69	4019.08	4315.41	4572.11	4785.24	4972.69
2571.78	2561.06	2686.71	2964.51	3305.72	3568.85	3783.74	3939.2	4038.69	4121.79
2757.96	2744.32	2810.53	2953.55	3162.06	3332.4	3457.22	3578.45	3730.52	3787.62
2793.3	2954.43	3228.32	3549.54	3883.12	4164.15	4373	4551.66	4703.26	4833.24
2627.68	2789.44	3026.75	3269.55	3540.47	3763.15	3957.9	4088.99	4241.01	4373.25
2585.77	2750.66	2943.81	3161	3376.75	3586.39	3763.03	3889.08	3985.65	4104.12
2572.24	2742.98	2958.09	3184.05	3345.18	3526.5	3722.25	3857.12	3973.63	4124.7
2618.33	2783.05	2977.33	3217.21	3427.71	3653.85	3856.46	4003.73	4234.55	4345.8
2512.74	2500.48	2618.22	2873.37	3117.1	3341.35	3540.4	3713.12	3856.81	4013.53
2389.65	2326.54	2400.67	2605.67	2862.07	3093.66	3327.55	3551.16	3772.83	3956.84
2614.77	2775.12	3094.93	3362.67	3674.08	3919.33	4171.22	4395.78	4599.94	4736.27
2701.15	2896.48	3150.69	3444.87	3742.07	3985.18	4213.74	4431.85	4603.93	4804.96
2667.45	2859.07	3088.69	3297.31	3548.07	3789.76	3993.19	4182.77	4340.59	4450.72
2570.39	2790.68	3054.27	3326.31	3597.36	3818.8	4062.54	4236.86	4430.93	4569.88
2576.15	2764.44	3016.86	3315.35	3620.24	3951.69	4200.62	4448.1	4677.72	4844.36
2481.73	2487.11	2645.32	2918.4	3228.25	3534.13	3848.63	4099.05	4310.6	4439.23
2400.22	2347.85	2419.16	2658.9	2944.75	3255.44	3565.04	3847.7	4123.84	4311.03
2683.39	2883.05	3173.81	3474.63	3752.82	4105.2	4411.42	4639.68	4875.37	5030.92
2794.47	3044.05	3269.4	3480.75	3626.68	3787.67	3944.29	4086.97	4229.84	4394.07
2733.99	2981.8	3186.82	3425.78	3676.64	3898.03	4078.22	4227.95	4346.15	4434.61
2638.98	2836.12	3086.48	3373.72	3629.61	3854.52	4076.43	4224.27	4385.75	4518.93
2681.03	2883.51	3109.51	3423.63	3677.42	3930.76	4117.36	4268.92	4449.66	4563.2
2493.7	2546.48	2637.05	2868.13	3109.9	3321.02	3504.43	3640.63	3740.85	3831.58
2362.85	2359.41	2384.22	2522.17	2764.52	2963.89	3136.19	3296.8	3486.3	3646.6
2558.7	2772.36	3024.52	3264.8	3490.72	3663.71	3824.07	3924.43	4023.64	4091.94
2612.16	2766.86	2963.4	3239.95	3516.19	3729.37	3944.04	4105.61	4311.71	4450.43
2731.22	2837.32	3081.52	3369.32	3668.5	3950.52	4230.89	4511.54	4724.1	4904.08
2673.98	2914.7	3161.89	3544	3889.02	4172.06	4543.69	4808.58	5049.42	5190.73
2690.36	2876.25	3136.57	3413.41	3705.69	4030.51	4326.12	4594.1	4827.51	4987.9
2501.56	2499.96	2612.55	2876.19	3168.45	3413.78	3696.47	4087.97	4232.12	4471.2

2513.83	2498.55	2512.42	2704.87	2975.33	3266.46	3559.07	3882.4	4098.26	4301.97
2596.15	2635.86	2682.91	2875.66	3173.26	3512.38	3780.84	3997.29	4144.42	4405.76
2725.25	3099.37	3290.56	3524.25	3811.22	4152.48	4392.08	4592.58	4748.27	4953.88
2772.5	3083.09	3253.93	3508.56	3811.19	4053.97	4214.14	4410.21	4566.7	4652.75
2673.49	2993.93	3192.07	3426.55	3569.75	3670.45	3840.96	4043.95	4201.77	4332.24
2587.78	2872.24	3045.06	3299.35	3566.67	3795.71	4039.25	4192.56	4395.27	4573.81
2452.23	2506.67	2623.19	2945.6	3258.24	3491.51	3730.83	3973.65	4229.57	4460.98
2450.45	2445.49	2493.45	2741.82	3085.77	3474.72	3818.77	4178.91	4507.64	4659.77
2917.45	3346.1	3480.62	3674.59	3835.48	4079.2	4158.94	4317.67	4486.53	4666.56
2740.06	3002.1	3226.09	3536.81	3822.65	4047.34	4324.22	4535.29	4781.41	4897.61
2587.15	2853.95	3053.89	3335.66	3583.56	3846.13	4112.48	4329.28	4569.57	4793.18
2672.32	2953.59	3191.85	3513.6	3817.02	4143.43	4441.8	4731.75	4971.58	5113.07
2767.18	3035.45	3261.28	3618.49	3944.37	4320.93	4661.92	4962.35	5242.26	5378.43
2635.06	2700.42	2807.84	3150.16	3516.1	3922.76	4304.03	4680.23	4865.03	5001.22
2694.43	2705.39	2733.13	3083.55	3502.18	3974.97	4454.53	4838.02	5133.42	5290.46
3178.06	3407.18	3657.22	4058.83	4457.2	4895.29	5289.98	5605.65	5860.89	6037.42
3262.49	3520.73	3821.83	4226.62	4734.91	5207.78	5578.89	5938.53	6130	6279.83
3311.33	3610.11	3890.54	4336.64	4805.46	5186.38	5484.63	5726.39	5891.24	5961.76
2887.26	3149.46	3336.51	3635.47	3881.25	4151.24	4325.5	4479.46	4597.8	4731.8
2726.72	3034.14	3207.47	3444.77	3599.27	3791.58	3940.86	4069.56	4202.89	4330.78
2454.59	2564.57	2656.94	2852.83	3066.69	3162.66	3200.08	3227.84	3253	3405.89
2295.14	2364.69	2386.97	2526.87	2693.46	2830.9	2941.44	3056.1	3216.99	3379.62
2509.53	2778.67	2941.94	3198.73	3443.23	3666.2	3838.24	4014.26	4153.15	4275.99
2543.91	2790.34	2992.33	3240.97	3470.21	3709.97	3916.78	4114.66	4297.19	4433.29
2492.92	2762.53	2931.35	3200.18	3462.84	3717.52	3946.09	4168.38	4386.11	4579
2620.43	2881.74	3064	3341.59	3641	3929.19	4190.92	4441.74	4627.39	4782.43
2632.5	2881.08	3073.48	3377.97	3646.67	3853.01	4021.58	4141.02	4256.11	4304.76
2325.09	2389.73	2460.25	2654.29	2878.5	3014.33	3103.88	3178.04	3184.66	3170.98
2197.21	2230.88	2252.78	2411.48	2594.82	2736.48	2816.53	2893.55	2962.93	3013.53
2370.94	2608.64	2784.68	2997.92	3206.81	3369.98	3492.95	3580.78	3661.87	3740.47
2369.03	2655.99	2807.71	3045.35	3259.77	3471.41	3642.88	3782.97	3931.29	4060.88
2425.02	2725.81	2877.82	3084.24	3315.29	3483.46	3643.86	3777.82	3933.98	4062.06
2452.14	2719.67	2882.93	3137.71	3402.46	3638.4	3875.43	4080.85	4331.56	4511.58
2494.29	2734.99	2903.32	3164.45	3519.14	3778.08	4077.32	4305.41	4565.93	4762.18
2408.59	2456.77	2530.85	2781.3	3093.56	3424.1	3734.84	4003.99	4253.56	4481.78
2343.08	2366.47	2364.84	2551.09	2833.32	3106.61	3412.57	3707.12	4009.13	4244.47
2603.06	2862.15	3016.01	3281.28	3554.1	3817.85	4048.35	4271.52	4525.39	4714.33
2572.63	2847.65	3006.01	3250.63	3502.04	3747.36	3967.16	4183.68	4411.2	4637.99
2540.8	2799.77	2921.22	3180.45	3407.43	3666.17	3863.83	4027.14	4216.53	4334.11
2576.31	2868.32	3034.42	3207.89	3374.05	3543.27	3726.07	3840.07	3981.39	4073.09
2504.7	2791.88	2959.88	3158.25	3334.82	3492.81	3666.13	3763.82	3867.28	3955.85
2322.66	2437.44	2519.77	2681.37	2862.84	3037.12	3172.48	3303.56	3402.13	3509.85
2304.87	2360.85	2359.48	2511.02	2664.62	2842.53	2999.2	3154.83	3297.13	3449.57
2510.58	2775.1	2909.11	3123.36	3338.75	3554.48	3719.84	3888.33	4050.04	4147.07
2533.94	2833.21	3009.95	3194.69	3346.32	3460.21	3536.29	3622.43	3705.52	3764.43
2432.37	2739.37	2899.97	3080.49	3250.93	3399.28	3511.35	3565.43	3610.63	3649.43
2397.47	2697.23	2840.61	3013.98	3213.22	3367.17	3456.78	3524.72	3588.71	3641.84

