BPA Policy 231-2
Power Transacting Risk Management

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1. Purpose & Background

Bonneville Power Administration (BPA) enters into Energy Commodity-Related Transactions to manage BPA’s portfolio of generation, customer loads, contractual and treaty obligations in a cost effective manner. BPA performs these activities to ensure reliable service to firm loads, to meet fish mitigation and other non-power obligations, to dispose of surplus energy on an economically efficient basis, and to manage financial and power system operations risks.

This policy establishes a framework of requirements, procedures, standards, and responsibilities for managing risks, including related credit risk associated with Energy Commodity-Related Transactions executed by Power Services (PS). This framework ensures that the risk impacts associated with the execution or modification of Energy Commodity-Related Transactions and the exercise or waiver of rights under such transactions are within BPA’s risk tolerance, and that such actions are taken with full understanding of significant associated risks.

An effective risk management program requires clear segregation of duties, reporting lines, and incentives between functions and personnel who enter into contractual commitments, and those who analyze, monitor, and report risk. BPA has developed a risk management and oversight structure that includes Front, Middle, and Back Office responsibilities.

2. Policy Owner

The Executive Vice President of Compliance, Audit, and Risk and Chief Risk Officer (CRO) working through the Transacting Credit Insurance Risk Manager has overall responsibility for monitoring compliance with this policy and managing any revisions.

3. Applicability

This policy applies to all Energy Commodity-Related Transactions executed by PS, including the initial entry into any such transactions and any associated amendments, settlements, or terminations.

The following transactions are not covered by this policy:

A. Long-term firm power sales contracts (e.g., Regional Dialogue contracts) and amendments thereto, as authorized by section 5(b), 5(c), and 5(d) of the Northwest Power Act

B. Sales, purchases, and related transactions of transmission rights entered into by Transmission Services (TS) pursuant to BPA’s Open Access Transmission Tariff (OATT)

C. Energy and capacity agreements between PS and TS

D. Energy efficiency agreements
E. Residential Exchange agreements
F. U.S. Army Corps of Engineers and Bureau of Reclamation arrangements
G. Fish and wildlife arrangements
H. Court ordered settlements
I. Procurements under the Bonneville Purchasing Instruction
J. Columbia River Treaty activities
K. Government-mandated actions
L. Debt management actions (e.g., Interest Rate Swaps)

4. Terms & Definitions

A. Approved Transaction: An Energy Commodity-Related Transaction that can be executed by BPA Power Services staff consistent with the requirements described in this risk policy.

B. Credit Risk: The risk of financial loss if a counterparty to a transaction does not fulfill its contractual obligations in a timely manner. Credit Risk includes: 1) payment risk exposure, which is the amount owed for goods and services delivered or provided under the terms of a transaction; and 2) market risk exposure, which is the difference between the contract price and the value of replacing the contract with a contract having substantially similar terms (in most circumstances the value will be best determined by reference to the market value of the replacement agreement).

C. Derivatives Clearing Organization (DCO): A clearinghouse, clearing association, clearing corporation, or similar entity that enables each party to an agreement, contract, or transaction to substitute, through novation or otherwise, the credit of the DCO for the credit of the parties; arranges or provides, on a multilateral basis, for the settlement or netting of obligations; or otherwise provides clearing services or arrangements that mutualize or transfer Credit Risk among participants. A DCO has established rules and regulations where it acts as a clearing organization and establishes and enforces margin requirements. Note, in a cleared transaction, the counterparty to the transaction is the DCO.

D. Emergency Situation: Any abnormal system condition which requires immediate manual or automatic action to prevent or minimize loss of load, equipment damage, tripping of system elements, or any other consequence that could threaten BPA’s ability to meet minimum operating reliability criteria, environmental requirements, or other material system operation needs.

E. Energy Commodity-Related Transaction: A transaction governed by the Commodities Exchange Act (CEA), as amended by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), that is (1) for the purchase, sale, assignment, or
exchange of any energy commodity, or (2) for its value is related to the purchase, sale, assignment, or exchange of any energy commodity.

