



# Natural Gas Hedge Plan

## Washington Public Utilities Commission

December 14, 2018

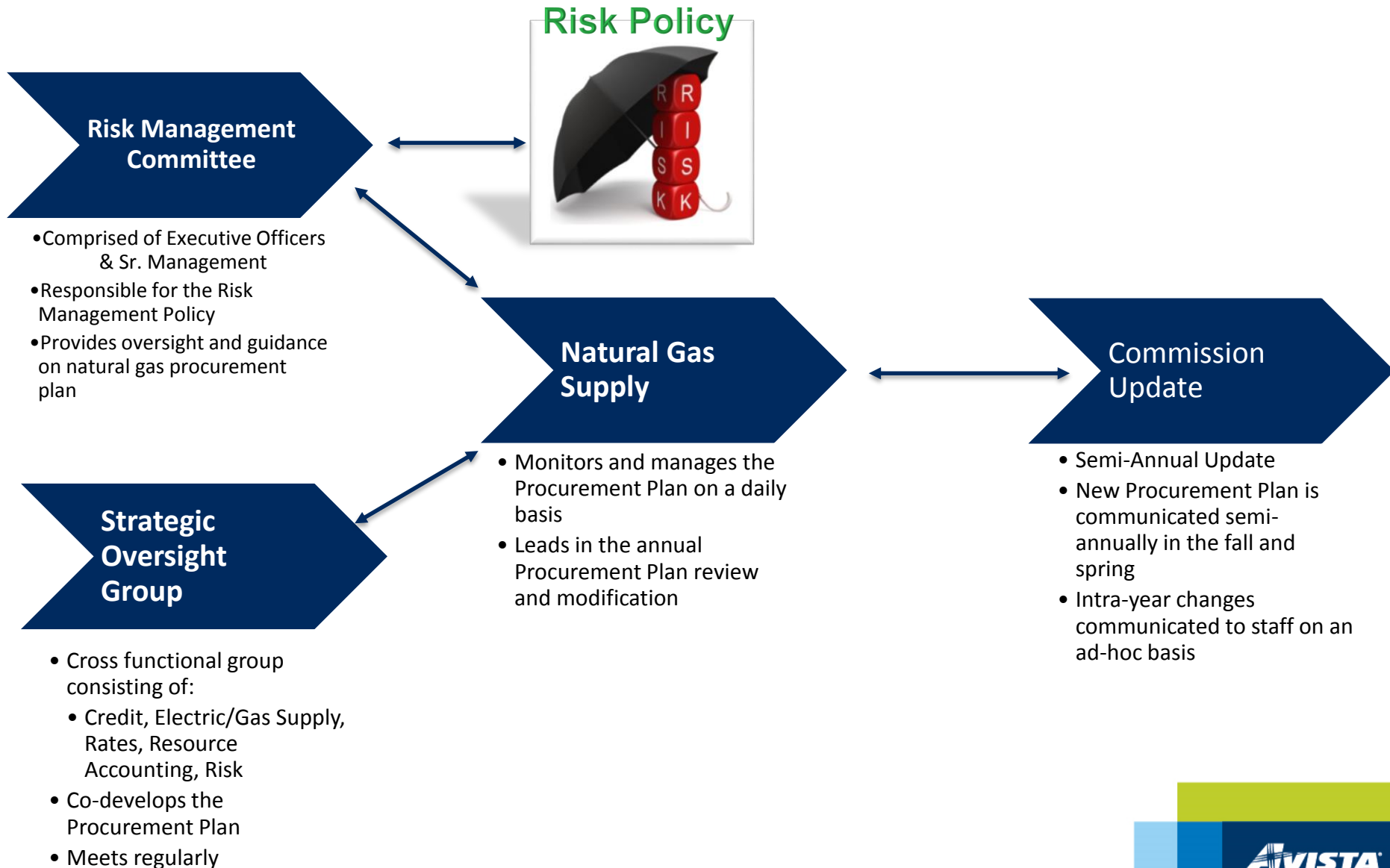
# Hedging Objectives and Goals

## Mission

*To provide a diversified portfolio of reliable supply and a level of price certainty in volatile markets.*

- Avista cannot predict future market prices, however we use experience, market intelligence, and fundamental market analysis to structure and guide our procurement strategies.
- Avista's goal is to develop a plan that utilizes customer resources (storage and transportation), layers in pricing over time for stability (time averaging), allows discretion to take advantage of pricing opportunities should they arise, and appropriately manages risk.