2371.08	2671.07	2841.6	3033.72	3196.62	3325.11	3439.75	3466.99	3501.12	3527.41
2225.57	2321.09	2373.11	2544.42	2757.12	2902.65	2956.99	2998.08	3020.8	3037.5
2157.86	2200.61	2195.8	2343.69	2522.43	2688.83	2776.8	2861.45	2907.51	2980.92
2448.67	2768.59	2947.92	3123.15	3274.23	3376.74	3446.31	3517.52	3625.6	3675.95
2396.71	2682.67	2844.64	3016.45	3197.01	3361.93	3498.97	3562.51	3650.42	3661.81
2359.56	2648.93	2809.51	2992.39	3183.66	3344.52	3489.46	3563.84	3713.25	3791.05
2402.47	2697.82	2832.2	3021.45	3218.59	3420.38	3592.58	3711.52	3853.81	3948.13
2382.41	2668.65	2806.58	2998.73	3207.61	3414.38	3555.08	3686.6	3804.92	3902.21
2261.85	2374.41	2439.48	2603.73	2794.36	2984.38	3090.96	3128.41	3129.19	3183.61
2119.67	2191.07	2198.96	2313.38	2480.65	2644.69	2747.92	2810.47	2888.61	2958.21
2369.07	2649.34	2812.37	2969.48	3141.33	3282.01	3385.95	3418.84	3500.55	3558.19
2350.58	2637.63	2804.71	2962.95	3136.15	3290.18	3407.13	3467.01	3557.39	3612.51
2367.86	2631.86	2794.18	2959.98	3154.85	3317.53	3463.03	3568.47	3690.13	3748.11
2366.08	2659.32	2833	3004.03	3168.22	3337.22	3458.7	3556.88	3630.48	3653.75
2378.93	2688.86	2887.86	3008.05	3180.31	3287.46	3337.76	3340.82	3295.38	3281.67
2162.27	2255.57	2342.36	2449.36	2594.49	2715.06	2763.41	2771.11	2716.09	2672.3
2077.75	2093.23	2192.05	2327.67	2445	2491.32	2528.61	2557.5	2576.43	2580.16
2309.32	2540.08	2738.52	2913.26	3053.52	3146.08	3181.86	3220.21	3237.87	3239.93
2326.92	2569.2	2767.7	2920.05	3067.46	3154.44	3226.24	3269.34	3306.03	3323.51
2349.61	2587.33	2782.63	2999.31	3162.12	3304.96	3402.43	3484.19	3581.68	3609.99
2391.65	2594.51	2813.97	3076.95	3279.31	3482.48	3640.88	3745.47	3843.53	3886.55
2392.27	2585.47	2822.09	3075.95	3303.1	3493.37	3641.79	3732.06	3833.95	3852.21
2228.83	2271.93	2402.25	2648.53	2879.07	3055.62	3174.85	3295	3347	3397.49
2118.36	2146.08	2204.88	2367.75	2522.34	2680.11	2794.18	2895.44	2972.73	2981.58
2378.97	2606.29	2795.85	3011.27	3122.95	3224.9	3280.97	3322.09	3338.68	3355.1
2333.81	2525.69	2712.2	2934.51	3065.4	3156.13	3185.71	3207.07	3205.31	3165.58
2338.56	2566.34	2759.28	2946.97	3071.66	3172.88	3215.03	3220.85	3245.86	3225.09
2261.55	2489.74	2672.69	2860.97	2985.82	3095.28	3149.1	3156.04	3194.29	3156.33
2296.9	2506.25	2701.72	2885.53	3044.25	3115.81	3181.21	3231.8	3252.08	3248.8
2144.89	2229.69	2304.58	2506.79	2634.02	2708.91	2775.93	2803.93	2769.84	2753.3
2081.48	2088.35	2133.33	2274.36	2388.58	2480.9	2533.72	2552.78	2579.57	2583.6
2247.33	2483.02	2660.14	2830.14	2967.72	3088.03	3126.31	3182.77	3202.33	3211.14
2270.71	2579.16	2673.09	2890.8	3022.23	3095.33	3163.22	3198.37	3206.71	3216.54
2351.18	2473.43	2718.21	2905.84	3031.26	3132.72	3210.03	3217.08	3262.25	3226.36
2302.58	2553.72	2735.81	2901.16	3030.32	3113.83	3171.36	3201.94	3201.56	3197.06
2284.03	2545.02	2710.12	2890.23	3010.85	3086.11	3127.49	3155.16	3178.73	3172.88
2158.55	2211.84	2318.2	2481.66	2634.15	2740.38	2789.5	2798.59	2754.39	2730.82
2139.64	2153.05	2206.45	2351.27	2481.64	2528.47	2610.88	2640.3	2656.61	2681.48
2333.16	2558.84	2719.69	2908.91	3031.27	3118.78	3195.68	3239.81	3241.67	3272.57
2352.24	2572.54	2736.05	2935.31	3059.31	3159.75	3210.39	3248.45	3289.66	3298.36
2414.12	2589.43	2764.9	2921.93	3072.98	3163.66	3261.24	3321.19	3362.92	3368.58
2209.98	2234.45	2306.37	2428.37	2585.35	2722.81	2836.3	2930.4	3012.86	3056.16
2197.35	2307.87	2387.55	2545.95	2711.69	2825.9	2891.63	2951.24	2992.16	3034.15
2149.86	2198.55	2267.26	2440.74	2590.7	2670.66	2729.83	2748.88	2725.57	2724.08
2069.21	2140.85	2152.98	2292.28	2494.11	2627.19	2680.05	2704.22	2717.28	2768.03

16	17	18	19	20	21	22	23	24
2689.75	2809.59	3134.47	3103.48	3042.89	2973.27	2864.82	2659.85	2449.04
3140.09	3222.17	3430.44	3425.58	3325.45	3229.59	3080.07	2852.64	2597.48
3142.68	3244.88	3473.75	3438.76	3364.24	3273.92	3108.01	2860.07	2616.74
3100.43	3185.44	3468.43	3469.68	3437.6	3360.78	3214.93	2996.45	2733.89
3120.25	3230.7	3496.39	3517.05	3472.71	3434.18	3284.96	3047.85	2800.87
3141.87	3213.74	3531.75	3524.3	3455.95	3306.38	3183.42	3052.51	2832.69
2925.54	2999.03	3315.75	3370.5	3330.69	3292.85	3215.11	3074.68	2890.35
2818.4	3003.64	3348.64	3421.42	3423.91	3407.66	3297.82	3102.96	2869.2
3274.44	3435.75	3756.8	3798.25	3760.17	3701.72	3552.81	3292.3	3033.63
3227.47	3333.7	3641.72	3659.88	3647.7	3613.72	3477.6	3231.5	2965.74
3185.65	3267.78	3561.57	3537.02	3492.25	3444.63	3321.43	3060.64	2803.9
3154.29	3236.51	3504.26	3503.35	3453.94	3395.27	3264.32	3033.65	2788.28
3110.26	3185.97	3472.99	3458.64	3384.44	3321.19	3206.73	3033.59	2818.43
2708.63	2801.59	3127.16	3181.56	3140.1	3084.49	3008.64	2864.66	2692.94
2696.93	2837.49	3180.18	3242.42	3208.02	3129.29	2994	2779.92	2523.38
3285.76	3307.57	3573.99	3482.49	3395.34	3297.36	3119.29	2877.57	2636.1
3343.62	3412.79	3621.2	3545.31	3460.43	3338.84	3188.28	2937.2	2660.29
3210.4	3280.95	3509.84	3448.38	3376.37	3297.74	3135.89	2884.39	2621.66
3198.79	3264.35	3544.44	3532.57	3483.34	3412.16	3281.48	3060.52	2802.06
3108.21	3186.56	3498.76	3492.28	3444.06	3333.81	3237.37	3064.32	2831.89
2730.62	2815.58	3166.99	3208.59	3197.74	3169.08	3075.09	2934.01	2760.67
2580.64	2722.79	3078.28	3167.48	3154.43	3130.32	3028.39	2870.1	2667.71
3044.66	3111.85	3392.82	3391.24	3325.98	3265.86	3147.18	2962.17	2711.68
2903.07	2959.33	3280.62	3197.55	3030.99	2929.51	2831.11	2704.64	2563.07
2523.8	2574.58	2908.44	2922.44	2867.35	2837.59	2754.81	2605.87	2417.11
3035.97	3062.49	3342.33	3307.89	3221.89	3147.09	3025.98	2818.36	2587.75
3041.24	3077.92	3348.61	3308.58	3216.56	3113.51	2985.56	2804.55	2593.52
2647.3	2702.73	3047.05	3077.65	3021.24	2978.32	2870.57	2737.57	2559.66
2580.88	2631.85	2987.99	3077.78	3049.93	3002.09	2904.73	2733.51	2524.25
3030.23	3058.84	3357.35	3379.49	3288.26	3200.63	3078.74	2892.12	2655.64
2889.78	2924.64	3308.17	3299.64	3163.77	3013.59	2897.79	2778.07	2637.2
2524	2578.09	2946.98	3016.64	3006.76	2931.59	2839.26	2682.58	2486.36
3132.05	3129.57	3382.3	3363.39	3281.28	3148.03	3019.22	2820.55	2600.13
3060.32	3114.13	3391.23	3350.63	3248.98	3137.54	2993.86	2827.26	2623.92
2650.77	2704.27	3035.2	3109.72	3066.36	2983.74	2870.34	2743.31	2568.84
2593.55	2652.63	2958.48	3064.51	3032.33	2991.31	2846.16	2689.75	2489.62
3102.66	3121.31	3340.34	3348.8	3265.86	3198.05	3036.38	2822.74	2594
3125.52	3206.4	3441.09	3412	3333.34	3262.53	3102.86	2845.9	2610.9

