

BPA Policy 231-5

Interest Rate Hedging

Compliance, Audit and Risk

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1.1 Purpose & Background

To establish the Bonneville Power Administration's (BPA's) policy for, and provide general procedural direction regarding, the use, procurement, and execution of interest rate hedging, including the contractual exchange of different fixed and variable rate payment streams through interest rate swap agreements. Failure to adequately understand or manage risks associated with interest rate hedging transactions, such as market, credit, basis, tax, and termination risk variables may mature into undesirable outcomes that could adversely impact BPA's financial performance.

1.2 Policy Owner

The Executive Vice President of Compliance, Audit and Risk working through the Chief Risk Officer or his/her designee has overall responsibility for monitoring, reporting, deploying, evaluating, and proposing revisions to this policy.

1.3 Applicability

This policy applies to BPA's Front, Middle, and Back Office staff members and to interest rate hedging activities for federal or non-federal debt.

1.4 Terms & Definitions

- A. **Audit, Compliance & Governance Committee (ACGC):** The ACGC is a senior management forum to obtain assurance about effective internal control and compliance over BPA objectives. This committee is responsible for establishing risk tolerance levels for BPA commercial transacting risks and provides guidance to the ROC in the development of relevant risk programs and policies.
- B. **Authority:** The basis for BPA's authority to enter into swap transactions rests in BPA's enabling legislation – the Project Act, the Transmission Act and the Regional Act.
- C. **Back Office:** The derivative accounting function in the Finance office, Accounting and Reporting organization, responsible for accounting and reporting on hedging and derivative transactions as described below.
- D. **Basis Risk:** The risk that the value of a financial product purchased to hedge a particular price risk, will not move in a manner corresponding to the change in price of the commodity involved in the position to be hedged.
- E. **Chief Financial Officer (CFO):** The individual in charge of the Finance office, and who by delegation of the Administrator may negotiate, direct, organize, execute, amend, interpret, and administer any contracts and other agreements including International Swap Dealers Association (ISDA) Master Agreements and related ISDA supplements, confirmations, and documentation necessary to hedge BPA interest rate risk.

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- F. **Chief Risk Officer (CRO):** The individual who oversees the BPA’s central risk management organization, which contains two main units: (1) Enterprise Risk; and, (2) Transacting and Credit Risk.
- G. **Finance:** The organization that provides financial planning, accounting, and reporting for the Federal Columbia River Power System (FCRPS) and BPA. Finance provides economic and analytical support for rate case and regulatory proceedings, and coordinates and executes all Treasury and non-Federal financing programs. Finance has primary responsibility for relationships with Federal and non-Federal banking communities, rating agencies, investors, and others in the financial community.
- H. **Finance Management Committee (FMC) (or its successor):** The BPA senior management group having responsibility for creating and sustaining accomplishment of strategic financial objectives and initiatives that support the agency’s business strategies and optimize financial performance for the entire BPA enterprise.
- I. **Front Office:** The organization(s) that is/are responsible for developing, negotiating, and pricing financial hedging products.
- J. **Hedge or Economic Hedge:** A reduction in BPA’s exposure to interest rate risk and revenue uncertainty relative to a position BPA has or intends to take in the related market. An "economic hedge" for the purpose of this policy, is a derivative entered into by BPA to hedge a specific exposure, but which does not receive special hedge accounting under current derivative accounting guidance, as either the hedge relationship does not qualify for hedge accounting under the criteria in that standard or an entity does not elect hedge accounting (for example, if the entity does not believe the cost of designating the hedge and tracking effectiveness is worth the benefit of receiving hedge accounting).
- K. **Hedge Transaction:** A contract entered into pursuant to this policy to hedge an interest rate risk.
- L. **Interest Rate Swap:** An agreement to exchange interest rate cash flows, calculated on a notional principal amount, at specified intervals (payment dates) during the life of the agreement. Each party’s payment obligation is computed using a different interest rate. In an interest rate swap, the notional principal is never exchanged. Although there are no standardized swaps, a plain vanilla fixed to variable interest rate swap typically refers to a generic interest rate swap in which one party pays a fixed rate and one party pays a floating rate based on a common index (usually LIBOR or SIFMA).
- M. **ISDA Master Agreement:** The International Swaps and Derivatives Association (ISDA), Inc. International Swaps and Derivatives Association is the global trade association for the derivatives industry. The ISDA Master Agreement is the basic governing document that serves as a framework for interest rate swap, swap enhancement, and derivative transactions between two counterparties. ISDA Master Agreements have periodic updates and thus have different vintages, e.g. 1992, 1997, 2002, etc., any of which may

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be agreed to by the related parties as the governing ISDA Master Agreement for a transaction with BPA.

