

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

**I. D. # 11535
RESOLUTION E-4521
September 13, 2012**

**CONFIDENTIAL
R E S O L U T I O N**

Resolution E-4521. Pacific Gas and Electric Company requests approval of an amended and restated power purchase agreement with Bottle Rock Power LLC, owned by private investment companies including US Renewables Group and Riverstone Holdings.

PROPOSED OUTCOME: This Resolution approves cost recovery for the amended and restated power purchase agreement between Pacific Gas and Electric Company and Bottle Rock Power LLC.

ESTIMATED COST: Actual costs are confidential at this time.

By Advice Letter 4048-E filed on May 25, 2012.

SUMMARY

Cost recovery for Pacific Gas and Electric Company's amended and restated renewable energy power purchase agreement with Bottle Rock Power LLC is approved.

Pacific Gas and Electric Company (PG&E) requests approval of a power purchase agreement (PPA) with Bottle Rock Power LLC (Bottle Rock), owned by private investment companies including US Renewables Group and Riverstone Holdings. Bottle Rock operates an existing geothermal facility in The Geysers region of Lake County, CA and is currently providing approximately 80 gigawatt hours per year (GWh/year) of generation at a capacity of 10 MW for a term of 15 years.

The PPA under consideration is the third amendment to the PPA between PG&E and Bottle Rock. The original PPA resulted from PG&E's 2005 RPS Solicitation and was executed in 2006. The PPA was amended in 2007 and amended and restated in 2010. Compared to the PPA currently in effect,¹ the amended and

¹ Although the Commission approved an amended and restated PPA executed in 2010, the

restated PPA increases the contract price but provides stronger guarantees that Bottle Rock will invest the capital necessary to boost production at the facility. Under the amended and restated PPA, PG&E has the right to terminate the PPA in 2018 if the facility cannot reliably generate at least 15 MW of capacity by that time. While the amended and restated PPA does waive significant performance damages that have accrued since 2007, it establishes new performance penalties that are triggered if Bottle Rock fails to invest stipulated amounts in measures to increase production at the facility. The amended and restated PPA also extends the contract term from 15 to 20 years.

The CPUC approves cost recovery for the amended and restated PPA between PG&E and Bottle Rock. The Bottle Rock project is a currently operating facility that will provide PG&E with Category 1 bundled energy and RECs to meet its portfolio need in the third compliance period. The project requires no transmission network upgrades, is a baseload resource and provides local resource adequacy benefits.

The following table summarizes the project-specific features of the agreement:

Generating Facility	Type	Term Years	MW Capacity	Annual Deliveries	Online Date	Project Location
Bottle Rock Power	Geothermal	20	10-25	85-219 GWh	CPUC Approval	Lake Co., CA

BACKGROUND

Overview of the Renewables Portfolio Standard (RPS) Program

The California RPS program was established by Senate Bill (SB) 1078 and has been subsequently modified by SB 107, SB 1036, and SB 2 (1X).² The RPS program is codified in Public Utilities Code Sections 399.11-399.31.³ Under SB 2 (1X), the RPS program administered by the Commission requires each retail seller to procure eligible renewable energy resources so that the amount of electricity generated from eligible renewable resources be an amount that equals

price PG&E pays is still governed by the PPA approved by the Commission in 2007 because Bottle Rock has been unable to reach the capacity target specified in the 2010 PPA.

² SB 1078 (Sher, Chapter 516, Statutes of 2002); SB 107 (Simitian, Chapter 464, Statutes of 2006); SB 1036 (Perata, Chapter 685, Statutes of 2007); SB 2 (1X) (Simitian, Chapter 1, Statutes of 2011, First Extraordinary Session).

³ All further references to sections refer to Public Utilities Code unless otherwise specified.

an average of 20 percent of the total electricity sold to retail customers in California for compliance period 2011-2013; 25 percent of retail sales by December 31, 2016; and 33 percent of retail sales by December 31, 2020.⁴

Additional background information about the Commission's RPS Program, including links to relevant laws and Commission decisions, is available at <http://www.cpuc.ca.gov/PUC/energy/Renewables/overview.htm> and <http://www.cpuc.ca.gov/PUC/energy/Renewables/decisions.htm>.

NOTICE

Notice of AL 4048-E was made by publication in the Commission's Daily Calendar. PG&E states that a copy of the Advice Letter was mailed and distributed in accordance with Section 3.14 of General Order 96-B.

PROTESTS

PG&E's Advice Letter 4048-E was timely protested on June 14, 2012 by the Division of Ratepayer Advocates (DRA). PG&E responded to DRA's protest on June 21, 2012.

DRA recommends that the Commission deny cost recovery for the Bottle Rock PPA on the following grounds: 1) uncompetitive price, 2) elimination of all accrued non-performance damages, 3) lack of RPS portfolio need, 4) concurrence with the Independent Evaluator which expresses concern that Bottle Rock risks returning for another price amendment, and 5) disagreement with approval of a project for the sole benefit of supporting economic development. PG&E believes the Bottle Rock project provides benefits beyond the sole benefit of supporting economic development which justifies the higher contract price. In its reply to DRA's protest, PG&E suggests that the Bottle Rock project offers additional attributes including the following: 1) it is an existing and operating in-state facility with local area reliability benefits, 2) it does not require any additional transmission network upgrades, 3) it does not present integration issues that are associated with intermittent resources, and 4) it is required to spend a minimum specified amount of capital in order to improve plant production in the long term. PG&E also states that the Bottle Rock project would provide generation that can qualify as excess procurement in near term compliance periods, allowing PG&E to meet its RPS portfolio needs in later

⁴ D.11-12-020 established a methodology to calculate procurement requirement quantities for the three different compliance periods set forth in Section 399.15 (2011-2013, 2014-2016, and 2017-2020).

compliance periods. Lastly, PG&E disagrees that Bottle Rock is at risk of returning for another price amendment. PG&E states that the amended and restated contract has provisions that require Bottle Rock to upgrade the facility to increase generation, and the price of the PPA is adequate to allow Bottle Rock to successfully receive financing to complete the upgrades.

