

# VALLEY ELECTRIC ASSOCIATION, INC.

## Corporate Policy #113

### HEDGE POLICY

Dated: **June 29, 2017**  
Supersedes Date: **November 30, 2012**  
Formerly: Policy #121

#### I. OBJECTIVE

The Valley Electric Association, Inc. ("VEA") Hedge Policy outlines the hedging policy that will guide disciplined hedging of forward power supply portfolio components. This Hedge Policy is designed to reduce member wholesale rate volatility and to maintain rates within desired tolerances. The primary purpose of this policy is to identify specific time and volume (as a % of total projected native load) criteria for procuring projected power supply portfolio components.

This policy largely employs a price-averaging strategy of declining percentage of power supply portfolio components held over forward time periods. This strategy protects VEA from potential adverse impacts that could result in either sudden significant price increases or decreases. The strategy also maintains some elements of procurement flexibility. For example, during times of extremely attractive market conditions, this policy allows for increasing the amount of forward energy hedged above the stated ranges with the concurrence of the Board of Directors ("Board"). A key component of the policy is a quarterly compliance report for the Board, which is outlined herein.

Although this document is primarily concerned with managing energy costs and risks, a limited amount of discussion on capacity adequacy and transmission risk based on similar principles is included. Appendix B includes a more comprehensive review of the objectives of this policy.

#### II. HEDGING POLICY CRITERIA

The hedging criteria identified within this policy address the primary power supply portfolio components that affect rates and reliability the most. Accordingly, the hedge criteria in the following sections represent the risk tolerance of VEA and identify the processes VEA will employ to manage these key energy supply risks.

##### A. FIXED PRICE ENERGY POLICY - VOLUMETRIC AND LEAD TIME CRITERIA FOR ENERGY HEDGING

The policy employs a total energy hedging methodology whereby the MWh equivalent of all energy hedges are compared to the expected native load of VEA. Total energy hedged is the MWh equivalent of the sum of fuel purchases and electricity purchases. To apply as an energy hedge, fuel purchases must be combined with physical generation ownership or contracted capacity. The MWh equivalent

hedge from fuel purchases will be the volume of mmBTU's of fuel procured for the unit or contract divided by the expected average heat rate of the generation unit or contract divided by 1,000.

Rolling Annual Hedge Ranges: One criteria of this policy is to have energy procured within defined volumetric ranges during the following rolling timeframes. These ranges identify the percentage of VEA's projected total energy needs that will be procured with fixed price energy over a given time period.

For purposes of this policy, energy needs are considered hedged or procured to the extent that the projected need is met by; (i) Authorized power transactions, as defined in the VEA Trading Authority Policy, or (ii) Authorized fuel transactions combined with physical generation unit ownership, heat rate transactions, or physical capacity transactions.

Option transactions with out of the money strike prices may be used to hedge forward volumes, provided that they do not account for more than 15% of the projected energy needs in any given month, and they are not more than 50% out of the money at the time of the transaction.

Rolling Time Period	Months 1-12	Months 13-24	Months 25-36
Measurement period	Yearly	Yearly	Yearly
Volumetric Range (%)	60-90	40-70	30-60

For the above table, VEA will hedge projected energy needs based on the following criteria:

Measurement Period: This is the mechanism under which the volumetric range is measured. There are two measures: monthly, where compliance with the measurement period is tracked yearly, where the measurement period is tracked for a twelve month period. The initial 12 months shall be managed and compliance measured according to section B below. Months 13-36 shall be managed and compliance measured on an annual basis.

Volumetric Range: This is the range of overall energy needs that will be hedged with fixed price energy, of which up to 15% may be covered with out-of-the-money options.

Energy procurements that deviate from the stated range will require approval of the Board of Directors, and will be part of the regular quarterly reporting from ACES Power Marketing (APM).

B. HEDGE TIMING AND VOLUMETRIC MINIMUMS (1<sup>ST</sup> 12 MONTHS)

In meeting the volumetric energy parameters for the first rolling twelve-month period, VEA will have the following minimum percentages of energy hedge no later than the time horizon as identified in the table below.

For example, by November 30, 2008, VEA will have a minimum of 80% of its projected energy needs for December, January and February, 2009 (months 1 – 3) procured. Of course, this minimum amount can be hedged well before that date based on the ranges in the prior section.