- N. **MLIBOR:** The London Interbank Offered Rate. LIBOR is the rate of interest in which banks borrow funds from other banks in the London interbank market. It is a commonly used benchmark for interest rate transactions ranging from one month to one year.
- O. **Mark-to-Market:** A given time, the present value calculation of the financial instrument (like an interest rate swap) based on then-current market rates or prices of the underlying indices, assuming the instrument is held to maturity.
- P. **Middle Office:** The BPA group responsible for analyzing the transactions executed by the Front Office to determine the transactions' market value, assessing and implementing credit risk control, and determining revenue risk and performance. The Risk group serves as a Middle Office function.
- Q. **Non-Federal Debt:** Debt obligations of third parties that are secured by a payment or related obligation of BPA, in particular where BPA's promise to make payments for the related projects is not conditioned on the success of the related project or projects. Examples include the Net Billed Project debt issued by Energy Northwest with respect to its three BPA-backed nuclear projects, the Cowlitz Falls Hydro Project debt issued by Lewis County Public Utility District (PUD), and the Northwest Infrastructure Financing Corporation (NIFC) (and entities) bank debt and bonds issued or incurred for transmission projects owned by NIFC (or entities) and leased to BPA under lease purchase agreements.
- R. **Risk:** The effect of uncertainty on objectives. An effect is a deviation from the expected – positive and/or negative. Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence.
- S. **Risk Oversight Committee (ROC):** The ROC is a senior management level committee that has responsibility for ensuring that risk management monitoring systems and limits are in place to govern commercial transacting risks across BPA, within the parameters established by the ACGC.
- T. **Securities Industry and Financial Markets Association (SIFMA) Municipal Swap Index:** SIFMA is produced by Municipal Market Data (MMD), and is a 7-day high-grade market index comprised of tax-exempt variable rate demand obligations (VRDOs) from MMD's database. (<http://www.sifma.org>)
- U. **Transacting and Credit Risk Group or Risk Department:** The organization in BPA that is responsible for BPA's credit, control, and quantitative risk mitigation strategies and treatments; it is located within the office of the Chief Risk Officer.
- V. **Treasury Group:** For the purpose of this policy, both the Debt and Investment Management work group (or its successor) and the Cash and Treasury Management work

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group (or its successor) within the Finance office, responsible for the development of various debt and investment management policies and strategies in support of BPA’s strategic business initiatives. The Debt and Investment Management organization also assures sustainable access to capital. It develops and executes non-federal financing alternatives and manages the non-federal debt portfolio. Organization activities include providing advice and consultation to managers in the development of programs requiring financing and providing strategic debt and investment management.

W. Variable Rate Demand Obligation (VRDO): A debt security which bears interest at a floating (variable) rate adjusted at specified intervals (such as daily, weekly, or monthly) and can be redeemed at BPA’s option when the rate changes. VRDO may be called low floater, variable rate demand note, or variable rate demand bond.

1.5 Policy

This policy balances the objectives of BPA’s interest rate hedging activities: reducing cost of capital; minimizing interest rate volatility; and gaining efficiency and flexibility to restructure debt by appropriately developing, initiating, monitoring, and controlling interest rate hedging products.

To achieve the objectives of interest rate hedging activities, this policy, concomitantly with the Borrowing and Investment Policy(s), establishes a risk management process through the use of organizational structure, concentration limits, information controls, and provision for procedures. Nothing in this policy forbids the use of interest rate swaps or similar transactions to create Synthetic Variable Rate or Synthetic Fixed Rate Debt.

Interest rate hedging is accomplished in a manner consistent with the following:

- Activities are consistent with documented delegations of authority,
- Activities are consistent with and supported by statutory powers,
- Resulting risk levels are within BPA’s broad risk tolerances established by the ACGC,
- Activities are undertaken to meet the objectives outlined by the Finance Management Committee (FMC) and Chief Financial Officer (CFO).
- Interest rate hedging transactions are executed by the Treasury Group or its successors in consultation with the Risk Department, as appropriate.