DISCUSSION

PG&E requests Commission approval of an amended and restated renewable energy contract between PG&E and Bottle Rock Power LLC.

Bottle Rock operates an existing geothermal facility in The Geysers region of Lake County, CA that first began operation in 1985 under the Department of Water Resources (DWR). DWR suspended operations in 1990 due to lower than expected generation and sold the power station to US Renewables Group in 2005 who then sold a 50% interest to Riverstone Holdings in 2006.

Under new ownership, Bottle Rock signed a purchase power agreement (PPA) with PG&E in 2006 resulting from PG&E's 2005 RPS Solicitation for a minimum of 14.45 megawatts (MW) of capacity for a term of 10 years with a commercial operation date (COD) of July 31, 2007. Due to performance issues, Bottle Rock and PG&E amended the PPA in October 2007 to extend the COD to October 1, 2007, decrease the minimum capacity from 14.45 MW to 10 MW, and set a milestone of December 31, 2007 to achieve a capacity of 14.45 MW, and a milestone of December 31, 2008 to reach 16.15 MW. The CPUC approved the amended PPA in December 2007, and the project achieved COD in October 2007.

In 2010, Bottle Rock and PG&E re-negotiated the amended PPA for a second time due to further performance issues and cost increases. The amended and restated PPA increased the contract price for deliveries above the required minimum deliveries, increased the project development security and delivery term security, lowered the minimum contract capacity, and increased the delivery term from 10 years to 15 years. The CPUC approved the amended and restated PPA in January 2011.

Bottle Rock has not been able to satisfy the minimum quantity requirements of the second amended and restated PPA. Therefore, Bottle Rock has not been able to receive higher payments for deliveries above the required minimum deliveries. PG&E states in AL 4048-E that Bottle Rock has been unable to raise the additional capital necessary to expand the steam field and increase generation as required in the second amended and restated PPA.

Bottle Rock approached PG&E in June 2011 to amend the PPA again to increase the price for all electricity delivered under the contract, not just deliveries above the minimum, which would allow Bottle Rock to obtain financing for steam field expansion and to support the facility's continued operation. Bottle Rock has also requested that PG&E waive significant non-performance damages owed to PG&E under the second amended and restated PPA. Bottle Rock indicated that if a price increase was not approved by the CPUC, it would shut the plant down.

On May 25, 2012 PG&E filed AL 4048-E requesting CPUC approval of a third amended and restated PPA with the following adjustments:

1. Redacted

2. Waive significant non-performance damages owed to PG&E;
3. Increase the contract term to 20 years;
4. Reduce the maximum capacity from 55 MW to 25 MW, and require that the facility reach 15 MW by early 2018 or PG&E has a right to terminate the contract;
5. Increase the delivery term security;
6. Maintain a certain employment level;
7. Invest a minimum amount in steam field expansion and improvement of the project.

PG&E requests that the Commission issue a resolution that:

1. Approves the amended and restated PPA in its entirety, including payments to be made by PG&E pursuant to the PPA, subject to the Commission's review of PG&E's administration of the PPA;
2. Finds that any procurement pursuant to the amended and restated PPA constitutes procurement from an eligible renewable resource for purposes of determining PG&E's compliance with any obligation that it may have to procure eligible renewable resources pursuant to the RPS Legislation (PU Code Sec. 399.11 et seq.), D.03-06-071 and D.06-10-050 or other applicable law;

3. Finds that all procurement and administrative costs, as provided by PU Code Sec. 399.139(g), associated with the amended and restated PPA shall be recoverable in rates;
4. Adopts the following finding of fact and conclusion of law in support of CPUC approval:
 - a. The amended and restated PPA is consistent with PG&E's 2011 RPS procurement plan.
 - b. The terms of the amended and restated PPA, including the price of delivered energy, are reasonable.
5. Adopts the following finding of fact and conclusion of law in support of cost recovery for the amended and restated PPA:
 - a. The utility's costs under the amended and restated PPA shall be recovered through PG&E's Energy Resource Recovery Account.
 - b. Any stranded costs that may arise from the amended and restated PPA are subject to provisions of D.04-12-048 that authorize recovery of stranded renewables procurement costs over the life of the contract. The implementation of the D.04-12-048 stranded cost recovery mechanism is addressed in D.08-09-012.
6. Adopts a finding of fact and conclusion of law that deliveries from the amended and restated PPA fall within the RPS portfolio content category set forth in PU Code Sec. 399.16(b)(1); and
7. Adopts the following findings with respect to resource compliance with the EPS adopted in R.06-04-009:
 - a. The amended and restated PPA is pre-approved as meeting the EPS because it is for an existing geothermal facility covered by Conclusion of Law 35(c) of D.07-01-039.