F. Financial Option (i.e., Swaption): An option that provides the holder of the option with the right to enter into a Financial Power Transaction. In exchange for an option premium, the buyer gains the right but not the obligation to enter into a pre-specified Financial Power Transaction agreement with the issuer at a specified future time. Such transactions are executed on an exchange via a DCO or are “over-the-counter,” meaning executed directly between a buyer and seller. These direct bilateral transactions are transacted under an International Swaps and Derivatives Association (ISDA) or similar agreement between the two counterparties.

G. Financial Power Transaction: An Energy Commodity-Related Transaction is a future or option that provides for the netting or exchange of monetary payments, where the payments are determined by reference to the difference between the contract price and a stated market index to derive the market value of the transaction. Such transactions are executed on an exchange via a DCO or are “over-the-counter,” meaning executed directly between a buyer and seller. These direct bilateral transactions are transacted under an International Swaps and Derivatives Association (ISDA) or similar agreement between the two counterparties.

H. Futures Commission Merchant (FCM): An entity that solicits or accepts orders for Financial Power Transactions traded on or subject to the rules of a DCO; and in connection with such solicitation or acceptance of orders, accepts money, securities, or property (or extends credit in lieu thereof) to margin, guarantee, or secure any trades or contracts that result or may result. The FCM enables BPA and its counterparties to transact indirectly in financial futures markets. An FCM is responsible to the DCO in which it participates for collecting margin payments from the FCM’s customers.

I. Inventory: For the purpose of this policy, Inventory is the average electricity balance of the BPA portfolio, which includes all generation, customer load, and power wholesale commitments. This is expressed in monthly average on-peak, off-peak and flat inventory positions.

J. Load Factoring: Energy neutral buy/sell transactions that monetize the flexibility of the hydro system to shape energy from low valued periods to higher valued periods across a defined time horizon.

K. Market Manipulation: Deliberate manipulation of market prices, indices, or reported volumes to third parties in order to increase the value of index-priced transactions, or deliberate simultaneous purchase and sale of the same transaction to create misleading, artificial activity in markets.

L. Market Risk: The risk of financial loss due to changes in market conditions.

M. Operational Risk: The risk of direct or indirect financial loss resulting from inadequate or failed internal processes, human error or malfeasance, IT system shortcomings, etc. A
component of operational risk is model risk, which is defined as the risk of financial loss due to inaccurate or incomplete characterization of transaction or portfolio value or risk due to fundamental deficiencies in the model(s) being used to perform portfolio valuations, forecast inventory positions, and forecast market prices.

N. **Physical Option**: Any transaction where either counterparty may define the physical amount or schedule of energy commodity deliveries for any time period within the Term of the transaction, after the contract has been executed. For power products this includes traditional “put” and “call” option structures as well as agreements for energy commodities that include the ability to modify delivery pre-schedules prior to actual delivery. For the purposes of this policy, the definition of Physical Option excludes agreements for power reserves or any power product where the amount or schedule of delivery may be modified based only on real time system operational reliability requirements.

O. **Prompt**: For the purposes of this policy, this term takes the meaning commonly applied in the commodity trading field, which is the time period immediately following the current time period. For example, if the current fiscal year is 2020 then the prompt fiscal year is 2021.

P. **Speculation**: Entering into a transaction with high risk seeking to take financial advantage of an anticipated price movement, irrespective of inventory positions.

Q. **Term (i.e., Transaction Term)**: The period between the beginning and end of delivery specified in the transaction.

R. **Tenor (i.e., Transaction Tenor)**: The period between the execution date and end of delivery of a transaction.

5. **Policy**

A. **Approved Transactions**

  A proposed Energy Commodity-Related Transaction is an Approved Transaction if it:

  1. Meets the requirements under Appendix A

  2. Does not violate Credit Limits determined under Appendix B

B. **Transaction Approval Process**

  An Energy Commodity-Related Transaction that is not an Approved Transaction may not be entered into by BPA unless it is approved by the appropriate authority as specified in Section 8. Standards & Procedures and it meets the credit limit requirements established under Appendix B.