# Oversight and Control



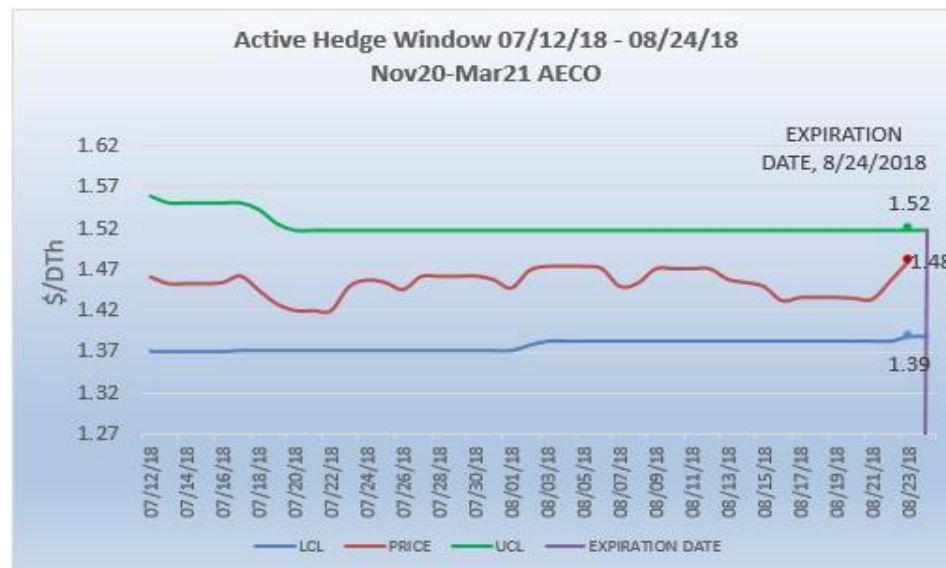
# Plan Changes and Performance

	2017-2018	2018-2019
Hedge percent of firm LDC average load – Dynamic Window Hedge	46%	40%
Operative Boundary – Risk Responsive Hedging Tool (RRHT)	\$3.50 up to \$4.50 (program in development and for monitoring only)	\$2.76 up to \$3.53
Percent of Portfolio - RRHT	40% up to 70% (program in development and for monitoring only)	20% up to 60%

Number of Hedges	Total Volume (Dth)	Average Hedge Price (\$/Dth)	Average Daily Cash Price (\$/Dth)	Difference (\$/Dth)	Total Difference
23	1,745,000	\$1.23	\$1.20	\$0.027	\$47,375

# Dynamic Window Hedging

	Physical Positions			Dynamic Window Hedging										
	Load Estimate (DTh/Day)	Completed Hedges (DTh/Day)	Net Position (DTh/Day)	Window Hedging Threshold	Load Hedged (%)	Hedges Left	Set Date	Expire Date	Low Price Trigger (\$/DTh)	Today's Price (\$/DTh)	High Price Trigger (\$/DTh)	Hedge Required (DTh/Day)	Preferred Basin	
November-18	-146,612	67,500	-79,112	40%	46%	0								
December-18	-188,306	82,500	-105,806	40%	44%	0								
January-19	-185,510	77,500	-108,010	40%	42%	0								
February-19	-163,647	70,000	-93,647	40%	43%	0								
March-19	-129,735	62,500	-67,235	40%	48%	0								
Apr19-Oct19	-47,220	10,000	-37,220	25%	21%	1	12/08/17	03/01/19	0.86	1.05	1.61		AECO	
Nov19-Mar20	-163,902	50,000	-113,902	32%	31%	1	08/21/18	10/01/19	1.31	1.60	1.86		AECO	
Apr20-Oct20	-47,653	7,500	-40,153	25%	16%	2	09/25/18	06/14/19	0.85	1.04	1.31		AECO	
Nov20-Mar21	-166,667	17,500	-149,167	32%	10%	15	08/28/18	10/18/18	1.48	1.57	1.58		AECO	
Apr21-Oct21	-48,316	0	-48,316	25%	0%	5	10/01/18	03/26/19	1.08	1.25	1.45		AECO	