Energy Division Evaluated the Bottle Rock PPA on these Grounds:

- Consistency with PG&E's 2011 RPS Procurement Plan
- Consistency with Least-Cost Best-Fit Requirements
- RPS Portfolio Need
- Price Reasonableness and Value
- Consistency with RPS Standard Terms and Conditions
- Procurement Review Group Participation
- Independent Evaluator Review

- Contribution to Minimum Long Term Contracting Requirement
- Compliance with the Interim Greenhouse Gas Emissions Performance Standard

Consistency with PG&E's 2011 RPS Procurement Plan

California's RPS statute requires the Commission to direct each utility to prepare an annual RPS Procurement Plan (Plan) and then review and accept, modify, or reject the Plan prior to the commencement of a utility's annual RPS solicitation.⁵ The Commission must then accept or reject proposed PPAs based on their consistency with the utility's approved Plan. PG&E's stated preferences in its 2011 RPS Plan include 1) projects that allow it to address its long-term 33% mandate under the third compliance period, and 2) projects with high viability. Because the PPA requires an increase in capacity of between 5 and 15 MW by 2018, the Bottle Rock project can help PG&E meet its long-term needs in the third compliance period that begins in 2017.

The Bottle Rock PPA is consistent with PG&E's 2011 RPS Procurement Plan approved by D.11-04-030.

Consistency with PG&E's Least-Cost Best-Fit Requirements

The LCBF decision directs the utilities to use certain criteria in their bid ranking.⁶ The decision offers guidance regarding the process by which the utility ranks bids in order to select or "shortlist" the bids with which it will commence negotiations. PG&E's bid evaluation includes a quantitative and qualitative analysis, as well as each proposal's absolute value to PG&E's customers and relative value in comparison to other proposals. The basic components of PG&E's LCBF evaluation and selection criteria and process for RPS contracts were established in the Commission's LCBF Decisions D.03-06-071 and D.04-07-029.

Consistent with these decisions, the three main steps undertaken by PG&E are: (1) determination of market value of bid; (2) calculation of transmission adders and integration costs; (3) evaluation of portfolio fit, and; 4) consideration of non-price factors. PG&E applied these criteria to the proposals received in the 2011 solicitation in order to establish a short-list of proposals from bidders with whom PG&E would engage in contract discussions. PG&E's 2011 RPS solicitation was the most recent solicitation at the time that the Bottle Rock PPA was negotiated and executed.

⁵ §399.13.

⁶ See D.04-07-029

PG&E examined the reasonableness of the Bottle Rock PPA using the same LCBF evaluation methodology that it used for RPS offers received for the 2011 RPS solicitation. Although the Bottle Rock PPA was negotiated bilaterally, PG&E determined that the agreements were reasonable and compared favorably to proposals that PG&E received in its 2011 solicitation and to other bilateral offers negotiated around the same time. PG&E stated in AL 4048-E that while the economics of the Bottle Rock project compare unfavorably to its 2011 RPS Solicitation short-list, the non-price factors and improved portfolio fit are favorable.

PG&E fails to adequately disclose what the “non-price factors” are in the redacted copy of AL 4048-E that warrant an increase in the price of the PPA and the forgiveness of significant accrued non-performance damages, in lieu of selecting one of the many other projects that provide RPS-eligible generation at a significantly better price and value.

PG&E failed to adequately examine the reasonableness of the Bottle Rock PPA utilizing its LCBF methodology during the time the PPA was being negotiated and executed.

RPS Portfolio Need

The California RPS Program was established by Senate Bill (SB) 1078 and has been recently modified by SB 2 (1X), which became effective on December 10, 2011. SB 2 (1X) made significant changes to the RPS Program.⁷ SB2 (1X) established new RPS procurement targets such that retail sellers must procure “...from January 1, 2011 to December 31, 2013...an average of 20 percent of retail sales...25 percent of retail sales by December 31, 2016, and 33 percent of retail sales by December 31, 2020.”⁸

Redacted

⁷ The Commission opened Rulemaking (R.) 11-05-005 (May 5, 2011) to implement the new RPS law.

⁸ See § 399.15(b)(2)(B), SB 2 (1X)

Redacted

Price Reasonableness and Value

Redacted

Consistency with RPS Standard Terms and Conditions

The Commission adopted a set of standard terms and conditions (STCs) required in RPS contracts, four of which are considered “non-modifiable.” The STCs were compiled in D.08-04-009 and subsequently amended in D.08-08-028. The Commission further refined these STCs in D.10-03-021, as modified by D.11-01-025.

The Bottle Rock PPA includes the Commission-adopted RPS “non-modifiable” standard terms and conditions, as set forth in D.08-04-009, D.08-08-028, and D.10-03-021, as modified by D.11-01-025.

Procurement Review Group Participation

The Procurement Review Group (PRG) process was initially established in D.02-08-071 as an advisory group of non-market participants to review and assess the details of the investor-owned utilities' overall procurement strategy, solicitations, specific proposed procurement contracts and other procurement

processes prior to submitting filings to the Commission as an interim mechanism for procurement review.

According to PG&E, participants in its PRG include representatives from the Commission's Energy Division, the Division of Ratepayer Advocates, The Utility Reform Network, California Utility Employees, the Union of Concerned Scientists, California Department of Water Resources, and Jan Reid, as a PG&E ratepayer. PG&E advised the PRG of the Bottle Rock PPA at the December 13, 2011 meeting of the PRG.

Pursuant to D.02-08-071, PG&E complied with the Commission's rules for involving the Procurement Review Group.