3104.49	3142.88	3419.66	3427.19	3329.78	3238.47	3111.87	2853.84	2622.58
3135.95	3199.59	3436.26	3446.46	3376.88	3312.51	3140.94	2873.11	2646
3137.79	3151.63	3377.6	3369.14	3264.06	3167.87	3063.96	2905.01	2676.11
2694.87	2733.96	3091.66	3135.61	3094.35	3069.54	2908.21	2736.48	2533.6
2580.98	2638.97	2998.16	3102.77	3073.89	3016.15	2870.47	2684.46	2479.85
3235.67	3239.82	3462.25	3453.02	3385.06	3231.02	3065.99	2811.15	2558.13
3288.1	3276.74	3472.25	3460.46	3359.12	3245.02	3055.72	2792.95	2550.85
3369.48	3334.21	3455.92	3428.84	3318.6	3205.88	3024.19	2786.03	2532.77
3388.39	3343.12	3464.37	3422.17	3325.52	3205.95	3037.86	2785.88	2557.36
3373.67	3314.47	3416.29	3390.75	3247.84	3130.18	2975.78	2777.7	2582.45
2820.29	2797.03	3003.35	3051.75	3011.84	2919.48	2816.35	2663.75	2508.07
2689.39	2716.02	2993.65	3071.59	3039.7	2939.85	2809.48	2640.35	2470.61
3162.9	3146.45	3343.25	3365.88	3286.78	3172.75	3007.81	2753.82	2529.65
3214.05	3207.26	3417.13	3415.26	3329.93	3250.11	3052.05	2793.62	2566.77
3295.99	3247.85	3385.06	3382.18	3298.48	3195.75	3015.9	2776.78	2519.35
3187.21	3173.37	3377.25	3398.99	3313.94	3204.78	3031.57	2795.39	2556.57
3128.87	3142.01	3329.68	3328.33	3224.31	3129.79	2979.56	2799.88	2577.16
2778.82	2757.4	2936.08	3061.71	2990.19	2922.26	2815.35	2648.65	2477.72
2630.89	2718.69	2958.67	3080.89	3049.56	2968.08	2835.13	2648.86	2446.79
3147.35	3125.86	3291.49	3333.77	3272.88	3159.84	3000.44	2758.65	2513.79
3185.87	3145.96	3326.79	3374.04	3312.94	3201.17	3035.87	2787.85	2552.57
3228.38	3196.55	3325.98	3394.1	3313.85	3211.42	3038.84	2811.16	2559.97
3185.29	3222.65	3395.09	3388.57	3327.77	3220.24	3054.04	2820.93	2565.77
3039.81	3013.88	3182.25	3272.65	3212.67	3140.89	3007.85	2826.14	2645.08
2581.29	2603.36	2806.29	2989.38	2971.07	2920.12	2834.9	2717.24	2549.17
2573.26	2629.77	2858.3	2985.54	3009	3002.16	2902.03	2723.86	2500.66
3034.66	3051.97	3239.41	3374.14	3349.83	3287.87	3131.51	2900.01	2646.84
3087.09	3083.67	3241.83	3381.36	3349.28	3267.19	3112.43	2872.86	2639.88
3020.75	3040.17	3203.89	3349.54	3323.42	3240	3098.88	2860.19	2635.71
3203	3237.75	3378.77	3442.39	3378.49	3276.04	3103.81	2884.2	2651.68
3064.02	3051.37	3195.73	3320.97	3252.61	3175.88	3019.99	2890.46	2686.6
2672.17	2717.56	2883.06	3061.68	3026.12	2987.43	2885.39	2751.17	2569.1
2598.13	2637.74	2831.31	3015.26	3032.74	2981.81	2857.92	2722.16	2506.9
3106.79	3104.49	3236.2	3330.79	3285.71	3187.76	3026.09	2796.86	2572.36
3173.36	3137.07	3254.45	3365.09	3295.22	3213.85	3038.02	2807.8	2576.55
3248.4	3210	3248.1	3355.45	3291.39	3195.22	3032.17	2803.43	2556.92
3296.82	3262.52	3284.27	3370.42	3279.38	3181.14	3021.92	2770.44	2539.78
3321.89	3268.16	3269.76	3313.77	3222.36	3082.6	2921.62	2732.18	2528.51
2713.44	2716.26	2865.75	3021.95	2990.37	2919.21	2812.27	2658.22	2485.18
2639.43	2659.1	2793.32	3016.51	2984.47	2910.7	2791.32	2641.6	2440.46
2990.26	2994.89	3108.67	3259.68	3217.81	3138.83	2956.44	2731.59	2526.94
3160.91	3147.65	3245.03	3358.37	3306.47	3228.69	3041.22	2832.5	2570.06
3183.77	3183.66	3228.92	3348.83	3304.2	3206.39	3066.29	2824.8	2576.9
3382.23	3346.87	3350.3	3458.17	3344.05	3247.37	3069.74	2861.74	2619.64
3274.24	3202.28	3199.05	3281.39	3168.36	3054.58	2906.65	2748.82	2512.37
2691.25	2669.79	2741.63	2976.78	2933.41	2874.17	2758.63	2596.09	2441.24
2572.81	2602.92	2710.06	2954.35	2958.45	2888.6	2765.46	2588.89	2387.32

3154.37	3118.4	3183.79	3290.19	3254.2	3166.12	2980.3	2756.79	2508.8
3145.91	3108.66	3153.82	3323.9	3278.14	3168.7	3002.26	2725.56	2503.7
3122.42	3117.37	3219.23	3325.95	3282.08	3177.36	3010.33	2784.27	2560.88
3122.42	3087.77	3171.7	3340.81	3281.56	3171.36	2996.51	2752.5	2525.26
3212.14	3178.22	3309.51	3413.39	3318.49	3182.71	3032.28	2804.8	2599.6
2784.74	2808.78	2885.28	3084.05	3032.46	2990.28	2882.08	2713.89	2553.38
2673.56	2698.78	2861.21	3079.91	3121.47	3033.07	2949.45	2738.94	2537.91
3146.7	3097.9	3212.74	3419.74	3392.44	3283.86	3135.27	2855.19	2599.87
3240.23	3236.95	3267.6	3446.27	3400.22	3326.72	3203.69	2943.4	2681.37
3358.12	3356.38	3397.68	3530.26	3473.05	3345.42	3197.58	2942.03	2666.98
3385.79	3366.51	3377.24	3535.33	3453.03	3363.56	3184.72	2932.7	2673.43
3298.37	3298.62	3322.5	3485.27	3411	3289.48	3150.7	2914.23	2743.46
2971.66	3020.83	3075.32	3265.51	3259.14	3154.65	3038.04	2847.26	2680.18
3030.89	3094.76	3099.8	3147	3325.71	3364.24	3232.34	3056.07	2700.96
3636.51	3609.6	3497.99	3422.89	3581.99	3511.52	3349.84	3107	2845.1
3498.24	3455.42	3413.34	3348.31	3516.52	3472.96	3341.86	3072.64	2788.46
3521.73	3488.69	3426.94	3344.58	3502.36	3458.01	3312.14	3074.86	2830.47
3438.94	3421.81	3351.94	3270.74	3437.97	3394.18	3227.58	3037.12	2793.41
3442.87	3401.57	3334.45	3246.19	3358.31	3311.15	3172.45	2985.93	2759.4
3084.64	3085.56	3087.66	3072.89	3217.37	3197.82	3099.18	2932.17	2752.03
3204.57	3238.78	3224.6	3193.53	3303.44	3327.43	3174.43	2952.15	2722.97
3550.3	3526.69	3470.94	3376.41	3504.45	3449.28	3289.48	3033.92	2782.76
3528.16	3498.73	3425.81	3327.41	3439.99	3402.94	3254.72	2993.52	2774.76
3528.91	3518.16	3474.14	3375.42	3502.57	3484.03	3293.95	3066.16	2788.7
3427.75	3406.19	3330.63	3261.28	3389.21	3369.16	3246.86	2985.17	2754.42
3262.89	3226.63	3159.74	3125.96	3260.04	3243.36	3134.65	2936.16	2720.97
2803.75	2801.23	2790.42	2816.14	3039.19	3054.22	2932.62	2804.4	2653.66
2758.66	2762.6	2804.54	2895.43	3097.23	3132.06	3035.9	2842.21	2608.88
3331.38	3326.93	3289.27	3259.37	3406.66	3433.05	3269.08	3054.53	2807.86
3382.47	3238.41	3211.04	3226.46	3369.17	3365.51	3252.18	3012.23	2797.06
3017.25	3017.26	2994.56	2985.87	3193.46	3207.66	3055.96	2813.86	2663.17
3276.38	3266.5	3212.27	3146.18	3310.79	3319.63	3209.26	2997.21	2772.55
3279.96	3247.34	3191.8	3125.58	3269.48	3240.04	2970.24	2792.43	2588.82
2913.67	2900.67	2885.19	2929.38	3088.82	3089.78	3011.47	2880.53	2707.48
2729.57	2743.07	2754.44	2852.42	3017.3	3089.9	3013.83	2832.45	2653.46
3195.12	3187.76	3138.62	3140.51	3290.63	3356.16	3223.38	3017.69	2795.51
3102.86	3109.63	3089.25	3110.6	3333.45	3398.64	3237.31	2984.36	2727.37
3219.64	3223.49	3149.72	3173.51	3332.09	3421.48	3301.03	3073.9	2837.04
3202.58	3159.58	3113.2	3083.15	3306.84	3351.21	3204.67	2977.6	2729.57
3174.71	3158.88	3114.34	3077.73	3226.06	3247.09	3142.59	2973.35	2769.28
2682.97	2714.17	2780.31	2774.97	2993.58	3084.24	3005.42	2848.28	2676.65
2925.6	2935.08	2966.04	3005.13	3127.62	3218.8	3106.44	2923.28	2660.73
3711.81	3712.41	3654.2	3513.29	3553.52	3562.56	3342.96	3101.18	2820.41
3985.89	3990.23	3927.2	3754.41	3731.31	3685.51	3490.43	3162.03	2873.98
3966.1	3919.81	3825.45	3602.93	3579.57	3545.3	3364.12	3057.56	2774.5
3677.47	3549.91	3405.24	3302.31	3361.19	3385.65	3213.49	2998.59	2734.55
3538.64	3519.45	3412.99	3263.55	3300.14	3285.86	3154.39	2888.77	2659.88