C. **Prohibited Activities**

  The following actions are prohibited under this policy:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Title</th>
<th>Unique ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARE</td>
<td>Power Transacting Risk Management</td>
<td>231-2</td>
</tr>
<tr>
<td>Author</td>
<td>Approved by</td>
<td>Date</td>
</tr>
<tr>
<td>L. Racicot</td>
<td>EVP CARE</td>
<td>4/30/2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Speculation in, by, or through Energy Commodity-Related Transactions
2. Market Manipulation in, by, or through Energy Commodity-Related Transactions
3. Structuring Energy Commodity-Related Transactions for the specific purpose of avoiding any limitation or control in this policy or any statutory obligations

D. Transparency

The Front Office will provide full and timely communication of all commercial activity to BPA’s Risk organization. All Energy Commodity-Related Transactions must be captured in the trade management system within the same day of execution. If the Front Office is not able to meet this timeline, they will notify the Risk organization within the same day of execution.

6. Policy Exceptions

There are no exceptions to this policy.

7. Responsibilities

A. Audit Compliance & Governance Committee (ACGC): The ACGC is responsible for assurance of effective internal control and compliance over BPA business activities and for approving risk tolerance levels established by the Risk Oversight Committee (ROC) for BPA commercial transacting risks by approving all relevant risk programs and policies.

B. Risk Oversight Committee (ROC): The ROC is responsible for ensuring that risk management monitoring systems and limits are in place to govern commercial transacting risks across BPA, within the parameters approved by the ACGC. The ROC reviews and approves the Rules of Engagement document on an annual basis as well as any proposed changes during the interim period. The ROC reviews and approves all relevant risk programs and policies. The ROC receives quarterly risk updates from the Middle Office.

C. Risk Assessment Team: The Risk Assessment Team is responsible for review and approval, as appropriate, of Energy Commodity-Related Transactions proposed by the PS organization that are not Approved Transactions as defined in this policy.

D. Front Office: For purposes of this policy, the Front Office includes the Bulk Marketing (PT) departments that have functional responsibility and delegated authority for developing, pricing, and executing Energy Commodity-Related Transactions.

E. Generation Asset Management (PG): PG includes the Operations Planning, Short Term Planning, and Long Term Power Planning organizations that provide inventory forecasts for scenario and stress analysis and portfolio position and financial analysis.
F. **Middle Office**: The Transacting Credit Insurance Risk Management organization (CBC) functions as the Middle Office. The Middle Office is responsible for performing analysis and monitoring of financial risk and reporting risk measurements to the CRO and the ROC. The Middle Office provides credit analysis and approval of proposed and existing counterparties and quarterly risk updates to the ROC.

G. **Back Office**: Accounting & Reporting (FRT), Contract Administration (PTC), and Customer Support Services (KS) organizations function as the Back Office, which includes financial accounting and reporting, treasury and cash management, external audit coordination, contract administration and billing, deal confirmation and after-the-fact settlement for Energy Commodity-Related Transactions.

H. **Internal Audit**: Coordinates with the ROC to perform periodic risk-based audits, assessments, and tests of the risk management framework defined by this policy.

I. **Office of General Counsel**: Reviews Energy Commodity-Related Transaction documents as they are being developed, amended, and negotiated including master/enabling agreements, credit enhancement agreements, and non-Trading Floor Energy Commodity-Related Transactions.