Independent Evaluator Report (IE)

PG&E retained Merrimack Energy Group as the Independent Evaluator for the Bottle Rock PPA. Resolution E-4199 governs the role of independent evaluators when developers request changes in approved contracts that would increase the contract price. According the directives of Resolution E-4199, utilities must explain why a change in contract price is necessary and provide all data needed to justify the change. Developers requesting a price increase must provide the Commission and the IE with cash flow models for the original contract price and the requested contract prices. The IE is directed to include an evaluation of the new price compared to the utility's most recent solicitation, a review of the cash flow model and model inputs, and an evaluation of whether the model results justify the requested price increase. See Confidential Appendix B for excerpts from the IE report.

Redacted

Contribution to Minimum Quantity Requirement for Long-Term Contracts

Section 399.13(b) requires that the commission establish “minimum quantities of eligible renewable energy resources to be procured through contracts of at least 10 years’ duration.”

Because the term of the Bottle Rock PPA is greater than 10 years in length, the PPA may be construed as counting toward the minimum quantity requirements that the Commission established in D.12-06-038.

Compliance with the Interim Greenhouse Gas Emissions Performance Standard (EPS)

California Public Utilities Code Sections 8340 and 8341 require the Commission to consider emissions associated with new long-term (five years or greater) power contracts procured on behalf of California ratepayers.

D.07-01-039 adopted an interim EPS that establishes an emission rate for obligated facilities at levels no greater than the greenhouse gas (GHG) emissions of a combined-cycle gas turbine power plant. The EPS applies to all energy contracts for baseload generation that are at least five years in duration.⁹ Generating facilities using certain renewable resources, including geothermal energy, are deemed compliant with the EPS.¹⁰

The Bottle Rock PPA meets the conditions for EPS compliance because the contract is for generation from geothermal resources, which are among the deemed compliant renewable resources.

The Protest of DRA is Denied

DRA filed a timely protest to AL 4048-E on June 14, 2012. The protest opposed the PPA on five grounds. First, DRA asserts that this contract should not be approved because lower-cost alternatives are available. The higher price proposed in the amended and restated PPA will bring the price paid to Bottle Rock closer to the range of prices bid by other geothermal plants shortlisted from the 2011 RPS Solicitation.

Second, DRA asserts that by waiving the accrued performance damages, PG&E is failing to protect its ratepayers. As noted by DRA, the IE’s opinion is that the project would likely fail without both the price increase and the waiver of the accrued damages. In order to preserve a currently operating RPS-eligible

⁹ “Baseload generation” is electricity generation at a power plant “designed and intended to provide electricity at an annualized plant capacity factor of at least 60%.” Pub. Utils. Code § 8340 (a).

¹⁰ D.07-01-039, Attachment 7, p. 4

facility, the waiver of the accrued damages is necessary, but the amended and restated PPA would impose higher damage payments than are currently owed in 2018 if certain performance or capital spending milestones are not reached.

Third, DRA states that PG&E does not need this contract to meet its RPS goals. However, as PG&E states in AL-4048-E, PG&E does have a need for incremental RPS energy in the third compliance period, which PG&E has documented in its draft 2012 Renewable Energy Procurement Plan, filed in R.11-05-005.

Fourth, DRA questions the long-term viability of the project. DRA cites the past failures of Bottle Rock to increase production as required by the current and previous contracts. In response, PG&E indicated that by providing a higher price for all delivered electricity, rather than only providing a higher price for incremental output, the pricing structure of the amended and restated PPA will allow Bottle Rock to raise the financing necessary for additional capital investment. Thus, the Commission finds that there is a reasonable chance that Bottle Rock will be able to increase the facility's capacity as a result of the new pricing structure. If Bottle Rock proves unable to increase the facility's output to a minimum of 15 MW by 2018, the amended and restated PPA gives PG&E the right to terminate the contract, which protects PG&E ratepayers from a long-term liability if the facility's operations do not improve.

Finally, DRA argues that economic development is the sole benefit of the project, and it is inappropriate for ratepayers to shoulder the burden of providing that benefit. The Commission disagrees with DRA that economic development is the sole benefit of this project. The Bottle Rock facility has provided very low-cost RPS energy to PG&E since 2007, it provides local reliability benefits, it requires no transmission upgrades, and it will increase output by the third compliance period when PG&E is projected to have a shortfall. The Commission finds that the amended and restated PPA merits approval for these reasons regardless of any economic development benefits that it may also provide.

For the reasons given above, DRA's protest on the grounds that lower-cost alternatives are available, the waiver of damages disregards the goal of protecting ratepayers, the project is not needed for RPS compliance, the long-term viability of the project is uncertain, and the sole benefit of the project is economic development is denied.

RPS ELIGIBILITY AND CPUC APPROVAL

Pursuant to Public Utilities Code Section 399.13, the CEC certifies eligible renewable energy resources. Generation from a resource that is not CEC-certified cannot be used to meet RPS requirements. To ensure that only CEC-

certified energy is procured under a Commission-approved RPS contract, the Commission has required standard and non-modifiable “eligibility” language in all RPS contracts. That language requires a seller to warrant that the project qualifies and is certified by the CEC as an “Eligible Renewable Energy Resource,” that the project’s output delivered to the buyer qualifies under the requirements of the California RPS, and that the seller uses commercially reasonable efforts to maintain eligibility should there be a change in law affecting eligibility.¹¹

The Commission requires a standard and non-modifiable clause in all RPS contracts that requires “CPUC Approval” of a PPA to include an explicit finding that “any procurement pursuant to this Agreement is procurement from an eligible renewable energy resource for purposes of determining Buyer's compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard (Public Utilities Code Section 399.11 et seq.), D.11-12-020 and D.11-12-052, or other applicable law.”¹²

Notwithstanding this language, the Commission has no jurisdiction to determine whether a project is an eligible renewable energy resource, nor can the Commission determine prior to final CEC certification of a project, that “any procurement” pursuant to a specific contract will be “procurement from an eligible renewable energy resource.”