2721.15	2700.36	2656.36	2721.37	2843.36	2934.6	2853.07	2676.56	2537.08
2672.62	2688.72	2701.28	2777.76	2860.11	2952.37	2869.42	2730.56	2547.32
3634.81	3647.16	3637.38	3487.05	3472.96	3512.88	3341.82	3105.08	2811.78
3615.84	3627.97	3780.13	3397.75	3398.73	3460.88	3277.87	3046.43	2798.8
3437.35	3418.53	3319.94	3213.23	3301.36	3348.85	3228.47	3031.26	2799.2
3423.99	3250.32	3210.89	3175.88	3294.24	3355.81	3221.44	3026.51	2786.64
3323.98	3310.28	3285.7	3165.42	3228.73	3288.47	3167.29	2995.63	2799.99
2987.33	3033.2	2999.27	3015.02	3092.29	3183.29	3088.12	2941.38	2768.95
3005.51	2981.38	3005.65	3020.15	3097.61	3217.77	3128.57	2935.77	2697.46
3756.35	3701.59	3570.98	3424.38	3445.85	3467.79	3298.76	3051.52	2778.21
3403.8	3380.44	3342.73	3227.11	3277.71	3375.54	3201.61	2994.6	2716.9
3393.22	3414.32	3336.82	3208.33	3240.6	3325.7	3197.58	2994.89	2731.07
3549.92	3577.23	3500.56	3353.03	3373.48	3451.21	3309.15	3067.66	2814.28
3261.54	3221.1	3174.84	3048	3138.58	3199.68	3066.53	2865.84	2687.35
2635.86	2687.61	2673.51	2679.4	2850.51	2973.91	2913.17	2795.32	2608.42
2616.84	2637.71	2748.05	2773.53	2904.08	3070.05	2983.67	2763.29	2585.07
3531.34	3587.61	3566.69	3422.63	3394.5	3497.25	3314.44	3082.87	2803.76
4157.49	4227.9	4163.92	4023.21	3924.04	3921.27	3677.79	3362.53	3012.74
4294.43	4320	4298.32	4141.14	4019.06	4022.54	3796.1	3477.53	3103.12
4568.02	4595.3	4517.89	4289.25	4117.32	4043.92	3853.96	3529.39	3203.74
4835.77	4848.78	4717.32	4479.09	4269.82	4200.43	3976.52	3693.51	3351.61
4132.6	4138.35	4002.57	3850.32	3749.23	3714.5	3586.74	3366.5	3111.99
3556.94	3586.68	3544.09	3466.2	3421.97	3491.03	3371.43	3123.38	2874.83
3635.71	3598.12	3537.99	3371.38	3333.01	3446.12	3319.57	3028.8	2780.77
3250.45	3215.06	3202.56	3118.95	3148.13	3339.74	3193.76	2980.87	2719.9
3146.89	3100.7	3030.84	2924.94	2967.1	3121.91	3016.38	2927.88	2678.99
3227.23	3215.72	3125.51	3015.88	3067.21	3204.72	3078.06	2981.12	2735.21
3545.94	3514.57	3454.73	3303.79	3260.97	3344.08	3232.85	3034.67	2810.61
2953.74	2946.47	2960.22	2926.65	2962.84	3115.11	3068.25	2891.29	2726.38
2916.32	2958.4	2967.23	3016.45	3028.79	3214.86	3134.58	2955.26	2714.09
4226.52	4280.21	4175.55	3976.59	3838.82	3846.62	3669.92	3224.09	3002.77
4656.37	4715.17	4649.46	4411.13	4271.02	4257.59	3970.84	3650.53	3302.93
5136.86	5234.45	5144.44	4946.35	4737.4	4691.65	4329.49	4024.19	3597.91
5558.74	5611.63	5549.59	5304.69	5026.48	4943.01	4589.24	4289.96	3840.23
5341.87	5344.74	5196.66	4873.31	4590.32	4494.21	4160.3	3943.87	3602.11
4180.72	4164.46	4071.83	3940.04	3718.45	3752.32	3582.55	3368.16	3097.64
3501.62	3531.54	3489.39	3438.96	3380.63	3464.21	3353.96	3118.67	2863.35
3762.43	3731.87	3673.14	3488.46	3398.48	3502.37	3359.77	3135.89	2857.14
3438.58	3384.35	3317.03	3215.84	3220.54	3312.6	3194.92	3020.51	2769.12
3451.22	3413.39	3342.55	3228.09	3240.97	3344.54	3229.86	3014.17	2783.81
3336.77	3300.21	3236.66	3138.32	3119.28	3247.42	3221.3	2993.96	2767.91
3460.17	3441.83	3329.92	3206.82	3145.51	3250.45	3169.95	2998.14	2754.31
2844.28	2864.48	2837.54	2854.93	2921.2	3051.33	2978.25	2861.11	2709.57
3188.74	3237.9	3216.9	3180.46	3117.95	3204.15	3133.05	2976.63	2783.61
3610.35	3680.75	3668.16	3498.32	3387.7	3454.89	3389.44	3235.89	2935.92
4408.83	4415.29	4315.8	4047.34	3839.56	3797.06	3638.7	3365.19	3035.47
4306.65	4323.59	4260.49	4017.17	3811.98	3822.38	3633.95	3389.67	3058.37

4149.92	4134.01	4024.7	3842.82	3684.18	3709.25	3556.52	3274.71	3001.56
4258.17	4281.53	4172.4	3952.52	3712.48	3688.25	3540.67	3252.83	3012.59
3691.69	3731.34	3685.7	3558.31	3424.56	3447.06	3357.22	3148.12	2942.32
3607.02	3658.9	3657.21	3567.21	3500.16	3531.9	3446.59	3204.98	2925.09
3994.14	3996.98	3923.78	3740.5	3550.84	3586.76	3488.78	3228.09	2935.18
4171.3	4198.28	4119.74	3946.85	3765.87	3784.56	3639.79	3369.61	3049.38
4236.82	4259.24	4183.21	3985.33	3781.55	3801.7	3637.4	3378.5	3072.53
4304.3	4301.5	4224.54	3999.07	3799.14	3776.45	3659.58	3408.84	3109.58
3989.31	3901.62	3886.04	3656.94	3527.55	3509.7	3374.68	3222.35	2993.06
3278.17	3330.61	3345.55	3296.13	3256.32	3344.59	3245.16	3131.79	2935.38
3472.88	3560.4	3621.67	3607.97	3569.4	3608.42	3490.63	3272.48	3016.74
4314.86	4443.49	4355.01	4083.64	3800.03	3797.56	3635.45	3370.26	3102.1
3979.4	3975.59	3906.94	3728.67	3594.46	3624.11	3519.83	3292.77	3023.99
3954.03	3945.58	3870.4	3681.56	3501.46	3551.11	3466.45	3257.59	2971.01
3988.77	4001.23	3895.05	3748.92	3571.49	3569.6	3468.12	3207.6	2949.15
3890.28	3884.28	3792.34	3590.32	3433.28	3443.11	3383.09	3188.48	2961.28
3502.04	3529.96	3483.47	3382.82	3306.83	3310.78	3239.9	3110.19	2898.63
3269.21	3304.81	3306.25	3253.75	3173.78	3228.21	3203.82	3049.91	2785.14
3796.26	3792.62	3625.72	3541.51	3396.61	3457.57	3368.86	3116.69	2858.8
3810.18	3762.56	3684.89	3482.23	3333.8	3409.76	3318.5	3122.65	2863.11
3808.9	3851.74	3812.1	3667.71	3512.55	3544.16	3444.93	3298.54	3004.49
4220.07	4261.39	4179.38	3989.89	3812.38	3624.49	3628.88	3409.6	3131.49
4445.46	4534.39	4460.54	4235.63	3950.83	3886.71	3725.01	3507.09	3215.54
3919.51	3931.24	3913.49	3783.5	3643.49	3604.22	3490.32	3367.51	3123.75
3647.6	3668.91	3662.24	3601.27	3488.04	3511.55	3457.69	3238.52	2972.09
4160.06	4164.47	4099.33	3892.44	3735.54	3725.9	3625.77	3385.84	3066.27
4210.62	4220.2	4122.12	3917.93	3744.43	3753.15	3641.04	3427.56	3117.46
4081.85	4136.87	4091.42	3906.11	3730.75	3746.09	3664.16	3414.51	3142.21
4110.07	4168.7	4095.5	3906.05	3787.13	3725.48	3591.36	3424.63	3141.4
4327.62	4368.16	4329.9	4099.16	3884.47	3856.94	3771.33	3543.96	3279.65
3988.25	4017.55	3934.54	3830.95	3702.04	3677.49	3628.37	3475.38	3200.93
4149.76	4179.54	4132.92	4031.29	3880.54	3839.62	3768.12	3534.02	3232.35
4517.49	4575.51	4500.42	4240.32	4017.64	3965.17	3870.73	3600.18	3270.49
4464.17	4486.42	4404.07	4189.84	3945.68	3904.22	3735.49	3497.51	3194.58
4494.29	4507.63	4453.15	4274.89	4066.91	4008.61	3861.77	3597.77	3270.21
4897.18	4909.65	4802.64	4566.94	4366.88	4246.99	4095.03	3803.84	3483.92
4397.06	4381.89	4287.34	4147.21	3928.11	3831.9	3712.57	3594.29	3385.27
4510.18	4520.79	4463.17	4303.73	4098.37	4069.78	3924.24	3717.97	3445.54
4416.7	4449.02	4437.22	4317.17	4179.38	4128.2	4017.17	3757.29	3436.04
5146.75	5112.17	4991.98	4729.29	4474.29	4428.82	4229.96	3907.74	3554.42
5074.63	5077.15	5013.1	4752.84	4454.81	4351.83	4168.25	3861.31	3546.58
4924.88	4924	4821	4568.3	4288.32	4171.6	3945.8	3663.03	3374.52
4543.64	4630.47	4527.49	4274.59	4009.86	3941.67	3804.96	3579.69	3292.7
4496.06	4478.86	4420.11	4165.93	3924.59	3837.4	3742.28	3569.4	3290.31
4122.42	4097.71	4062.1	3935.59	3712.75	3696.6	3602.16	3443.73	3211.52
4301.46	4345.44	4359.27	4241.69	4002.35	3981.88	3884.25	3590.89	3307.69
4116.33	4257.28	4283.56	4023.94	3799.38	3858.47	3742.91	3508.27	3241.72