Months	1-3	4-6	7-9	10-12
Range Minimum (%)	80	70	60	50

VEA will maintain hedges at the minimum volumetric level for the specified lead times. Any deviation from the minimum volume for the specified lead-time will require Board approval and all deviations will be reported to the Board.

C. NATURAL GAS HEDGING

Natural gas and power hedging will be a complementary hedging activity since VEA may purchase power supply contracts tied to natural gas fired generation. This could require VEA to hedge with natural gas if such transactions use a natural gas index price to derive its electricity cost. Such transactions, while potentially considered capacity, would not be considered energy hedges until the projected natural gas volumes are procured. The monthly hedge criteria are measured based on total energy exposure for native load (total projected electricity needed for native load minus energy already hedged). In order to allow flexibility in overall energy hedging decisions (e.g. economically hedging additional needs via natural gas or coal contracts versus power purchases), specific sub-targets for natural gas hedging are not set within this policy.

D. PEAK LOAD RESOURCE HEDGING

This hedge policy calls for the establishment of targeted peak resource levels in future peak seasonal periods. The peak load resource level within the targeted range that VEA employs should consider regional reserve margins, resource diversity, potential hydro unavailability, market liquidity and depth, expected future resource transaction negotiations or plant construction, and the potential impact on member cost to serve of being short resources when prices indicate possible significant volatility. VEA will always comply with all applicable regulatory capacity requirements but VEA will furthermore maintain peak resource levels, similar to its approach for energy hedges.

This policy calls for a target summer (July-August) and winter (January-February) resource level for the upcoming four peak periods (the following two summer and two winter periods) as identified in the table below. The target peak resource level will be monitored seasonally and resources must be secured for the upcoming four

peak periods 2 full months prior to the beginning of the Peak 1 season (i.e. by Oct 31<sup>st</sup> and April 30<sup>th</sup>).

For example, if the upcoming Peak 1 season is winter (i.e. January – February), resources totaling 90-95% of native peak load requirements will be secured by the end of the prior October. Additionally, VEA will have resources totaling 92-97% of forecasted native peak load for Peak 2: Summer (July – August). Non-peak seasons will be tracked, reported, and prudently managed by VEA staff.

	Peak 1	Peak 2	Peak 3	Peak 4
Target Range	90-95%	92-97%	80-85%	75-80%

For purposes of policy compliance, the following products and instruments are considered to meet peak resource requirements:

- WAPA Hydro Allocations
- Firm Liquidated Damages 6X16 or 7X24 Energy Purchases
- Firm Liquidated Damages 6X16 or 7X24 Daily Call Options
- OTC 6X16 or 7X24 Financial Swaps
- OTC 6X16 or 7X24 Financial Call Options
- Physical Plant Capacity Control and/or Ownership
- Firm Liquidated Damages Structured Purchased Power Contracts
- Unit Contingent Purchased Power Contracts (minimum 95% availability guarantee)

On a twice-annual basis, **Internal Risk Management Committee (IRMC)** will assess the physical capacity reserve target levels for the upcoming two summer and winter seasons **and advise the Board.**

#### E. TRANSMISSION HEDGING

Much of VEA's physical capacity and energy hedges will be procured at delivery points that are at the location of its native load. While VEA's Network Integration Transmission Service (NITS) Agreement with Nevada Power will mitigate most of the delivery risk associated with native load energy delivery, it does not directly mitigate the financial impact of transmission delivery risk. Transmission delivery risk is the possibility of possessing energy that cannot be delivered due to transmission contracts hence creating an adverse price differential between the location of the energy sources and the location of native load.

VEA will mitigate a minimum of 0% of its transmission delivery risk (measured by annual load requirements) prior to the beginning of each month.

VEA will mitigate a minimum of 0% of congestion risk prior to the month of delivery. This will be done through:

- Firm transmission rights

- Basis swaps with bilateral counterparties
- Firm LD Delivered Energy

Executed transmission delivery hedge strategies will be reported to the IRMC and Board. Furthermore the results will be used to refine future congestion hedging strategy development.