Therefore, while we include the required finding here, this finding has never been intended, and shall not be read now, to allow the generation from a non-RPS-eligible resource to count towards an RPS compliance obligation. Nor shall such finding absolve the seller of its obligation to obtain CEC certification, or the utility of its obligation to pursue remedies for breach of contract. Such contract enforcement activities shall be reviewed pursuant to the Commission’s authority to review the utilities’ administration of such contracts.

CONFIDENTIAL INFORMATION

The Commission, in implementing Public Utilities Code Section 454.5(g), has determined in D.06-06-066, as modified by D.07-05-032, that certain material submitted to the Commission as confidential should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future RPS solicitations. D.06-06-066 adopted a time limit on the confidentiality of specific terms in RPS contracts. Such information, including price, is

¹¹ See, e.g. D. 08-04-009 at Appendix A, STC 6, Eligibility.

¹² See, e.g. D. 08-04-009 at Appendix A, STC 1, CPUC Approval.

confidential for three years from the date the contract states that energy deliveries begin, except contracts between IOUs and their affiliates, which are public.

The confidential appendices, marked "[REDACTED]" in the public copy of this resolution, as well as the confidential portions of the advice letter, should remain confidential at this time.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.

FINDINGS AND CONCLUSIONS

Redacted

Redacted

THEREFORE IT IS ORDERED THAT:

1. The power purchase agreement between Pacific Gas and Electric Company and Bottle Rock LLC as proposed in Advice Letter 4048-E is approved.
2. The protest of the Division of Ratepayer Advocates is denied.

This Resolution is effective today.


I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on September 13, 2012; the following Commissioners voting favorably thereon:

Paul Clanon
Executive Director

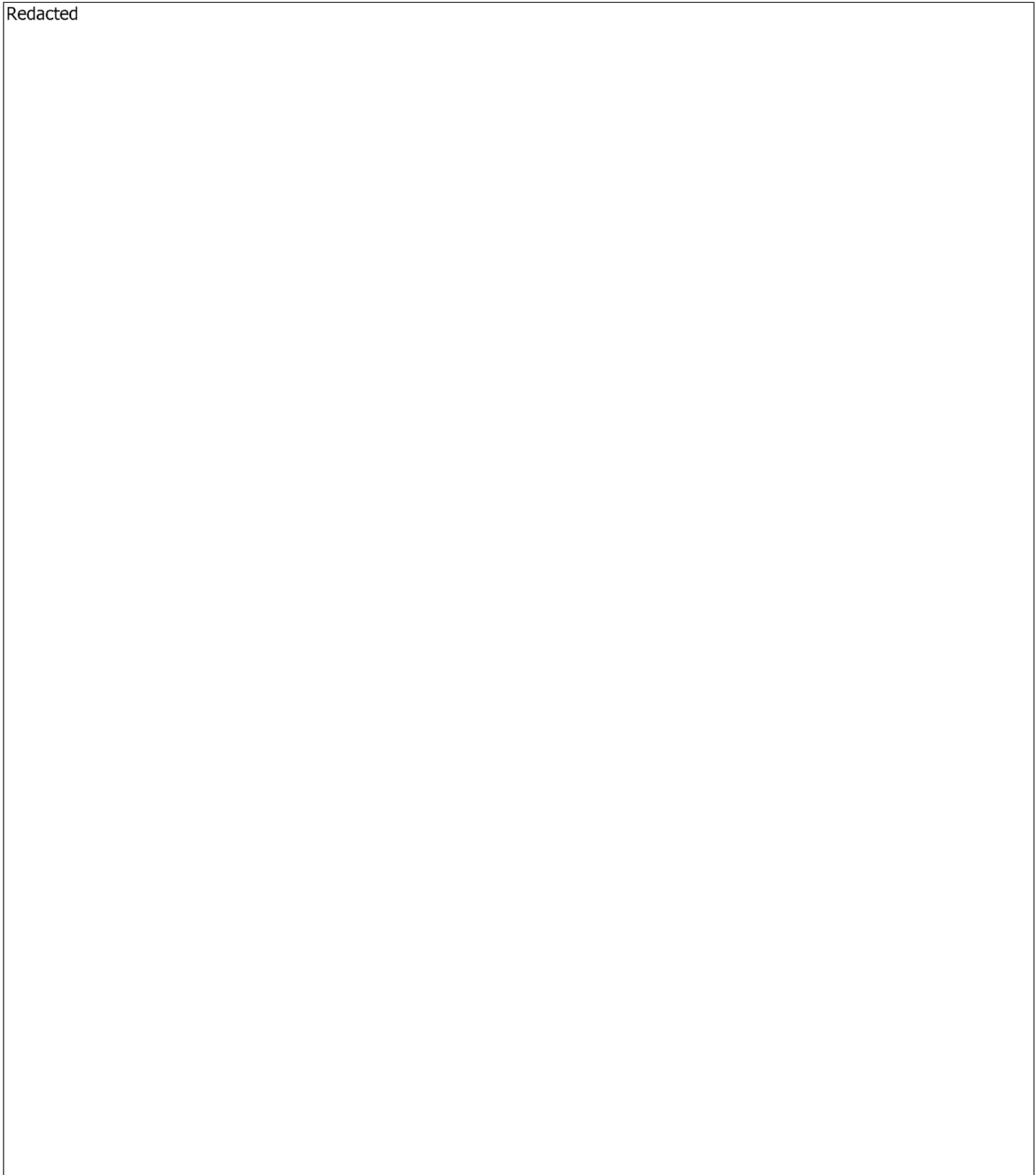
Confidential Appendix A

Price Reasonableness, Value and Portfolio Need

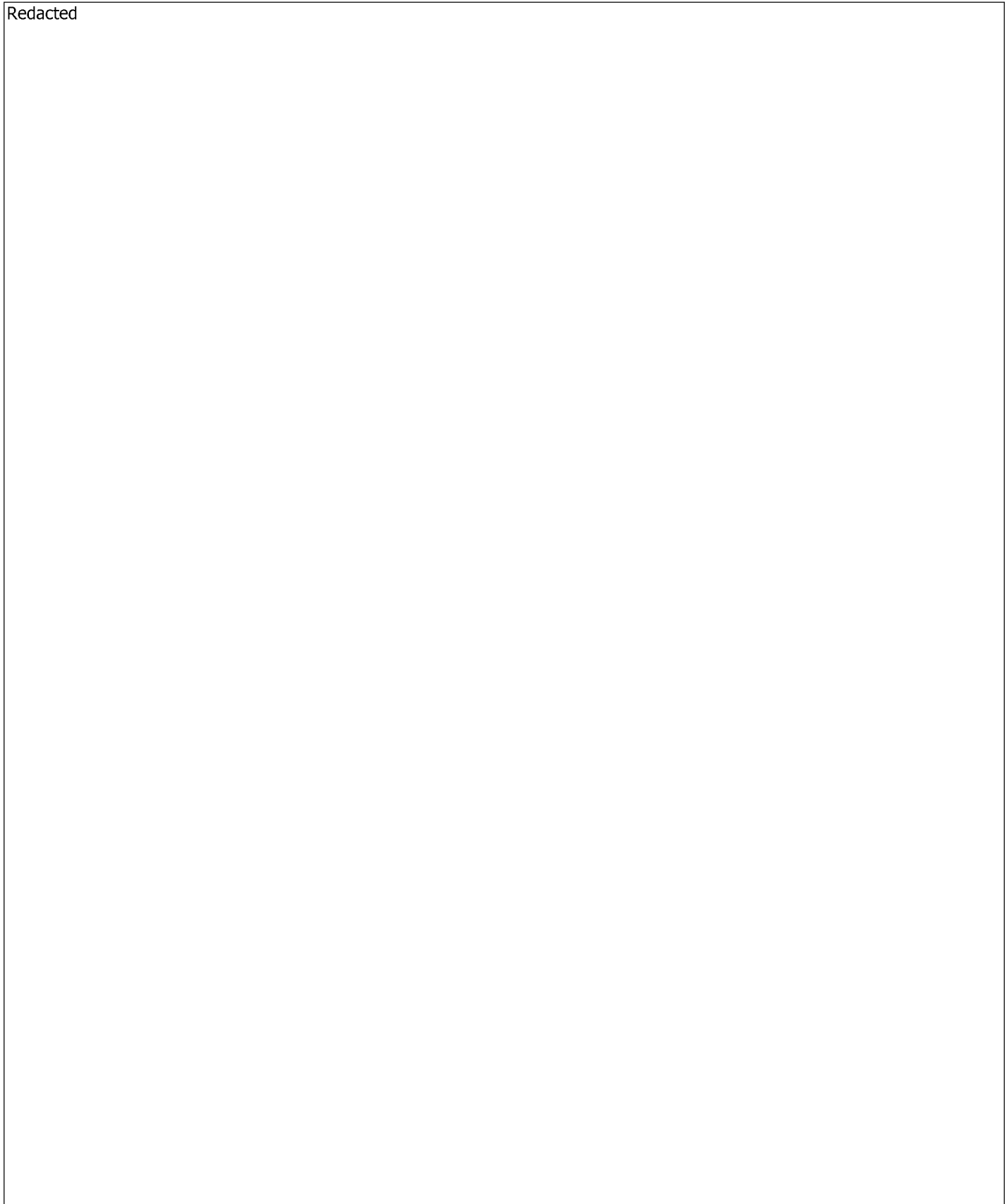
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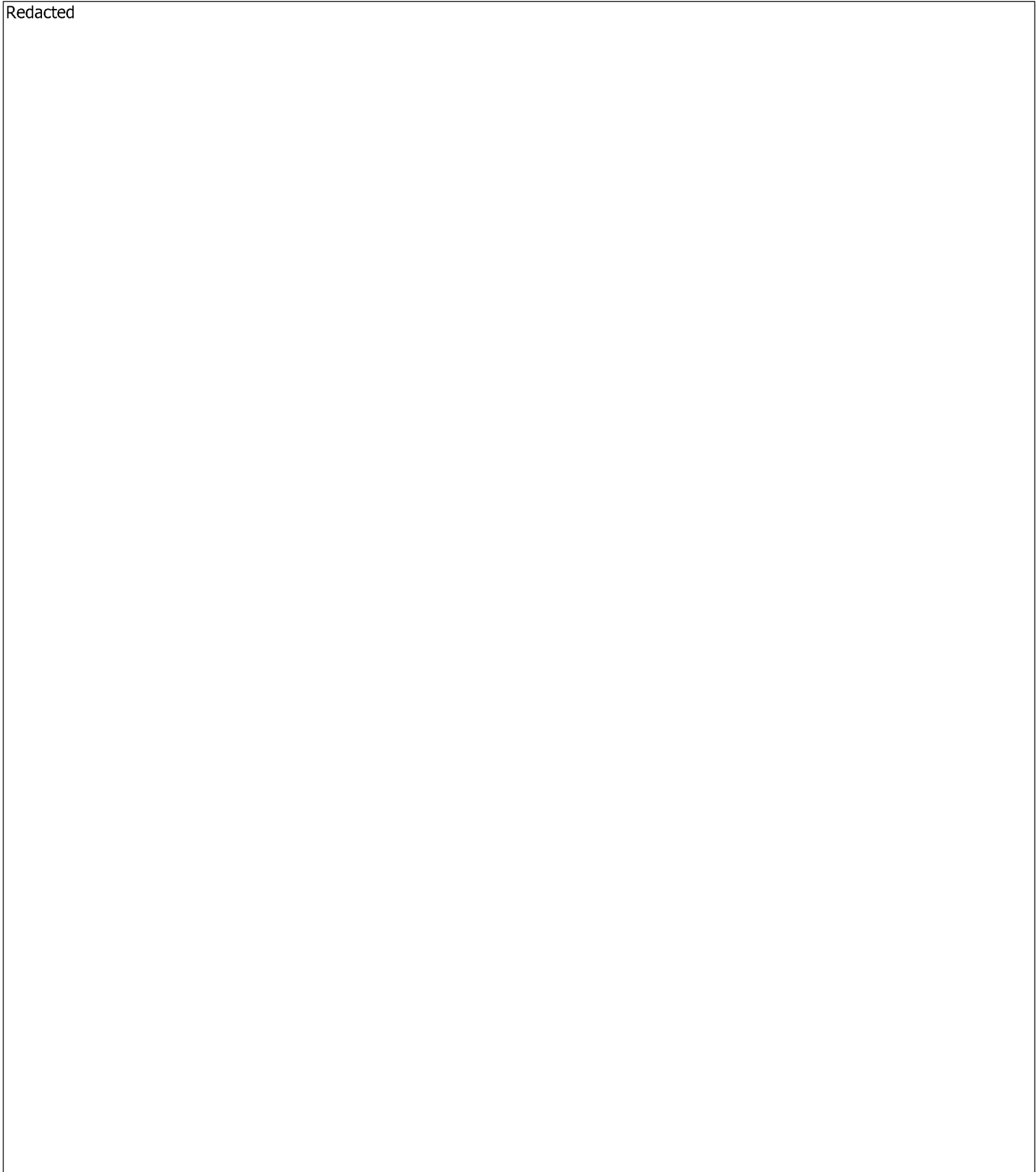
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¹⁴ Incentive is based on GWh production, but for the purposes of this discussion, converted to equivalent MWs based on a 95% capacity factor.