4602.24	4526.34	4340.42	4025.34	3827.78	3864.37	3724.8	3459.53	3202
4279.46	4351.18	4267.68	4013.8	3796.69	3784.11	3635.11	3385.21	3094.08
4085.46	4098.51	4011.1	3805.36	3660.5	3653.74	3551.65	3357.22	3096.12
4066.38	4095.65	4061.79	3784.25	3627.97	3649.39	3520.35	3319.74	3085.66
3308.63	3279.07	3276.36	3197.68	3164.85	3209.28	3091.35	2952.03	2797.64
3352.5	3451.93	3520.7	3493.4	3417.22	3521.81	3441.09	3248.83	2986.24
4371.1	4367.41	4349.18	4128.39	3936.36	3909.3	3762.27	3483.06	3154.21
4704.04	4726.13	4666.44	4459.52	4213.07	4170.21	4004.5	3629.49	3268.52
5082.87	5082.15	5034.43	4804.33	4579.63	4492.64	4314.69	3895.63	3516.31
5517.33	5509.46	5466.07	5231.47	4971.67	4863.25	4632.06	4229.15	3821.3
5041.5	5010.73	4926.64	4607.56	4351.48	4301.55	4108.23	3806.18	3487.64
4370.78	4388.53	4314.77	4155.61	3932.91	3881.22	3727.77	3506.8	3231.94
3750.4	3958.49	4006.09	3935.03	3795.45	3851.45	3778.85	3518.73	3214.62
4942.98	4879.33	4813.8	4568.95	4354.17	4297.09	4119.69	3761.94	3408.71
5067.98	5058.76	4825.09	4509.69	4259.4	4303.12	4135.01	3813.37	3492.89
5218.26	5179.5	4998.74	4702.8	4481.51	4446.22	4219.68	3811.46	3462.64
5235.35	5211.96	5064.84	4810.52	4531.27	4470.65	4245.39	3821.04	3453.62
5060.85	5039.1	4896.01	4596.22	4217.44	4348.73	4100.73	3770.25	3405.14
4190.46	4220.44	4182.35	4032.27	3953.26	3998.5	3908.89	3664.78	3441.06
3734.12	3671.33	3656.75	3650.89	3663.14	3762.87	3721.63	3541.96	3268.95
4832.56	4821.25	4668.89	4382.87	4114.3	4057.55	3855.47	3564.86	3202.55
4474.1	4480.74	4396.26	4151.03	3927.32	3909.65	3727.13	3397.26	3068.19
4195.95	4214.77	4186.35	3940.19	3755.82	3800.29	3620.99	3311.43	3033.24
4200.83	4248.53	4177.63	3962.41	3770.94	3844.72	3664.02	3401.78	3108.5
4477.77	4477.21	4382.01	4094.59	3871.54	3863.3	3586.1	3381.65	3129.71
4114.07	4114.72	4037.44	3855.58	3653.22	3670.84	3515.05	3283.16	3050.97
4070.32	4124.4	4090.58	4006.77	3847.37	3858.1	3736.8	3458.82	3144.54
4801.87	4771.32	4637.81	4354.99	4096.15	4110.94	3907.73	3631.65	3271.46
4894.33	4822.58	4693.1	4374.52	4092.12	4066.86	3815.38	3484.98	3157.16
4580.72	4623.7	4508.96	4218.44	3993.58	3999.77	3812.47	3475.22	3131.91
4706.55	4726.43	4655.29	4377.86	4138.99	4106.58	3857.35	3553.65	3194.91
4979.62	5026.71	4893.6	4606.02	4336.06	4267.77	4002.81	3670.28	3353.42
4523.66	4538	4443.67	4239.58	4036.18	4007.54	3828.44	3566.1	3277.49
4460.36	4492.68	4422.54	4289.84	4108.37	4111.84	3900.64	3579.52	3187.03
5147.56	5108.55	4963.77	4642.4	4360.97	4285.09	4025.14	3632.84	3276.54
4469.77	4449.73	4340.89	4050.84	3925.97	3934	3746.72	3465.39	3140.89
4523.07	4547.19	4432.63	4179.37	3995.18	3990.09	3795.16	3445.05	3112.74
4639.2	4663.76	4533.36	4200.67	4009.53	3982.75	3790.45	3461.13	3147.88
4665.04	4700.02	4580.83	4232.65	4005.53	3955.19	3782.24	3454.28	3144.38
3879.1	3912.07	3826.15	3700.06	3599.07	3605.08	3436.42	3211.09	2957.3
3724.59	3752.5	3725.97	3650.85	3595.36	3645.94	3462.94	3194.49	2898.96
4116.71	4097.55	3980.84	3691.71	3759.97	3804.48	3556.08	3249.61	2929.83
4540.35	4548.15	4401.21	4189.16	4048.01	4039.58	3778.97	3411.59	3109.69
4999.09	5055.58	4971.69	4710.09	4521.04	4465.49	4158.4	3701.4	3361.51
5300.97	5327.41	5213.88	4907.59	4696.53	4549.13	4120.99	3834.21	3410.66
5077.54	5107.28	4959.11	4625.8	4368.81	4290.26	4009.7	3656.86	3302.14
4568.97	4646.83	4577.85	4394.57	4279.89	4175.5	3978.69	3640.36	3289.35

4402.24	4427.98	4352.93	4169.95	4043.25	3977.92	3815.31	3558.79	3202.19
4472.49	4534.97	4544.49	4353.48	4284.81	4227.61	3987.97	3626.95	3165.67
5095.24	5095.44	4943.82	4578.4	4405.19	4315.2	4084.23	3607.89	3172.9
4748.44	4868.29	4725.77	4394.85	4262.54	4182.03	3862.95	3495.22	3079.81
4446.09	4485.67	4376.95	4049.84	4027.83	3917.79	3708.6	3334.97	2999.51
4699.88	4755.86	4658.33	4319.89	4182.45	4051.28	3804.17	3462.39	3136.63
4624.02	4703.23	4661.19	4465.52	4234.79	4033.86	3797.57	3548.7	3221.32
4787.38	4822.07	4679.56	4449.26	4400.11	4283.96	4070.78	3749.97	3352.46
4725.4	4686.58	4500.28	4328.13	4361.77	4278.02	4020.14	3648.99	3253.47
4966.5	4951.97	4789.71	4419.42	4300.2	4190.58	3895.92	3491.79	3129.65
4995.85	5037.83	4905.89	4600.45	4528.87	4376.66	4110.4	3671	3262.61
5226.83	5265.88	5171.94	4839.95	4744.07	4594.67	4300.22	3866.09	3449.75
5462.59	5428.72	5266.38	4906.67	4752.76	4553.84	4271.6	3884.8	3554.74
5122.28	5093.17	4984.73	4769.01	4707.4	4546.06	4292.21	3957.79	3632.75
5352.97	5364.11	5251.49	5068.43	5036.25	4892.49	4629.84	4257.25	3826.25
6144.9	6155.6	6052.43	5735.2	5661.23	5500.75	5117.76	4656.73	4131.67
6340.24	6342.61	6120.24	5685.55	5632.55	5403.51	5057.63	4615.19	4051.49
5963.18	5924.52	5743.63	5345.76	5219.13	4976.21	4611.66	4040.31	3691.4
4791.33	4791.31	4581.7	4271.4	4233.35	4107.99	3831.71	3546.91	3176.67
4416.4	4403.97	4232.78	3976.57	3962.03	3850.47	3652.06	3340.64	3081.59
3522.21	3576.65	3534.73	3448.7	3507.19	3426.72	3312.62	3023.86	2822.71
3511.62	3531.75	3518.43	3431.07	3570.07	3514.31	3329.32	3027.7	2767.88
4365.33	4396.4	4275.25	4036.3	4014.4	3855.9	3602.23	3279.09	2959.46
4527.17	4538.48	4364.5	4112.01	4061.56	3903.56	3638.82	3299.38	2975.17
4742.93	4708.09	4595.2	4407.73	4283.21	4118	3850.97	3513.92	3162.63
4847.48	4877.46	4697.98	4398.32	4317.77	4129.96	3882.44	3497.85	3172.74
4294.26	4235.4	4032.31	3749.67	3728.66	3597.31	3418.95	3133.86	2886.08
3169.11	3121.41	3121.53	3089.74	3258.26	3196.42	3057.92	2874.55	2684.77
3024.18	3023.2	3007.39	3042.39	3229.42	3130.46	2997.03	2789.28	2566.58
3818.91	3792.15	3658.15	3519.31	3591.58	3491.49	3293.86	3005.52	2750.23
4131.63	4113.47	3977.24	3751.26	3778.38	3635.05	3425.19	3141.36	2849.38
4133.15	4119.39	3965.4	3761.32	3811.76	3688.08	3438.98	3146.09	2857
4659	4695.62	4555.91	4294.44	4234.33	4041.88	3751.11	3385.8	3042.3
4830.45	4837.74	4631.23	4345.82	4109.97	4018.17	3745.68	3429.69	3111.53
4622.88	4670.24	4522.31	4298.46	4193.76	3971.06	3747.2	3410.18	3158.08
4407.75	4411.74	4323.63	4193.57	4137.03	3961.43	3741.09	3407.29	3098.11
4821.64	4829.3	4657.33	4380.51	4302.45	4105.09	3827.92	3448.8	3098
4765.48	4719.35	4539.79	4261.84	4177.04	3980.15	3696.87	3365.51	3062.94
4393.99	4353.15	4153.78	3966.44	3938.85	3776.6	3548.04	3240.05	2957.94
4111.1	4071.63	3913.3	3765	3792.56	3671.39	3444.28	3167.66	2869.11
4014.17	3959.82	3810.35	3651.51	3635.5	3476	3281.38	3057.37	2796.76
3596.06	3609.69	3558.49	3500.8	3529.07	3395.14	3271.14	3047.2	2852.29
3504.17	3522.67	3444.37	3445.65	3509.08	3401.21	3181.81	3012.9	2758.18
4210.54	4185.45	4018.89	3890.28	3854.5	3702.14	3461.7	3175.66	2881.88
3790.15	3659.78	3505.5	3500.62	3541.81	3422.41	3253.02	3010.56	2759.39
3658.93	3618.99	3479.79	3473.93	3496.12	3409.83	3240.3	2945.01	2700.46
3632.2	3599.08	3449.84	3436.36	3471.6	3364.35	3178.88	2932	2690.77