1.6 Policy Exceptions

None.

1.7 Responsibilities

BPA has chosen to implement a risk management organizational structure that embraces the traditional roles of a Front, Middle, and Back Office. This entire business process, as

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performed by the Front, Middle and Back Offices, is referred to as a risk management process.

A. Front Office:

1. **Chief Financial Officer (CFO):** Responsible for oversight and strategy.
 - a. Negotiates, directs, organizes, executes, amends, interprets and administers any contracts or agreements necessary to hedge interest rate risk.
 - b. Develops interest rate and debt management strategies.
2. **Treasury Staff:** Implements and oversees interest rate strategy, compliance with policy, reporting and operations.
 - a. Analyzes and recommends strategies and products to manage interest rate risk.
 - b. Executes interest rate activities and products within approved policies and procedures.
 - c. Forecasts and reports results.
 - d. Develops with CFO and FMC interest rate and debt management strategies.
 - e. Initiates interest rate hedging transactions in consultation with the transacting risk staff, legal and derivative accounting.

B. Middle Office:

1. **Transacting Risk Staff:** Develops and administers policy.
 - a. Performs an independent assessment and evaluation of market and operations risks associated with interest rate derivative products.
 - b. Screens and processes all counterparties for credit approval.
 - c. Collaborates in the review and processing of master and/or collateral agreements associated with hedging.
2. **Derivative Accounting:** Responsible for accounting and financial reporting.
 - a. Records and reports interest rate risk derivative transactions' mark-to-market valuations from two separate sources on a monthly basis (currently PFM and Bloomberg).

C. The Back Office:

1. **Derivative Accounting:** Responsible for accounting and financial reporting.
 - a. Coordinates and prepares monthly settlement transactions resulting from interest rate risk derivative transactions, as required.
 - b. Records interest rate cash flow transactions.

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- c. Coordinates and prepares accounting and financial reporting disclosure requirements.
- 2. **Legal:** Responsible for compliance.
 - a. Gives advice on legal matters and strategy with regards to contracts and other agreements.
 - b. Negotiates ISDA agreements.
- 3. **Internal Audit:** Responsible for compliance and oversight.
 - a. Reviews compliance with interest rate policy.

D. Management Committee

- 1. **ACGC:** Responsible for risk oversight, governance and strategy.
 - a. Oversees and approves this and other risk management policies.
- 2. **Risk Oversight Committee (ROC):** Responsible for risk oversight, policy approval and administration.
 - a. Responsible for ensuring that risk management monitoring systems and limits are in place to govern commercial transacting risks across BPA, within the parameters established by the ACGC.
- 3. **Finance Management Committee (FMC):** Responsible for financial strategy development.
 - a. Provides strategic direction and oversees the accomplishment of BPA’s financial objectives and supporting systems and processes. Integrates financial policies, standards, systems, processes, data and resource management to optimize financial performance for the entire BPA enterprise to meet its financial objectives.

1.8 Standards & Procedures

A. Managing interest rate hedging transaction risk

- 1. **Financial instruments principles:**
 - a. BPA is expressly forbidden from taking speculative positions or to trade interest rates or similar financial derivative instruments without any underlying debt or proposed debt for pure financial gain.
 - b. Interest rate risk management occurs only in the context of hedging underlying financial exposures associated with interest rate uncertainty or variability.
 - c. Each hedging transaction addresses the risk inherent in a given position. Care is taken to identify the most appropriate financial product to mitigate a given price risk.