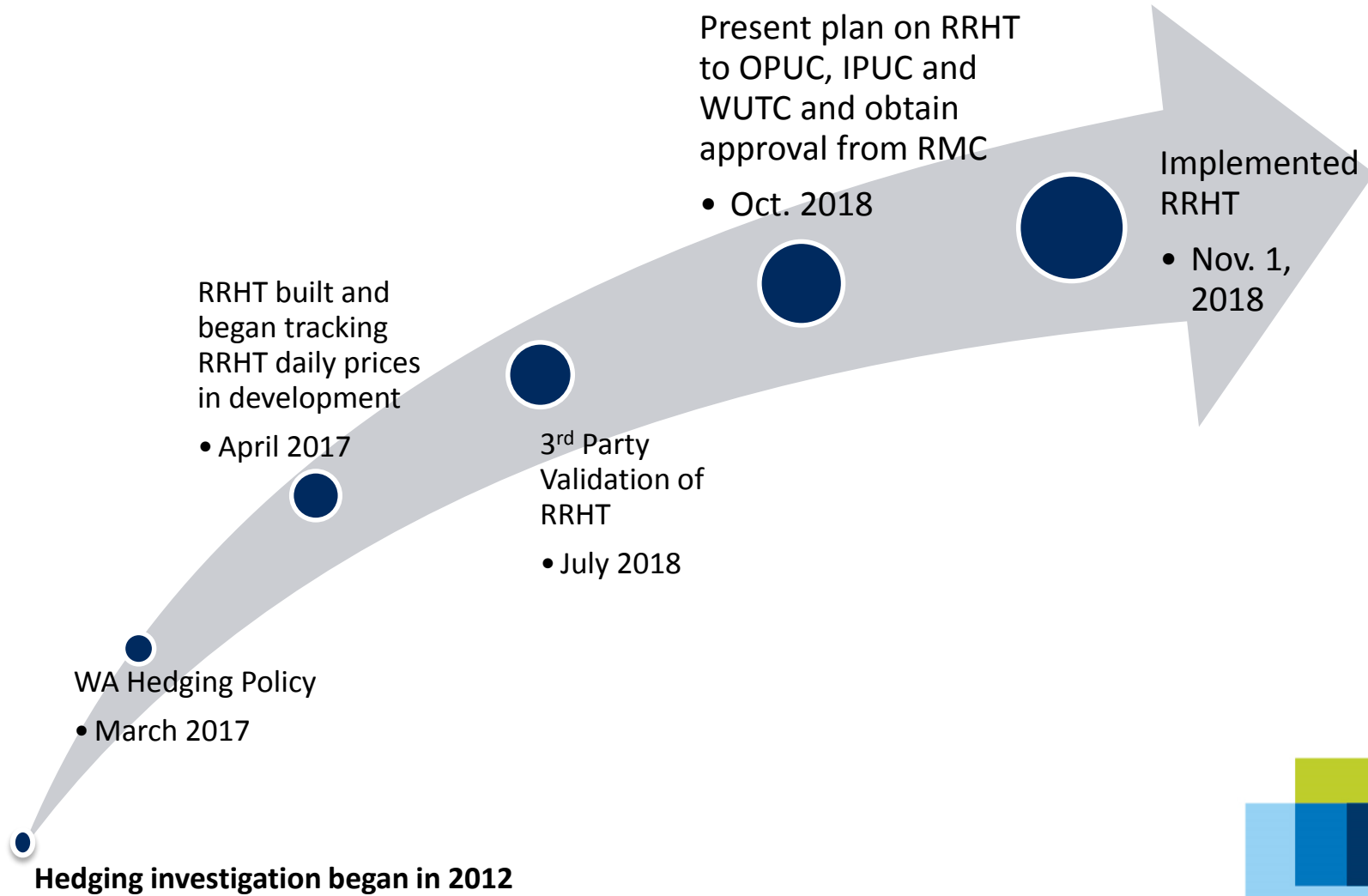
# Risk Responsive Hedging Tool (RRHT)

- The Program includes all utility purchase and sales transactions and estimated customer load
- Positions and market volatility are then used to calculate VaR by basin