8. **Standards & Procedures**

A. Transaction Approval Process

1. CRO Approval of De Minimis Energy Commodity-Related Transactions

   a) The CRO has the authority to approve any proposed Energy Commodity-Related Transaction that is not an Approved Transaction if the proposed transaction meets all of the following criteria:

      i) The Term is one year or less;

      ii) The notional volume is no more than 50 average annual megawatts over the Term and is no more than 74,500 megawatt hours in any one month; and

      iii) The notional value is $10 million or less. If a proposed transaction is any kind of energy neutral exchange, the total notional value of both sides of the transaction, what BPA is delivering and what BPA is receiving, is $20 million or less. If a proposed transaction will be priced to an index, the notional value will be based on the forward price associated with the transaction at the time of the CRO Review.

   b) The CRO must notify the ROC via e-mail within three business days following the time the CRO determines to grant or deny approval of a proposed transaction.

   c) If the CRO does not approve the transaction, the transaction will be escalated to the Risk Assessment Team for review.
2. Risk Assessment Team Approval of a Proposed Energy Commodity-Related Transaction

The Front Office may submit a proposed transaction for approval by the Risk Assessment Team. Prior to submitting a proposed transaction to the Risk Assessment Team for review, the Front Office will, with support from Middle and Back Office, complete the Proposed Transaction Information Template (defined in Appendix C) and submit to the Risk Assessment Team Chair.

The decision of the Risk Assessment Team will be communicated by the Chair of the Risk Assessment Team immediately to the ROC via e-mail. If the Risk Assessment Team does not approve the transaction unanimously, the Chair will expeditiously bring the decision to the ROC for review.

3. ROC and ACGC Approval of a Proposed Energy Commodity-Related Transaction

The Front Office may submit the proposed transaction for approval by the ROC, and the ROC will convene a meeting as soon as possible to review the proposed transaction as documented in the Proposed Transaction Information Template (Appendix C). All ROC votes will be documented and communicated to the Front Office via e-mail within three business days.

If the ROC does not approve the proposed transaction, then the Front Office may refer the proposed transaction to the ACGC for review and approval and the ACGC will convene a meeting as soon as possible to review the proposed transaction as documented in the Proposed Transaction Information Template (Appendix C). All ACGC votes will be documented and communicated to the ROC via e-mail within three business days by the CRO.

B. Changes to Policy and Appendices

Policy changes will be reviewed by the ROC and the ACGC prior to submission into the BPA policy approval process. The CRO has the authority to approve de minimis changes to the policy, with timely notice provided to the ROC and the ACGC. Any changes to the Appendices will be approved by the ROC and timely notice provided to the ACGC.

9. Performance & Monitoring

CBC is responsible for independently monitoring compliance with this policy and assessing the effectiveness of controls over Market, Credit, and Operational Risk as it pertains to Energy Commodity-Related Transactions executed by the Front Office.

Compliance with this policy is monitored and tested through:

A. A-123 internal controls:
   1. 1.A.4.a Order – Trading Floor
   2. 1.A.4.b Order – Mark-to-Market
B. Compliance Manual, which defines regulatory requirements (i.e., Commodities Futures Trading Commission (CFTC), Federal Energy Regulatory Commission)
C. Trading Floor Rules of Engagement (RoE)

10. Authorities & References

A. ACGC Charter
B. ROC Charter
C. Risk Assessment Team Charter
D. Delegations of Authority
E. Appendix A
F. Appendix B
G. Appendix C

11. Review

The Chief Risk Officer will review this policy as necessary to ensure it remains relevant. It is also subject to sunset review in accordance with BPA Policy 120-1 BPA Policy on Policy Management.

12. Revision History

<table>
<thead>
<tr>
<th>Version Number</th>
<th>Issue Date</th>
<th>Brief Description of Change or Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>8/31/2015</td>
<td>Initial policy</td>
</tr>
<tr>
<td>2.0</td>
<td>4/30/2019</td>
<td>Major revision of previous policy</td>
</tr>
<tr>
<td>2.1</td>
<td>6/23/2021</td>
<td>Updated Appendix B to include statutory limitation to tenor limits and refer to current operating procedures for compliance with notification requirements</td>
</tr>
</tbody>
</table>
Appendix A: Approved Transactions

A. **Within Month Energy Commodity-Related Transactions**

An Energy Commodity-Related transaction that is a within month transaction is an Approved Transaction.