F. RENEWABLE ENERGY CREDITS (RECS)

VEA will actively manage and comply with any State or Federal renewable energy requirements. The following guidelines for managing renewable energy portfolio standard requirements are as follows:

- VEA will actively evaluate renewable portfolio standard requirements and communicate those requirements to the IRMC and Board.
- VEA will annually develop a strategy for procuring any required renewable energy requirements and recommend the strategy to the Board for approval
- The Board will be advised of the cost for complying with renewable requirements
- Renewable energy strategies that exceed the minimum compliance by more than 20%, as measured by renewable energy credits divided by current portfolio standard requirements, will require approval of the Board

G. RESOURCE DIVERSITY MANAGEMENT

VEA will manage its concentration risks on a rolling 12-month basis by diversifying its supply resources as follows:

Peak load resources (generation and purchased power contracts consistent with section IID) shall not exceed 100% percent concentration from a single resource or supplier for any rolling 12-month period. Energy contracts (consistent with section IIA) will be diversified such that no more than 100% of VEA's total energy needs will be from a single supplier.

Exceptions to these limits shall require approval of VEA's Board.

H. RISK MEASUREMENT AND COMPLIANCE REPORTING

Risk measurement and policy compliance within the volumetric and lead time criteria will be demonstrated on a regular basis in the APM quarterly portfolio model risk report. This report will generally cover three years of projections with five-year runs performed when market conditions indicate the potential to cost-effectively hedge beyond three years. A brief outline of the contents of the APM portfolio model report is contained in Appendix A.

III. RESPONSIBILITY

It shall be the responsibility of the Board, CEO and IRMC to ensure compliance with this policy. Implementation of this policy shall adhere to the authority granted in the Trading Authority Policy.

**Appendix A – Power Resources Department Quarterly Report on the**

## VEA Portfolio

- Purpose – A consistent report to formally communicate risk, hedging activities, and other information to the IRMC and the Board, including:
  - Projected costs;
  - Changes in projections compared to the previous report and the budget;
  - Market changes;
  - Probability or "certainty" in the projections; and
  - Potential changes in projected costs due to stress events such as drastic forward price changes
  - Actual hedges compared to hedge policy ranges
  
- Addendums – Periodically or as necessary the report may contain risk assessments or decision support information for issues such as:
  - Hedging opportunities outside of policy (e.g. long term transaction/power plant investments)
  - Longer term portfolio risk assessments

### **Appendix B—Comprehensive Policy Objectives and Implementation Controls**

#### **Insulate portfolio from near term shocks**

Spot market wholesale power, coal, natural gas, capacity and emission allowance market volatility can create a financial burden to VEA and, therefore, VEA's objective is to minimize exposure to this short-term volatility. In order to mitigate the financial exposure to short-term price shocks, VEA should continually reduce its exposure to these markets as a certain time period nears. Upcoming months should be hedged close to 100% as the month nears. An upcoming calendar year should be more hedged than out years. This should provide more budget certainty and reduce the likelihood of unsettling cost changes.

#### **Interaction with Rates**

Although purchases above the specified Hedge Ranges are not generally pursued, the flexibility of this hedging strategy allows for rate impact assessments to play an important role. In general, if satisfied with the rate consequence, VEA can buy towards the top of the hedge range or seek approval from the Board of Directors to exceed the ranges.

During an upcoming 12-month period, a rate driven target to fill and/or a trailing stop can be used to drive residual purchases. Since this time interval allows hedges up to 100% (if achievable), a rate objective could be used in this timeframe while imposing little risk of becoming too out of balance with the market as is the case for the out years.

Another key component of the hedging strategy is to understand the impact of various market conditions on VEA's all-in member rates. Ongoing analyses of the relationship between VEA's rates and various market price levels allows recognition of market conditions where additional purchases are warranted to pursue an attractive absolute rate level.

### **Execution Strategy and Potential Departures**

Execution strategies will be developed to implement this hedging policy. Hedges will be entered based on disciplined execution strategies developed to comply with this policy. Execution strategies will include considerations of hedge timing, market price levels, rates and the VEA budget. Execution strategies will be approved by the IRMC not less than quarterly.

Departures above the monthly ranges or for additional years past the stated horizon should only occur when market prices indicate fundamental value. Fundamental value will be determined with a historical view of market prices combined with forward looking fundamental supply and demand dynamics given expected generation diversity. Fundamental value can also address VEA's desire to stabilize a portion of their long-term rates through long-term transactions or asset ownership.

As an example, given current market price dynamics, VEA could consider buying above the hedging ranges and/or for added years if forward power drops below \$48/MWh for an annual 7x24 block. The execution strategy may specify the magnitude and duration of departure from the stated hedging ranges. It might indicate that at \$45/MWh prices add 15% to the range and extend hedging to 4 years.

Execution strategies are continually in the development stage, but will become an important aspect of the hedging policy. Approved execution strategies will be firmly followed, but may be modified through the IRMC.