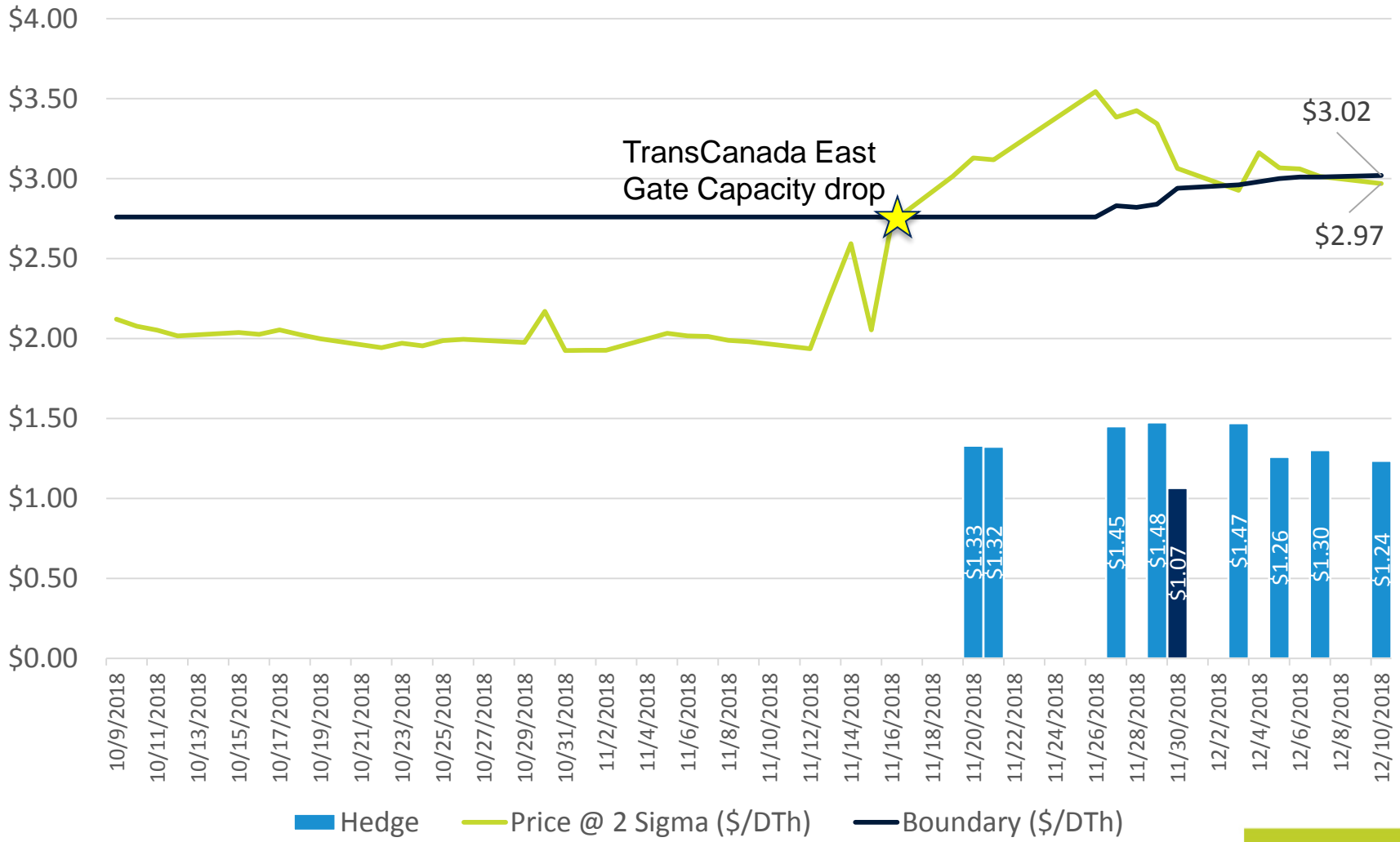


\*The RRHT produces a daily Price @ 2 sigma \$/Dth

# Timeline



# Winter '18 – '19 Volatile Market to RRHT



Risk Hedges	Weighted Average cost of RRHT	Total Volume
<b>9 Hedges</b>	<b>\$ 1.35</b>	<b>3.12 MM Dth</b>