B. **Financial Power Transactions**

A Financial Power Transaction is an Approved Transaction provided it is executed through 1) an agreement between BPA and an FCM to transact futures or options cleared through a DCO or other exchange that is subject to the Commodity Exchange Act (CEA), or 2) an uncleared agreement approved by the Chief Financial Officer (CFO) between BPA and a counterparty executed using an ISDA or other similarly allowed master agreement, with terms and conditions that meet the requirements of the Commercial End-User Exception set forth in the CEA, as amended by the Dodd-Frank Act. Any other agreements are not Approved Transactions.

**Margin Limit:**

1. If at any time the 10-day Margin-at-Risk (MaR) calculation from the Margin Requirements model indicates that there is a 5% probability or greater that the aggregate margin balance will exceed $50 million within the next 10 days, the trading floor may not execute any additional Financial Power Transactions that would have the effect of increasing the aggregate margin outstanding.

2. When the aggregate margin outstanding reaches $50 million, the CFO, CRO, and Senior Vice President of PS will meet and decide on an appropriate course of action. Such decision will be communicated to the ROC.

   a. Should the appropriate course of action result in the aggregate margin outstanding to continue above the $50 million threshold, the CFO, CRO, and Senior Vice President of PS, will meet at least weekly to review and update the approved course of action. Such updates will be communicated to the ROC.

3. The CFO and the ROC must approve any change to the analytical methods used to determine cash margin exposure or any limit set forth in this Appendix dealing with Financial Power Transactions.

**Volume Limit:**

A 500 MW HLH and 500 MW LLH net position limit will apply to all Financial Power Transactions beyond the prompt two quarters. For example, on July 1st of a given year, the position limits would apply to Financial Power Transactions in the quarter beginning on April 1st of the following year.
C. **Inventory Position Limits**

1. For the purpose of applying position limits to a potential Energy Commodity-Related Transaction, BPA’s inventory and capacity positions are derived from the current inventory study. The current inventory study is prepared by the Operations Planning organization and is used for a transaction whose Term is within the current and/or Prompt fiscal years. For transactions with Terms beyond the prompt fiscal year, the most recent inventory position report produced by the Long-Term Power Planning group will be used. The Operations Planning and Long-Term Power Planning groups shall immediately inform the Transacting Credit Insurance Risk Manager or his/her designee of any material changes to inventory and capacity model methodologies.

2. **Monthly Energy Position Limits**
   a. A potential Physical Option or other Energy Commodity-Related Transaction involving the physical delivery of power, or Financial Power Transaction, that is a sale and would cause the combined financial and physical Inventory level at the 50th percentile to be less than 0 MW flat is not an Approved Transaction.
   b. A potential Physical Option or other Energy Commodity-Related Transaction involving the physical delivery of power, or Financial Power Transaction, that is a purchase and would cause the combined financial and physical Inventory level at the 20th percentile to be greater than 0 MW flat is not an Approved Transaction.

3. **Monthly Capacity Position Limits**
   a. A potential Physical Option or other Energy Commodity-Related Transaction involving the physical delivery of power that is a sale and would cause BPA’s capacity position to be deficit is not an Approved Transaction.
   b. A potential Financial Power Transaction that is a sale:
      i. That would cause BPA’s capacity position to be deficit in excess of 500 MW is not an Approved Transaction.
      ii. That would cause BPA’s capacity position to be between zero and 500 MW deficit and the corresponding inventory forecasts at the 50th percentile to be less than 1000 MW HLH or 500 MW LLH is not an Approved Transaction.

4. **Position Calculation Methodology**

   For the purpose of applying position limits to potential transactions:
   a. All Energy Commodity-Related Transactions involving the physical delivery of power will be included in Inventory and capacity studies.
b. Inventory and capacity positions will be adjusted to appropriately reflect any Financial Power Transactions and Physical Options involving the physical delivery of power.