3503.02	3413.53	3324.75	3363.69	3354.32	3245.89	3109.44	2903.02	2689.39
3068.49	3050.96	3026.67	3110.13	3170.82	3091.42	2975.2	2819.12	2630.85
3034.86	3070.16	3026	3182.35	3241.39	3180.46	3059.21	2835.98	2638.3
3686.35	3643.2	3510.93	3486.49	3474.67	3371.84	3191.55	2938	2669.85
3661.66	3622.06	3525.31	3550.05	3543.43	3434.56	3244.14	2968.19	2692.75
3825.33	3787.7	3664.06	3636.49	3643.09	3496.39	3292.59	3027.17	2750.78
3913.6	3895.33	3764.91	3698.76	3690.94	3533.66	3301.14	3044.98	2779.92
3917.04	3873.91	3744.62	3672.39	3604.85	3454.22	3260.83	3044.62	2798.77
3180.79	3170.38	3134.13	3243.94	3257.33	3167.47	3026.68	2840.3	2659.48
2986.33	2970.11	2959.67	3132.9	3174.18	3092.75	2946.76	2745.31	2508.47
3465.5	3601.55	3411.03	3460.56	3447.29	3319.28	3151.14	2892.86	2630.24
3628.66	3608.43	3504.93	3527.44	3499.94	3372.03	3196.35	2943.2	2672.36
3787.26	3744.88	3598.97	3613.98	3561.46	3422.91	3236.2	2972.77	2722.6
3583.87	3494.17	3394.42	3452.53	3423.21	3344.96	3177.02	2950.12	2687.24
3244.15	3194.55	3166.27	3238.51	3165.37	3084.85	2990.26	2816.98	2630.82
2652.49	2660.13	2703.22	2939.27	2957.01	2909.02	2813.4	2658.39	2499.48
2592.58	2671.69	2938.91	2996.59	2963.57	2878.99	2740.9	2554.31	2348.77
3212.79	3200.8	3380.23	3344.48	3259.97	3149.26	2978.83	2741.43	2477.87
3294.76	3283.35	3414.82	3383.66	3288.11	3184.12	3005.82	2758.45	2528.62
3583.72	3504.97	3591.89	3502.13	3378.56	3278.66	3093.93	2833.3	2583.01
3823.52	3718.34	3746.89	3626.59	3472.61	3331.52	3132.8	2888.77	2635.46
3786.17	3656.31	3683.89	3519.93	3381.95	3241.09	3072.1	2855.72	2644.76
3363.72	3276.73	3372.8	3332.39	3202.3	3098.08	2958.55	2783.46	2581.03
2982.48	2964.52	3163.95	3193.82	3099.08	3000.53	2873.32	2659.14	2465.68
3314.78	3290.74	3426.87	3354.3	3264.8	3151.56	3002.48	2778.71	2545.22
3156.06	3196.29	3376.98	3340.31	3249.7	3138.96	2987.74	2746.94	2529.07
3183.36	3165.12	3332.43	3289.32	3217.16	3080.31	2933.55	2682.48	2460.26
3113.87	3150.39	3351.28	3316.86	3224.45	3121.85	2947.06	2734.74	2501.74
3181.53	3194.13	3360.51	3284.51	3166.33	3062.38	2918.86	2721.44	2521.38
2719.11	2759.95	3011.93	3012.77	2953.99	2882.27	2771	2601.05	2436.04
2600.53	2674.74	2946.22	2963.4	2925.38	2857.16	2724.2	2531.81	2341.41
3148.12	3169.31	3376.47	3292.35	3200.4	3099.42	2950.09	2709.61	2488.92
3172.61	3189.44	3299.42	3292.42	3218.48	3106.89	2947.84	2738.04	2491.84
3195.93	3204.36	3393.35	3358.87	3264.93	3165.53	2999.44	2777.61	2513.82
3172.6	3254.72	3401.87	3333.56	3262.2	3173.56	2989.26	2764.74	2533.69
3169.57	3171.74	3360.32	3270.14	3150.49	3079.6	2929.04	2727.36	2521.67
2730.08	2765.33	3034.89	3053.42	2980.08	2870.26	2768.56	2605.87	2442.94
2654.7	2762.28	3053.01	3074.91	3042.15	2935.64	2810.46	2637.05	2406.14
3234.16	3285.32	3431.54	3369.81	3265.44	3196.75	3020.55	2787.17	2542.92
3301.97	3280.57	3455.96	3355.18	3272.57	3157.99	3020.56	2811.7	2577.39
3270.06	3339.04	3475.09	3379.6	3263.3	3148.6	3009.48	2819.78	2596.19
3035.44	3009.17	3112.53	3000.63	2882.33	2811.35	2721.31	2605.86	2445.14
3012.01	3036.21	3233.43	3166.62	3072.44	2974.81	2891.11	2703.4	2506.48
2732.51	2860.61	3065.69	3066.28	3008.62	2931.48	2823.85	2669.47	2501.05
2777.4	2882.29	3081.75	3099.44	3061.49	2990.23	2835.59	2646.32	2448.55

resp_name	responde	report_yr	report_prc	spplmnt_n	row_num	avail_cap	plan_outa	unplan_ou	other_outa
Los Angele	194	2013	12	0	1200	5462	760	1145	0
Los Angele	194	2014	12	0	100	5542	689	1226	0
Los Angele	194	2014	12	0	200	5285	1282	853	0
Los Angele	194	2014	12	0	300	5126	1280	839	0
Los Angele	194	2014	12	0	400	6651	498	640	0
Los Angele	194	2014	12	0	500	5388	379	937	0
Los Angele	194	2014	12	0	600	7370	354	303	0
Los Angele	194	2014	12	0	700	7190	263	562	0
Los Angele	194	2014	12	0	800	6901	283	873	0
Los Angele	194	2014	12	0	900	6897	283	873	0
Los Angele	194	2014	12	0	1000	7118	135	794	0
Los Angele	194	2014	12	0	1100	6071	1253	869	0

Winter	Spring	Summer	Fall	
910.3333	719	300	557	621.5833
				621.5833

tot_net	ex_avail_c	ex_not_av	tot_capabi	avail_cap	plan_outa	unplan_ou	other_out	tot_net_f	ex_avail_c
7367	354	177	7898	0	0	0	0	0	0
7457	243	288	7988	0	0	0	0	0	0
7420	430	101	7951	0	0	0	0	0	0
7245	399	132	7776	0	0	0	0	0	0
7789	783	279	8851	0	0	0	0	0	0
6704	369	162	7235	0	0	0	0	0	0
8027	405	126	8558	0	0	0	0	0	0
8015	405	126	8546	0	0	0	0	0	0
8057	405	126	8588	0	0	0	0	0	0
8053	405	126	8584	0	0	0	0	0	0
8047	352	179	8578	0	0	0	0	0	0
8193	349	182	8724	0	0	0	0	0	0

ex_not_av	tot_capabi	row_lit	more_text	more_text	more_text3
0		0 Dec			
0		0 Jan			
0		0 Feb			
0		0 Mar			
0		0 Apr			
0		0 May			
0		0 Jun			
0		0 Jul			
0		0 Aug			
0		0 Sep			
0		0 Oct			
0		0 Nov			

resp_name	responde	report_yr	report_prd	spplmnt_n	row_num	elec_utility
Los Angele	194	2014	12	0	100	L.A. Dept. o
Los Angele	194	2014	12	0	200	L.A. Dept. o
Los Angele	194	2014	12	0	300	L.A. Dept. o
Los Angele	194	2014	12	0	400	L.A. Dept. o
Los Angele	194	2014	12	0	500	L.A. Dept. o
Los Angele	194	2014	12	0	600	L.A. Dept. o
Los Angele	194	2014	12	0	700	L.A. Dept. o
Los Angele	194	2014	12	0	800	L.A. Dept. o
Los Angele	194	2014	12	0	900	L.A. Dept. o
Los Angele	194	2014	12	0	1000	L.A. Dept. o
Los Angele	194	2014	12	0	1100	L.A. Dept. o
Los Angele	194	2014	12	0	1200	L.A. Dept. o
Los Angele	194	2014	12	0	1300	L.A. Dept. o
Los Angele	194	2014	12	0	1400	L.A. Dept. o
Los Angele	194	2014	12	0	1500	L.A. Dept. o
Los Angele	194	2014	12	0	1600	L.A. Dept. o
Los Angele	194	2014	12	0	1700	L.A. Dept. o
Los Angele	194	2014	12	0	1800	L.A. Dept. o
Los Angele	194	2014	12	0	1900	L.A. Dept. o
Los Angele	194	2014	12	0	2000	L.A. Dept. o
Los Angele	194	2014	12	0	2100	L.A. Dept. o
Los Angele	194	2014	12	0	2200	L.A. Dept. o
Los Angele	194	2014	12	0	2300	L.A. Dept. o
Los Angele	194	2014	12	0	2400	L.A. Dept. o
Los Angele	194	2014	12	0	2500	L.A. Dept. o
Los Angele	194	2014	12	0	2600	Total
Los Angele	194	2014	12	1	100	L.A. Dept. o
Los Angele	194	2014	12	1	200	L.A. Dept. o
Los Angele	194	2014	12	1	300	.A. Dept. o
Los Angele	194	2014	12	1	400	L.A.A. Dep
Los Angele	194	2014	12	1	500	
Los Angele	194	2014	12	1	600	
Los Angele	194	2014	12	1	700	
Los Angele	194	2014	12	1	800	
Los Angele	194	2014	12	1	900	
Los Angele	194	2014	12	1	1000	
Los Angele	194	2014	12	1	1100	
Los Angele	194	2014	12	1	1200	
Los Angele	194	2014	12	1	1300	
Los Angele	194	2014	12	1	1400	
Los Angele	194	2014	12	1	1500	
Los Angele	194	2014	12	1	1600	
Los Angele	194	2014	12	1	1700	
Los Angele	194	2014	12	1	1800	
Los Angele	194	2014	12	1	1900	
Los Angele	194	2014	12	1	2000	
Los Angele	194	2014	12	1	2100	
Los Angele	194	2014	12	1	2200	
Los Angele	194	2014	12	1	2300	
Los Angele	194	2014	12	1	2400	