Confidential Appendix B

Independent Evaluator Conclusions and Recommendations

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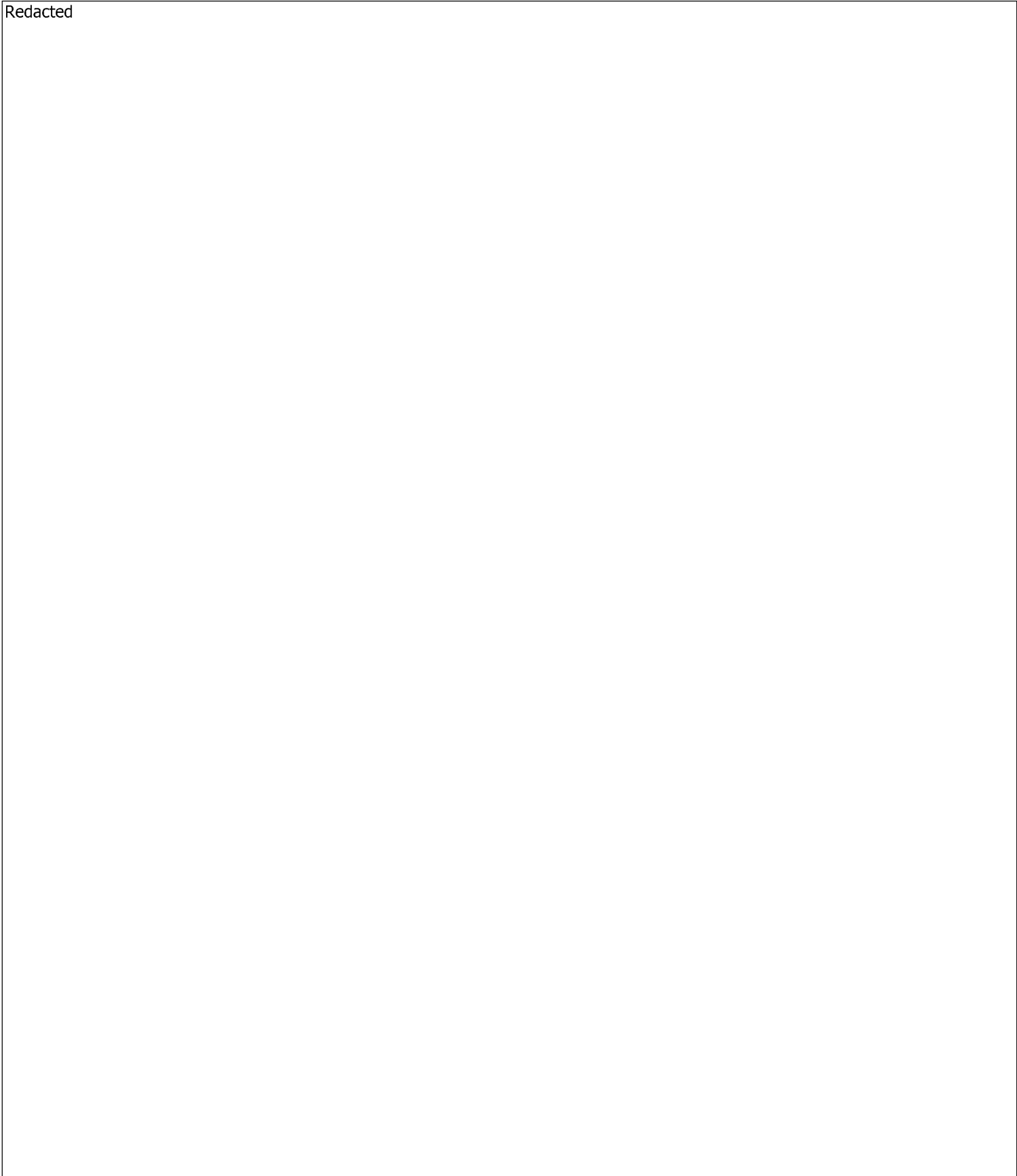
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Confidential Appendix C