5. Position Limit Exception

PS may go beyond the above limits if there is a set of specific strategies that involve Load Factoring and that ensure compliance with the Position Limits within a reasonable timeframe. Such strategies will be discussed in the weekly Strategy meeting and documented. CBC will ensure that the strategies are executed for the purposes of Load Factoring and are justified by expectations of changes in hydro or market conditions. If CBC is concerned with the level of risk involved or the execution, they will raise it to the Risk Assessment Team.

D. Forward Transaction Tenor Limit

A potential Energy Commodity-Related Transaction and Financial Power Transactions with a Tenor extending beyond current year plus three calendar years is not an Approved Transaction.

E. Transaction Points of Delivery

1. A potential Energy Commodity-Related Transaction with a point of receipt or delivery that is not in the Western Electricity Coordinating Council (WECC) interconnection is not an Approved Transaction.

2. A potential Energy Commodity-Related Transaction with a point of receipt or delivery that is not accessible with existing transmission rights or transmission rights BPA expects to be available for purchase is not an Approved Transaction.

F. Transaction Pricing

A proposed Energy Commodity-Related Transaction that is index priced is not an Approved Transaction if:

1. The reference index is not published by Platts, ICE, PowerDex, or CAISO, or their respective successors, or

2. The payments thereunder are not determined by adding a constant value, or applying a constant percentage, to the reference index.

G. Transaction Types and Attributes

A potential Financial Power Transaction or other Energy Commodity-Related Transaction that includes provisions relating to BPA’s credit rating or other indicator of BPA’s creditworthiness is not an Approved Transaction.
If a proposed Financial Power Transaction or other Energy Commodity-Related Transaction does not have characteristics consistent with one of the transaction types below, then it is not an Approved Transaction.

1. Power Transactions
   a) Financial Power Transactions (excludes Congestion Revenue Rights)
   b) Financial Options if the underlying Financial Power Transaction has a HLH, LLH or flat monthly delivery pattern
   c) Physical forward power transactions
   d) Physical Options
   e) Spin, non-spin, and regulation reserves
   f) Transferred Frequency Response Reserves (TFRRs) sales for balance of compliance year, current compliance year or Prompt compliance year (given TO Organization or its successor indicates inventory is available for resale)
   g) Renewable Energy Certificates sales that are defined as 80 percent of average forecast Tier 1 renewable-generation for any particular time period, as projected by REC Allocation Spreadsheet (RAS). Tier 1 resources providing Renewable Energy Certificates are defined by Exhibit H of the Regional Dialogue contracts.

2. Transmission Transactions
   a) Firm and non-firm transmission purchases that support power sales
   b) Transmission Resale (Reassignment)
   c) Transmission Financial Losses

H. Non-treaty storage agreements or water agreements for commercial purposes

The Power and Operation Planning organization is authorized to execute Non Treaty Storage Agreements or Water Agreements for Commercial Purposes with a duration of 18 months or less without ROC review. The Power and Operation Planning organization will notify the Middle Office after execution of any such agreement.
Appendix B: Credit Ratings and Limits

The below credit ratings and limits have been established to address the Credit Risk related to Energy Commodity-Related Transactions. Credit limits establishes the maximum extension of unsecured credit based on the internal rating of the counterparty or its guarantor. No Energy Commodity-Related Transaction may be executed if it would cause the counterparty’s credit limit to be exceeded, unless a credit limit exception is obtained.