Los Angele	194	2014	12	1	2500
Los Angele	194	2014	12	1	2600 Total

0
0

0	0	0	0	0
0	0	0	0	0 Total

Utility ID	Utility Name	Plant Code	Plant Name	State	County	Generator ID
11208	Angeles	6479	San Francisquito 1	CA	Angeles	1A
11208	Angeles	6479	San Francisquito 1	CA	Angeles	3
11208	Angeles	6479	San Francisquito 1	CA	Angeles	4
11208	Angeles	6479	San Francisquito 1	CA	Angeles	6
11208	Angeles	6480	San Francisquito 2	CA	Angeles	1
11208	Angeles	6480	San Francisquito 2	CA	Angeles	2
11208	Angeles	6480	San Francisquito 2	CA	Angeles	3
11208	Angeles	403	San Fernando	CA	Angeles	1
11208	Angeles	403	San Fernando	CA	Angeles	2
11208	Angeles	396	Foothill	CA	Angeles	1
11208	Angeles	397	Franklin (CA)	CA	Angeles	1
11208	Angeles	398	Haiwee	CA	Inyo	1
11208	Angeles	398	Haiwee	CA	Inyo	2
11208	Angeles	394	Cottonwood	CA	Inyo	1
11208	Angeles	394	Cottonwood	CA	Inyo	2
11208	Angeles	391	Big Pine Creek	CA	Inyo	1
11208	Angeles	402	Pleasant Valley Hydro	CA	Inyo	1
11208	Angeles	407	Upper Gorge	CA	Mono	1
11208	Angeles	401	Middle Gorge	CA	Mono	1
11208	Angeles	393	Control Gorge	CA	Inyo	1
11208	Angeles	392	Castaic	CA	Angeles	1
11208	Angeles	392	Castaic	CA	Angeles	2
11208	Angeles	392	Castaic	CA	Angeles	3
11208	Angeles	392	Castaic	CA	Angeles	4
11208	Angeles	392	Castaic	CA	Angeles	5
11208	Angeles	392	Castaic	CA	Angeles	6
11208	Angeles	392	Castaic	CA	Angeles	7
11208	Angeles	399	Harbor	CA	Angeles	10A
11208	Angeles	399	Harbor	CA	Angeles	10B
11208	Angeles	399	Harbor	CA	Angeles	5
11208	Angeles	399	Harbor	CA	Angeles	GT10
11208	Angeles	399	Harbor	CA	Angeles	GT11
11208	Angeles	399	Harbor	CA	Angeles	GT12
11208	Angeles	399	Harbor	CA	Angeles	GT13
11208	Angeles	399	Harbor	CA	Angeles	GT14
11208	Angeles	408	Valley (CA)	CA	Angeles	5
11208	Angeles	408	Valley (CA)	CA	Angeles	6
11208	Angeles	408	Valley (CA)	CA	Angeles	7
11208	Angeles	408	Valley (CA)	CA	Angeles	8
11208	Angeles	404	Scattergood	CA	Angeles	1
11208	Angeles	404	Scattergood	CA	Angeles	2
11208	Angeles	404	Scattergood	CA	Angeles	3
11208	Angeles	400	Haynes	CA	Angeles	1
11208	Angeles	400	Haynes	CA	Angeles	10

11208	Angeles	400	Haynes	CA	Angeles	11
11208	Angeles	400	Haynes	CA	Angeles	12
11208	Angeles	400	Haynes	CA	Angeles	13
11208	Angeles	400	Haynes	CA	Angeles	14
11208	Angeles	400	Haynes	CA	Angeles	15
11208	Angeles	400	Haynes	CA	Angeles	16
11208	Angeles	400	Haynes	CA	Angeles	2
11208	Angeles	400	Haynes	CA	Angeles	8
11208	Angeles	400	Haynes	CA	Angeles	9
11208	Angeles	6481	Intermountain Power Project	UT	Millard	1
11208	Angeles	6481	Intermountain Power Project	UT	Millard	2
16572	Project	4941	Navajo	AZ	Coconino	NAV1
16572	Project	4941	Navajo	AZ	Coconino	NAV2
16572	Project	4941	Navajo	AZ	Coconino	NAV3
803	Public	6008	Palo Verde	AZ	Maricopa	1
803	Public	6008	Palo Verde	AZ	Maricopa	2
803	Public	6008	Palo Verde	AZ	Maricopa	3
11208	Angeles	56433	Pine Tree Wind Power Project	CA	Kern	1
11208	Angeles	57306	Pine Tree Solar Project	CA	Kern	1
11208	Angeles	57305	Adelanto Solar Project	CA	Bernardin	1
11208	Angeles	55514	Apex Generating Station	NV	Clark	CTG1
11208	Angeles	55514	Apex Generating Station	NV	Clark	CTG2
11208	Angeles	55514	Apex Generating Station	NV	Clark	STG1
57391	Mountain	58017	Copper Mountain Solar 2	NV	Clark	PV01
57391	Mountain	58017	Copper Mountain Solar 2	NV	Clark	PV02
57391	Mountain	58017	Copper Mountain Solar 2	NV	Clark	PV03
59155	O&M, LLC	57079	Milford Wind Corridor I LLC	UT	Beaver	1
56409	Wind	57107	LLC	UT	Beaver	1
11208	Angeles	57310	1420 Coil Av #C	CA	Angeles	1
11208	Angeles	57311	Occidental College Solar Project	CA	Angeles	1
11208	Angeles	57313	Solar	CA	Angeles	1
11208	Angeles	57314	Los Angeles Harbor College	CA	Angeles	1
11208	Angeles	57635	Linden Wind Energy Project	WA	Klickitat	LW1
11208	Angeles	57730	Lopez Canyon	CA	Angeles	1
11208	Angeles	57854	North Hollywood	CA	Angeles	1PT1
11208	Angeles	57854	North Hollywood	CA	Angeles	1PT2
11208	Angeles	57854	North Hollywood	CA	Angeles	1PT3
11208	Angeles	57854	North Hollywood	CA	Angeles	2T1
11208	Angeles	57854	North Hollywood	CA	Angeles	2T2
11208	Angeles	57854	North Hollywood	CA	Angeles	2T3
11208	Angeles	57854	North Hollywood	CA	Angeles	3T1
11208	Angeles	57854	North Hollywood	CA	Angeles	3T2
11208	Angeles	57871	2555 E Olympic Bl	CA	Angeles	1
11208	Angeles	58248	Pierce College	CA	Angeles	GEN1
11208	Angeles	58249	Center	CA	Angeles	GEN1
11208	Angeles	58253	CBS Television City	CA	Angeles	GEN1

11208	Angeles	59652	Nordhoff Place	CA	Angeles	W4162
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Prime Mover	Unit Code	Ownership	Duct Burners	Can Bypass Heat	RTO/ISO LMP Node	RTO/ISO Location Designation	Nameplate Capacity	Nameplate Power Factor
HY		S	X	X			25.0	0.900
HY		S	X	X			9.3	0.800
HY		S	X	X			10.0	0.800
HY		S	X	X			25.0	0.900
HY		S	X	X			14.0	0.800
HY		S	X	X			14.0	0.800
HY		S	X	X			14.0	0.900
HY		S	X	X			2.8	0.800
HY		S	X	X			2.8	0.800
HY		S	X	X			11.0	1.000
HY		S	X	X			2.0	0.800
HY		S	X	X			2.8	0.800
HY		S	X	X			2.8	0.800
HY		S	X	X			0.8	0.800
HY		S	X	X			0.8	0.800
HY		S	X	X	none	none	3.2	0.800
HY		S	X	X			3.2	0.800
HY		S	X	X			37.5	1.000
HY		S	X	X			37.5	1.000
HY		S	X	X			37.5	1.000
PS		S	X	X			271.0	0.940
PS		S	X	X			271.0	0.940
PS		S	X	X			271.0	0.940
PS		S	X	X			271.0	0.940
PS		S	X	X			271.0	0.940
PS		S	X	X			271.0	0.940
HY		S	X	X			56.0	0.800
CT	CC1	S	X	N			85.3	0.850
CT	CC1	S	X	N			85.3	0.850
CA	CC1	S	N	X			75.0	0.800
GT		S	X	X			60.5	0.850
GT		S	X	X			60.5	0.850
GT		S	X	X			60.5	0.850
GT		S	X	X			60.5	0.850
GT		S	X	X			60.5	0.850
GT		S	X	X			60.5	0.850
CT	CC1	S	X	N			182.8	0.850
CT	CC1	S	X	N			182.8	0.850
CA	CC1	S	Y	X			264.4	0.850
ST		S	X	X			163.2	0.850
ST		S	X	X			163.2	0.850
ST		S	X	X			496.8	0.900
ST		S	X	X			230.0	0.850
CT	CC1	S	X	N			182.8	0.850

GT		S	X	X			108.2	0.850
GT		S	X	X			108.2	0.850
GT		S	X	X			108.2	0.850
GT		S	X	X			108.2	0.850
GT		S	X	X			108.2	0.850
GT		S	X	X			108.2	0.850
ST		S	X	X			230.0	0.850
CA	CC1	S	Y	X			264.3	0.850
CT	CC1	S	X	N			182.8	0.850
ST		W	X	X			820.0	0.900
ST		W	X	X			820.0	0.900
ST		J	X	X			803.1	0.900
ST		J	X	X			803.1	0.900
ST		J	X	X			803.1	0.900
ST		J	X	X			1,403.2	0.900
ST		J	X	X			1,403.2	0.900
ST		J	X	X			1,403.2	0.900
WT		S	X	X			135.0	
PV		S	X	X			8.5	
PV		S	X	X			10.0	
CT	CC1	S	X	N			174.0	0.850
CT	CC1	S	X	N			174.0	0.850
CA	CC1	S	Y	X			252.6	0.900
PV		J	X	X			30.0	
PV		J	X	X			30.0	
PV		J	X	X			34.0	
WT		S	X	X			203.5	
WT		S	X	X			102.0	
PV		W	X	X			1.1	
PV		W	X	X			1.0	
PV		W	X	X			1.2	
PV		W	X	X			1.2	
WT		W	X	X			50.0	1.000
GT		S	X	X			1.5	1.000
PS		S	X	X			1.8	0.814
PS		S	X	X			1.8	0.814
PS		S	X	X			1.8	0.814
HY		S	X	X			1.2	0.814
HY		S	X	X			1.2	0.814
HY		S	X	X			0.5	0.814
HY		S	X	X			0.5	0.814
HY		S	X	X			0.2	0.814
PV		W	X	X			1.0	
PV		W	X	X			1.9	
PV		W	X	X			3.5	
PV		W	X	X			1.6	