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- d. BPA evaluates all apparent risks, including those identified below in section E, Transacting and Position Limit Structure, prior to entering into an interest rate hedge or interest rate hedging transaction. At all times thereafter BPA monitors and manages related risks so that each interest rate hedging transaction or strategy will not in itself add unacceptable risk to BPA.
- e. In determining whether to enter into an interest rate hedge or series of hedging transactions to effectuate a strategy, every effort is made to use industry best practices and techniques to evaluate the efficiency of the hedge strategy and to be consistent with Generally Accepted Accounting Principles (GAAP) as used by BPA in connection with the financial statements of the Federal Columbia River Power System (FCRPS).
- f. BPA avoids having the notional interest rate hedge(s) exceed the amount of applicable VRDO debt outstanding.
- g. Interest rate hedges outlined below in section C, Authorized Hedging Instruments for Interest Rate Risk Management, seek to achieve one or more of the following goals:
 - (i) Reduce borrowing costs at the time of related debt issuance. BPA may do this by creating synthetically fixed or variable rate debt.
 - (ii) Hedge against adverse interest rate movement prior to related debt issuance. BPA anticipates a future borrowing for capital purposes and elects to secure interest rate conditions deemed favorable to BPA prior to that borrowing.
- h. At any time, should there be a material adverse change in either the financial derivative marketplace, regulations governing over-the-counter derivatives such as interest rate hedges, or significant macro or micro economic deterioration, the Risk group brings such event to the attention of the ROC, and, if directed by the CRO, to the attention of the ACGC, to determine if the contents of this policy should be amended.

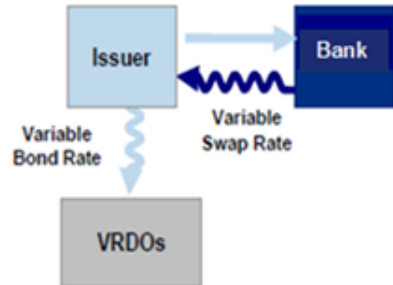
B. Standard contracts: BPA’s preference is to maximize the use of a standard master agreement for all over-the-counter interest rate hedging products — the model 2002 SWAP Master Agreement published by the International Swaps and Derivatives Association (ISDA). This agreement may be modified by means of negotiated annexes, as appropriate to meet the needs of BPA and counterparties.

C. Authorized hedging instruments for interest rate risk management: The following general types of agreements are suitable instruments for hedging interest rates:

D. Forward Floating-to-Fixed Swaps (Taxable or Tax-Exempt): The Issuer receives a variable rate (% of LIBOR or SIFMA) and pays a fixed rate starting at a determined time in the future to lock-in savings on a future refunding or to hedge fixed borrowing rates for a scheduled new money issuance. Upon the swap becoming effective, the

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Issuer could leave the swap outstanding and issue variable rate bonds for a synthetic fixed cost of funds or could cash settle the swap and issue fixed rate bonds. For cash settling, the Issuer will receive a payment if swap rates have increased and make a payment if swap rates have decreased. For example:



1. **Fixed-to-floating swaps (taxable or tax-exempt):** A fixed-to-floating swap is a contract in which the Issuer receives a fixed rate and pays a floating rate based on a variable rate index (SIFMA or LIBOR). A fixed-to floating swap can be done in conjunction with a fixed rate bond issue to achieve a synthetic cost of funds equal to the floating index plus a fixed spread between the bond coupon and the swap rate.
2. **Interest rate cap:** Interest rate cap is defined as an option to purchase a specified ceiling strike rate for the variable interest rate, where the seller pays the purchaser when the interest rate rises above the ceiling strike price.
3. **Interest rate floor:** Interest rate floor is defined as an option to purchase a specified floor strike rate for the variable interest rate, where the seller pays the purchaser when the interest rate falls below the floor.
4. **Forward Rate Agreement (FRA):** A forward contract in which one party pays a fixed interest rate and receives a floating interest rate equal to a reference rate or the underlying rate. The payments are calculated over a notional amount over a certain period, netted, and paid on the effective date. The reference rate is fixed one or two days before the effective date. For example:

$$\text{Payment} = \text{Notional Amount} * \left(\frac{(\text{Reference Rate} - \text{Fixed Rate}) * \alpha}{1 + \text{Reference Rate} * \alpha} \right)$$

- The Fixed Rate is the rate at which the contract is agreed.
- The Reference Rate is LIBOR.
- α is the day count fraction, the portion of a year over which the rates are calculated, using the day count convention used in the money markets. The number of days divided by 360.
- The Fixed Rate and Reference Rate are rates that should accrue over a period starting on the effective date, and then paid at the end of the period (termination date).

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5. **Interest rate lock:** An Issuer can hedge the financing cost on interest rate sensitive, fixed rate issuance by entering into a cash-settled rate lock based on SIFMA, LIBOR, MMD or Treasuries. Settlement payment based upon movement in interest rates — the Issuer will receive a payment if rates have increased and make a payment if rates have decreased. The settlement payment is similar to that on a forward floating-to-fixed swap, but unlike a forward swap, a rate lock requires a mandatory cash settlement.
6. **Other transactions:** Other interest rate hedging transactions may be authorized, upon review by ROC.