The following limits apply to Western System Power Pool Energy Commodity-Related Transactions:

### Non-Financial Institutions

<table>
<thead>
<tr>
<th>Internal Rating</th>
<th>Tenor Limit</th>
<th>Maximum Unsecured Credit Limit</th>
<th>Volumetric Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>60 months</td>
<td>$60 million</td>
<td>200aMW</td>
</tr>
<tr>
<td>AA+</td>
<td>60 months</td>
<td>$50 million</td>
<td>150aMW</td>
</tr>
<tr>
<td>AA</td>
<td>60 months</td>
<td>$40 million</td>
<td>150aMW</td>
</tr>
<tr>
<td>AA-</td>
<td>60 months</td>
<td>$35 million</td>
<td>100aMW</td>
</tr>
<tr>
<td>A+</td>
<td>48 months</td>
<td>$30 million</td>
<td>100aMW</td>
</tr>
<tr>
<td>A</td>
<td>36 months</td>
<td>$25 million</td>
<td>75aMW</td>
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<tr>
<td>A-</td>
<td>24 months</td>
<td>$20 million</td>
<td>75aMW</td>
</tr>
<tr>
<td>BBB+</td>
<td>12 months</td>
<td>$15 million</td>
<td>N/A</td>
</tr>
<tr>
<td>BBB</td>
<td>9 months</td>
<td>$10 million</td>
<td>N/A</td>
</tr>
<tr>
<td>BBB-</td>
<td>6 months</td>
<td>$5 million</td>
<td>N/A</td>
</tr>
<tr>
<td>BB+ or lower</td>
<td>Within Month Purchases Only</td>
<td>$0</td>
<td>N/A</td>
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### Financial Institutions

<table>
<thead>
<tr>
<th>Internal Rating</th>
<th>Tenor Limit</th>
<th>Maximum Unsecured Credit Limit</th>
<th>Volumetric Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA+ or higher</td>
<td>60 months</td>
<td>$50 million</td>
<td>150aMW</td>
</tr>
<tr>
<td>AA</td>
<td>60 months</td>
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<tr>
<td>AA-</td>
<td>48 months</td>
<td>$30 million</td>
<td>100aMW</td>
</tr>
<tr>
<td>A+</td>
<td>36 months</td>
<td>$25 million</td>
<td>100aMW</td>
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<tr>
<td>A</td>
<td>36 months</td>
<td>$20 million</td>
<td>75aMW</td>
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<tr>
<td>A-</td>
<td>18 months</td>
<td>$15 million</td>
<td>50aMW</td>
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<tr>
<td>BBB+</td>
<td>12 months</td>
<td>$10 million</td>
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</table>
Volumetric Limits are for transactions that are greater than 12 months in duration, or extend beyond the 12th forward month. Volumetric limits are based on average annual megawatts.

**Additional credit considerations:**

A. Credit limits will be viewed on an aggregated basis for each group of affiliated counterparties.

B. Generally, the credit limit for any counterparty cannot exceed the lesser of 5 percent of tangible net worth or the maximum credit limit per their internal rating above.

C. Public Preference Customers are extended the higher of the credit limits or $4 million and a tenor limit that is the greater of 12 months or the amount specified by the internal rating above.

D. PS may not enter into an Energy Commodity-Related Transaction with a counterparty that is rated below investment grade unless the counterparty provides adequate credit enhancement that is cash equivalent as determined by the credit office (e.g., letter of credit, cash collateral), or a parental guarantee from a parent that is rated investment grade or better, in which case the credit extension will be 5 percent of tangible net worth of the parent or the maximum credit limit of the parent per the internal rating above. In any event, the credit limit may not exceed the amount of any applicable credit enhancement. Credit enhancement agreements must be approved by the General Counsel's Office and the CBC. To the extent a credit enhancement agreement requires bilateral margining requirement, the margining thresholds must be approved by the ROC and the CFO.

E. Tenor limits for extra-regional counterparties are subject to the recall provision requirement of the Regional Preference Act of 1964 which allows BPA to recall energy sales to customers outside of the Pacific Northwest with a 60-day notice. For compliance with statute notification requirements, refer to the Rules of Engagement (RoE) manual.