PV		W		X			1.2	
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Summer Capacity (MW)	Winter Capacity (MW)	Minimum Load (MW)	Uprate or Derate Complete	Month Uprate or Derate	Year Uprate or Derate	Status	Synchronized to Transmis	Operating Month
27.0	27.0	0.1	N			OP	X	12
10.0	10.0	0.1	N			OP	X	4
12.0	12.0	0.1	N			OP	X	5
27.0	27.0	0.1	N			OP	X	4
14.5	14.5	0.1	N			OS	X	7
14.0	14.0	0.1	N			OP	X	8
18.0	18.0	0.1	N			OP	X	9
3.2	3.2	0.1	N			OP	X	10
2.9	2.9	0.1	N			OP	X	10
9.9	9.9	0.1	N			OP	X	10
2.0	2.0	0.1	N			OP	X	6
3.6	3.6	0.5	N			OP	X	7
3.6	3.6	0.5	N			OP	X	7
1.2	1.2	0.1	N			OP	X	11
1.2	1.2	0.1	N			OP	X	10
3.0	3.0	0.3	N			OP	X	7
2.7	2.7	0.3	N			OP	X	2
37.5	37.5	0.5	N			OP	X	6
37.5	37.5	0.5	N			OP	X	5
37.5	37.5	0.5	N			OP	X	4
250.0	250.0	10.0	Y	8	2013	OP	X	9
265.0	265.0	10.0	N			OP	X	8
265.0	265.0	10.0	N			OP	X	3
265.0	265.0	10.0	N			OP	X	8
265.0	265.0	10.0	N			OP	X	3
265.0	265.0	10.0	N			OP	X	10
56.0	56.0	2.0	N			OP	X	2
79.5	82.0	36.0	N			OP	X	1
79.5	82.0	36.0	N			OP	X	1
65.0	67.0	14.0	N			OP	X	7
47.4	47.4	15.0	N			OP	X	1
47.4	47.4	15.0	N			OP	X	1
47.4	47.4	15.0	N			OP	X	1
47.4	47.4	15.0	N			OP	X	1
43.0	43.0	5.0	N			OP	X	1
156.0	159.0	100.0	N			OP	X	7
156.0	159.0	100.0	N			OP	X	7
201.0	215.0	60.0	N			OP	X	7
174.0	183.0	45.0	N			OP	X	12
177.0	184.0	45.0	N			OP	X	7
445.0	450.0	63.0	N			OP	X	10
222.0	222.0	50.0	N			OP	X	9
157.5	162.5	105.0	N			OP	X	1

96.3	100.0	50.0	N			OP	X	6
96.3	100.0	50.0	N			OP	X	6
96.3	100.0	50.0	N			OP	X	6
96.3	100.0	50.0	N			OP	X	6
96.3	100.0	50.0	N			OP	X	6
96.3	100.0	50.0	N			OP	X	6
222.0	222.0	50.0	N			OP	X	4
235.0	250.0	73.0	N			OP	X	1
157.5	162.5	105.0	N			OP	X	1
900.0	900.0	320.0	N			OP	X	6
900.0	900.0	320.0	N			OP	X	5
750.0	750.0	325.0	N			OP	X	5
750.0	750.0	325.0	N			OP	X	4
750.0	750.0	325.0	N			OP	X	4
1,311.0	1,333.0	110.0	N			OP	X	1
1,314.0	1,336.0	110.0	N			OP	X	9
1,312.0	1,334.0	110.0	N			OP	X	1
135.0	135.0	0.0	N			OP	X	6
8.5	8.5		N			OP	X	3
10.0	10.0		N			OP	X	6
149.6	163.6	90.0	N			OP	X	5
149.6	163.6	90.0	N			OP	X	5
195.2	213.4	55.0	N			OP	X	5
30.0	30.0		N			OP	X	10
30.0	30.0		N			OP	X	8
34.0	34.0		N			OP	X	7
203.5	203.5	0.0	N			OP	X	9
102.0	102.0	0.0	N			OP	X	5
1.3	1.3		N			OP	X	3
1.0	1.0		N			OP	X	2
1.2	1.2		N			OP	X	4
1.2	1.2		N			OP	X	10
50.0	50.0	2.0	N			OP	X	6
1.5	1.5	0.3	N			OP	X	8
1.8	1.8	1.8	N			OS	X	1
1.8	1.8	1.8	N			OP	X	1
1.8	1.8	1.8	N			OP	X	1
1.2	1.2	1.2	N			OP	X	1
1.2	1.2	1.2	N			OP	X	1
0.5	0.5	0.5	N			OP	X	1
0.5	0.5	0.5	N			OP	X	1
0.2	0.2	0.2	N			OP	X	1
1.0	1.0		N			OP	X	3
1.9	1.9		N			OP	X	1
3.5	3.5		N			OP	X	10
1.6	1.6		Y	8	2013	OP	X	7

1.0	1.0		N			OP	X	9
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Operating Year	Planned Retirement Month	Planned Retirement Year	Associated with Combine	Sector Name	Sector	Topping or Bottomin	Energy Source 1	Energy Source 2
1983			N	Utility	1	X	WAT	
1917			N	Utility	1	X	WAT	
1923			N	Utility	1	X	WAT	
1987			N	Utility	1	X	WAT	
1920			N	Utility	1	X	WAT	
1920			N	Utility	1	X	WAT	
1932			N	Utility	1	X	WAT	
1922			N	Utility	1	X	WAT	
1922			N	Utility	1	X	WAT	
1971			N	Utility	1	X	WAT	
1921			N	Utility	1	X	WAT	
1927			N	Utility	1	X	WAT	
1927			N	Utility	1	X	WAT	
1908			N	Utility	1	X	WAT	
1909			N	Utility	1	X	WAT	
1925			N	Utility	1	X	WAT	
1958			N	Utility	1	X	WAT	
1953			N	Utility	1	X	WAT	
1952			N	Utility	1	X	WAT	
1952			N	Utility	1	X	WAT	
1973			N	Utility	1	X	WAT	
1974			N	Utility	1	X	WAT	
1977			N	Utility	1	X	WAT	
1977			N	Utility	1	X	WAT	
1978			N	Utility	1	X	WAT	
1978			N	Utility	1	X	WAT	
1972			N	Utility	1	X	WAT	
1994			Y	Utility	1	T	NG	OBG
1994			Y	Utility	1	T	NG	OBG
1949			Y	Utility	1	T	NG	OBG
2002			N	Utility	1	X	NG	OBG
2002			N	Utility	1	X	NG	OBG
2002			N	Utility	1	X	NG	OBG
2002			N	Utility	1	X	NG	OBG
2002			N	Utility	1	X	NG	OBG
2002			N	Utility	1	X	NG	OBG
2004			Y	Utility	1	T	NG	OBG
2004			Y	Utility	1	T	NG	OBG
2004			Y	Utility	1	T	NG	OBG
1958	12	2020	N	Utility	1	X	NG	OBG
1959	12	2020	N	Utility	1	X	NG	OBG
1974	12	2015	N	Utility	1	X	NG	OBG
1962			N	Utility	1	X	NG	OBG
2005			Y	Utility	1	T	NG	OBG

2013			N	Utility	1	X	NG	OBG
2013			N	Utility	1	X	NG	OBG
2013			N	Utility	1	X	NG	OBG
2013			N	Utility	1	X	NG	OBG
2013			N	Utility	1	X	NG	OBG
2013			N	Utility	1	X	NG	OBG
1963			N	Utility	1	X	NG	RFO
2005			Y	Utility	1	T	NG	OBG
2005			Y	Utility	1	T	NG	OBG
1986			N	Utility	1	X	BIT	SUB
1987			N	Utility	1	X	BIT	SUB
1974			N	Utility	1	X	BIT	
1975			N	Utility	1	X	BIT	
1976			N	Utility	1	X	BIT	
1986			N	Utility	1	X	NUC	
1986			N	Utility	1	X	NUC	
1988			N	Utility	1	X	NUC	
2009			N	Utility	1	X	WND	
2013			N	Utility	1		SUN	
2012			N	Utility	1	X	SUN	
2003			N	Utility	1	X	NG	
2003			N	Utility	1	X	NG	
2003			N	Utility	1	X	NG	
2012			N	CHP	2	X	SUN	
2012			N	CHP	2	X	SUN	
2012			N	CHP	2	X	SUN	
2009			N	CHP	2	X	WND	
2011			N	CHP	2		WND	
2011			N	al Non-	4	X	SUN	
2013			N	al Non-	4	X	SUN	
2005			N	al Non-	4	X	SUN	
2010			N	al Non-	4	X	SUN	
2010			N	Utility	1	X	WND	
2002			N	Utility	1	X	LFG	
1993			N	al Non-	4	X	WAT	
1993			N	al Non-	4	X	WAT	
1993			N	al Non-	4	X	WAT	
1993			N	al Non-	4	X	WAT	
1993			N	al Non-	4	X	WAT	
1993			N	al Non-	4	X	WAT	
1993			N	al Non-	4	X	WAT	
1993			N	al Non-	4	X	WAT	
2012			N	al Non-	4	X	SUN	
2013			N	al Non-	4	X	SUN	
2014			N	al Non-	4	X	SUN	
2013			N	al Non-	4	X	SUN	

2014			N	CHP	2	X	SUN	
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Carbon Capture Technology	Turbines, Inverters, or	Time from Cold Shutdown	Fluidized Bed Technology	Pulverized Coal Technology	Stoker Technology?	Other Combustion	Subcritical Technology	Supercritical Technology
		10M						
		10M						
		10M						
		10M						
		10M						
		1H						
		10M						
		10M						
		10M						
		10M						
		10M						
		1H						
		1H						
		1H						
		1H						
		12H						
		1H						
		1H						
		1H						
		1H						
		10M						
		10M						
		10M						
		10M						
		10M						
		10M						
		10M						
		1H						
		1H						
		1H						
		1H						
		1H						
		1H						
		1H						
		1H						
		1H						
		1H						
		12H						
		12H						
		12H						
		OVER						
		OVER						
		OVER						
		OVER						
		12H						

		10M					
		10M					
		10M					
		10M					
		10M					
		10M					
		OVER					
		12H					
		12H					
N	0	OVER		Y		Y	
N		OVER		Y		Y	
N		OVER		Y			Y
N	0	OVER		Y			Y
N	0	OVER		Y			Y
		OVER					
		OVER					
		OVER					
	90						
N	17	10M					
N	13	10M					
N		12H					
N		12H					
N		12H					
N	48						
N	48						
N	54						
	97						
	68						
	3						
	25	10M					
		10M					
	1	10M					
	1	10M					
	1	10M					
	1	10M					
	1	10M					
	1	10M					
	1	10M					
	1	10M					
	4						
	8						

	36							
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WECC's contingency reserve standard is based on the larger of the largest single contingency or "the sum of three percent of hourly integrated Load and three percent hourly integrated generation." BAL-002-WECC-2 - Operating Reserves, <https://www.wecc.biz/Reliability/BAL-002-WECC-2.pdf>.

As a proxy for this, a six percent operating reserve requirement was applied based on load (because it is not possible to know the amount of hourly integrated generation)

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