D. Qualified counterparties

1. **Counterparty risk:** In order to diversify counterparty risk in interest rate hedging transactions, BPA seeks to use multiple counterparties.
2. **Creditworthiness threshold:** A counterparty is deemed qualified to transact with BPA in interest rate hedging transactions if and so long as:
 - a. The counterparty has demonstrated experience in successfully executing interest rate exchange contracts with other municipal, state, or federal entities.
 - b. And either,
 - (i) Its lowest credit rating among Standard & Poor’s, Moody’s, and Fitch is not lower than A/A2; or,
 - (ii) Its payments pursuant to the related contract(s) are unconditionally guaranteed by an entity with credit ratings that satisfy the criteria set forth in the subparagraph above (D.2.b.(i)).
3. **Change in counterparty qualification:** If, after an interest rate hedging transaction is entered into between BPA and a counterparty, the counterparty no longer meets the standards provided in section D.2. (b) (ii) above, the counterparty shall cease to be a qualified counterparty for future interest rate hedging transactions until such time as the counterparty meets the standards provided in section D.2. above.
4. **Exception for hedge transactions predating the effective date of this policy:** Notwithstanding, the provisions of section D -- Qualified Counterparties, interest rate hedge transactions in effect at the time of the effective date of this policy need not be modified unless the CFO decides to effect an Optional Termination.

E. Transacting and position limit structure:

1. The Treasury Group is authorized to execute hedging products consistent with an approved limit structure without ROC review. The Middle Office will verify that any expected transaction (with the exception in section E.3, Modifications) results in an overall portfolio that is within the limit structure.

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In any case where there is lack of absolute clarity as to whether a contemplated transaction is consistent with the limit structure, the Debt and Investment Manager should consult with the Transacting and Credit Risk Manager. If the Transacting and Credit Risk Manager and Debt and Investment Manager cannot reach agreement that the contemplated transaction keeps the hedging position within the limit structure, then the issue will be referred to the CFO and the CRO. If they fail to reach agreement then the matter will be referred to the ROC.

2. The ROC shall review and approve all interest rate hedging transactions not consistent with a limit structure that has not been approved by the ROC and reviewed by the ACGC, unless the transaction falls within section E.3, Modifications, below.
3. **Modifications:** The ROC need not review and approve proposed modifications to interest rate hedging positions unless the Treasury Group and the Middle Office both determine that the proposed modification is significant enough for ROC review. If there is an impasse between the Treasury Group and the Middle Office regarding whether a proposed modification warrants ROC review, the issue will be forwarded to the CRO and CFO for a final decision, which may include referral to the ROC.
4. All hedging transactions considered by the Treasury Group shall consider the following risks at a minimum, and whether the hedge results in a position beyond the tolerances established in the limit structure established by the ACGC.
 - a. **Amortization risk:** The potential cost to BPA of servicing debt or honoring swap payments resulting from a mismatch between bonds and the notional amount of swap outstanding.
 - b. **Basis risk:** The mismatch between actual variable rate interest expense and variable rate indices used to determine swap payments. The resulting mismatch between the actual bond rate and the swap interest rate could result in a financial loss to BPA. Basis risk may occur as a result of increased supply of tax-exempt bonds, deterioration of bond rating, or a reduction of federal income tax rates for corporations and individuals.
 - c. **Counterparty risk:** Counterparty risk is the risk that the swap counterparty will not perform pursuant to the contract's terms. Under a fix payer swap, for example, if the counterparty defaults, the issuer would be exposed to an unhedged variable rate bond position.
 - d. **Liquidity risk:** If a VRDO remarketing were to fail, the liquidity provider providing liquidity support to cover tenders would own the bonds at the bank rate, or BPA would have to purchase tendered bonds.
 - e. **Rollover risk:** The risk is that swap contract is not coterminous with the related bonds.