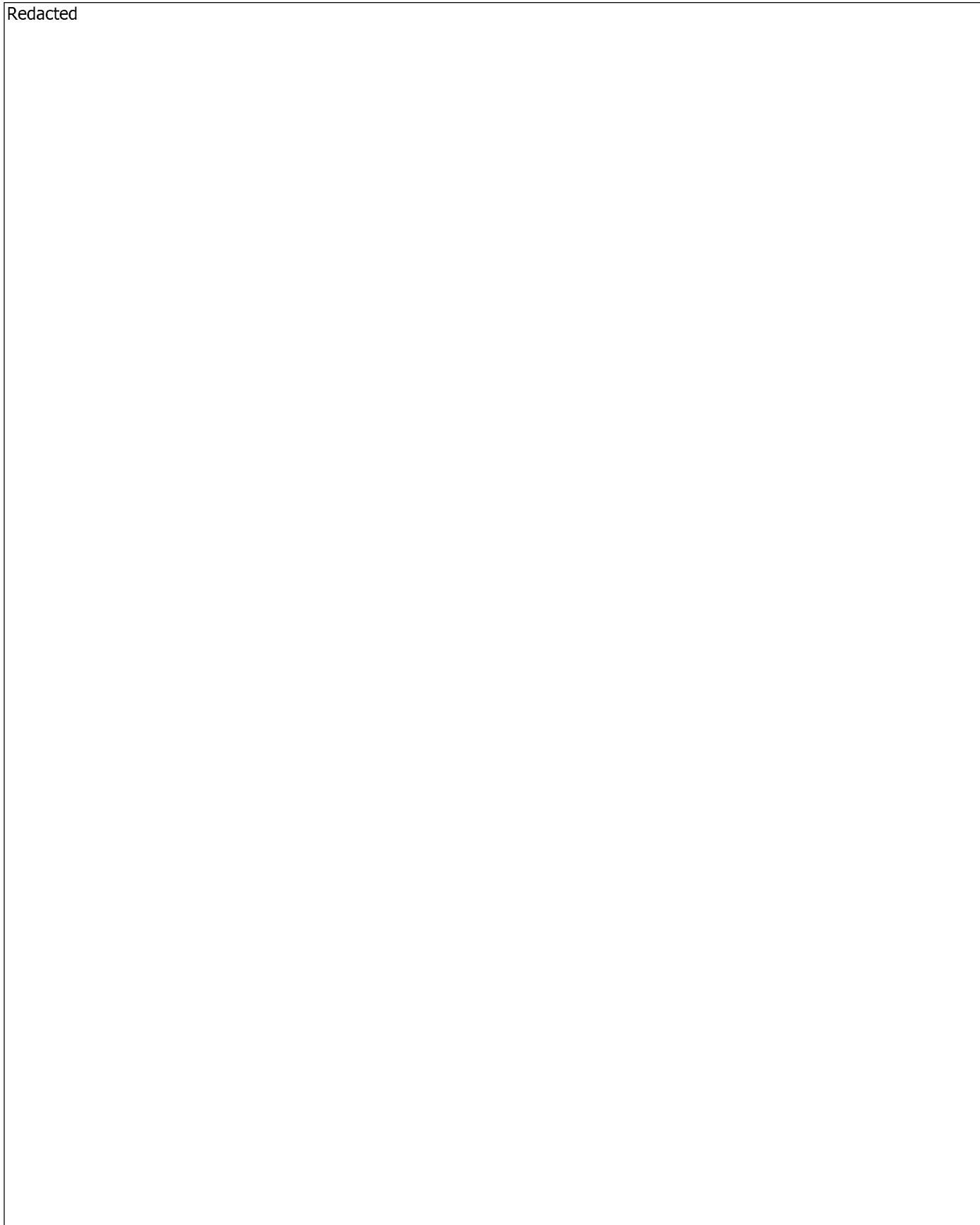
Amended and Restated Contract Terms and Conditions

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