**ISDA Margin Thresholds**

Energy Commodity-Related Transactions executed under an ISDA containing the following Margin Trigger Amounts are considered an Approved Transaction:

<table>
<thead>
<tr>
<th>Ratings by Moody’s</th>
<th>Ratings by S&amp;P</th>
<th>Ratings by Fitch</th>
<th>Trigger Amount</th>
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</thead>
<tbody>
<tr>
<td>Aaa</td>
<td>AAA</td>
<td>AAA</td>
<td>$40 million</td>
</tr>
<tr>
<td>Aa1, Aa2, Aa3</td>
<td>AA+, AA, AA-</td>
<td>AA+, AA, AA-</td>
<td>$30 million</td>
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</table>
Credit Limit Exceptions
Credit limit exceptions may be granted by CBC under the Transacting Credit Insurance Risk Manager Approval authority described below. If an exception is not granted, the request must go through the applicable approval process outlined in the policy under Standards & Procedures.

A. De minimis Credit and Tenor Exceptions:
   1. The Front Office may request that CBC temporarily increase a counterparty’s total credit limit to an amount up to 120 percent of the limit established under the above provisions of this Appendix B, but in no event shall the amount of the increase in the credit limit exceed $4 million. Front Office may, in addition, request that CBC grant a three month extension of counterparty’s tenor limit of up to an additional three months. All exceptions must be requested by the Trading Floor manager or designee and must be documented.
   2. Exceptions granted under this section shall be approved by two members of CBC with at least one being a lead/senior analyst or the Manager of CBC. CBC will inform the Trading Floor manager or designee and Risk Assessment Team of any decision made under the process within two business days.

B. Emergency Conditions:
   1. In the case of Emergency Conditions, credit limits may be temporarily suspended or relaxed to allow the Front Office to acquire the power and related flexibility to assure safe and effective operations during, and to resolve, the Emergency Condition(s).
   2. Energy Commodity-Related Transactions entered into to respond to Emergency Conditions must be documented in writing by the Trading Floor Manager or Transacting Credit Insurance Risk Manager and reported to the Risk Assessment Team.

C. Adverse Market or Credit Conditions
   1. The CRO or Transacting Credit Insurance Risk Manager may at his or her sole discretion temporarily decrease a counterparty’s credit limit in the event of adverse changes to market and/or credit conditions. The decrease will be documented and reported to the Risk Assessment Team.

D. Temporary increases:

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<td>231-2</td>
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<td>Author</td>
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<td>Date</td>
</tr>
<tr>
<td>L. Racicot</td>
<td>EVP CARE</td>
<td>4/30/2019</td>
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<tr>
<th>Baa1, Baa2, Baa3</th>
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1. If the Front Office believes that the exceptions outlined above are inadequate to implement the strategies of PS, PS may request from the Risk Assessment Team additional exceptions to the Credit Risk Limits in Section D above. PS will be responsible for preparing documentation supporting the request. The Middle Office will be responsible for performing a credit assessment to accompany the request.
Appendix C: Proposed Transaction Information Template

1. Brief description of why proposed transaction is not an Approved Transaction
2. Identification of the risks associated with the transaction and any mitigation
3. Impact on inventory/RoE/Position limits
4. Brief description of any implementation issues, including but not limited to:
   a. Are there any issues anticipated in properly capturing transaction in the Trade Management System?
   b. Will this proposal go through the Implementation Team?
   c. Determination of how product will be modeled as an obligation in affected PG inventory studies
5. Counterparty:
   i. Name:
   ii. Counterparty Credit Rating:
   iii. Counterparty’s Total Exposure:
   iv. Counterparty’s Total Credit Limit:
6. Type of Enabling Agreement:
   i. Can the deal be executed under an existing umbrella agreement?
7. Delivery Period:
8. Delivery Shape/Pattern:
9. Buy/Sell:
10. Quantity:
11. POR/POD:
12. Pricing Information:
13. Billing terms (standard vs. non-standard):
14. Scheduling terms and flexibility:
15. If transaction is an option, provide additional information related to:
   i. Option premium
   ii. Strike price/Index
   iii. Call time (e.g., T-120)
   iv. Billing terms for the option premium
   v. Description of any changes to inventory assessment needed
16. Value proposition for BPA:
17. Value proposition for CP:
18. Other Information:

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