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- f. **Tax risk:** The risk created by potential tax events that could affect the actual variable interest rate which could cause a difference from expected results. All issuers of tax-exempt variable rate debt inherently accept risk stemming from changes in the marginal income tax rates. Decreases in the marginal income tax rates for individuals and corporations could result in tax exempt variable rates rising faster than taxable variable rates. This is a result of the tax code’s impact on the trading value of tax-exempt bonds. Percentage of LIBOR and certain SIFMA swaps also expose issuers to tax risk due to tax event triggers which can change the basis under the swap.
- g. **Termination risk:** The risk that the swap could be terminated as a result of any of several events, which may include a ratings trigger, bankruptcy filing, and payment default, by either party, default events defined in the bond indenture, or the market may be advantageous for BPA to voluntarily terminate the hedge.

F. Terminating an interest rate hedge:

- a. **Optional termination:** If the CFO, whether or not acting by and through the Treasury group determines (i) that it is advantageous to obtain a replacement swap, or, depending on market value, make or receive a termination payment (ii) that the interest rate hedge transaction runs counter to then-current strategies, or (iii) that the interest rate hedge transaction runs counter to this Policy or the Borrowing and Investment Policies, the CFO may exercise contract rights to terminate an interest hedge transaction early (Optional Termination). If the Middle Office determines that the resulting position would fall outside previously approved parameters, then the Treasury group will consult with the Middle Office concerning the analysis of the proposal to terminate prior to ROC review and approval. If the Middle Office determines that the end result would fall within previously approved parameters, then the transaction does not require ROC approval.

Mandatory termination: In the event an interest rate hedging transaction is mandatorily terminated as a result of a contractual termination (some contracts require termination in the event of a counterparty default or a rating trigger event) (Mandatory Termination), the Treasury group will inform the ROC within 60 days of the termination.

1.9 Performance & Monitoring

Policy Oversight: The ROC is responsible for ongoing review of this policy to ensure that the principles continue to provide adequate guidance, protection, and direction for BPA’s Interest Rate hedging transactions. Internal Audit Services conducts independent compliance reviews as requested by the ROC, or whenever deemed necessary by either Internal Audit, or the Administrator to assure that hedging transactions are being carried

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out in a manner consistent with this policy and industry best practices and to recommend appropriate changes to improve this policy.

1.10 Authorities & References

- A. Borrowing and Investment Policy(s)
- B. Risk Oversight Committee (ROC) Charter
- C. Audit, Compliance and Governance Committee (ACGC) Charter
- D. Finance Management Committee Charter
- E. Enterprise Risk Policy
- F. Executive VP of Compliance, Audit and Risk’s delegation of authority.
- G. CRO’s delegation of authority.
- H. CFO’s delegation of authority.

1.11 Review

Changes to policy and appendices: Policy change requests require review and approval by the ROC and the ACGC.

The person or organization sponsoring the policy change request must document the proposed change through an ADF and present the change to the ROC and ACGC. The person or organization sponsoring the policy change request and the CRO will determine the level of rigor that is needed for the justification that will be presented to the ROC and the ACGC. Such justification will conform to the standards of the ADF and any standards specified by the ROC and the ACGC. Each policy change request will contain the following information, as applicable: the language to be changed in the policy, the reason for the proposed change, a list of affected organizations, an assessment of the extent of the change upon operations and risk, and a timeframe for implementation.

Proposed amendments that are not substantive in nature, such as factual, typographical, formatting, or grammatical corrections, and changes to organizational titles of members may be approved by the CRO and do not require an ADF.

Stakeholder organizations within BPA that may be affected by the proposed policy change, including, at a minimum, affected Front Office organization(s), Risk Management, Contract Administration, Billing, Accounting, and General Counsel’s Office, will be provided an opportunity to review and comment on the draft ADF. Each stakeholder will report the results of this review to the person or organization sponsoring the policy change request and the CRO. If the modification will require new systems or additional custom reporting from Information Technology (IT), the person or organization sponsoring the Policy change request has the responsibility to coordinate with IT to ensure the change can be supported.

As part of its review, the CRO must assess whether all steps of this process have been satisfactorily performed, and whether the proposal is ready for ROC and ACGC review.

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This policy is scheduled for review in 2019 or earlier if the Charter for any authority cited above is revised.

1.12 Revision History

| Version | Issue Date | Description of Change |
|---------|------------|---|
| 2 | 09-30-2014 | Migration of content to new policy format. |
| 2.1 | 10/16/2017 | Administrative update. Document revision process updated to current standard. |

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