

**HATCHING EGG SECTOR
PROPOSED COP-BASED PRICING PACKAGE**

POST-SUBMISSION IMPLEMENTATION ANALYSIS

CHICKEN SECTOR PRICING SUPERVISORY REVIEW

MARCH 30, 2022



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COP-Based Pricing Effects

At the COP Roundtable the Commission presented the difference between the current Linkage-Based Pricing and the proposed COP-Based Pricing. The 2020 COP survey yielded a \$1.00/hen increase from the last COP, or \$0.009/saleable chick. The following tables for Period A167 to A168 were part of the follow-up slide deck that was provided to attendees which review the effects; Period A169 is now also available.

The current lay cycle for these periods is 55 weeks, as noted in the middle columns.

A167	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	55	58
Equivalent (\$/doz)	\$6.4144	\$6.5461	\$6.1989
Equivalent (per chick)	\$0.6682	\$0.6819	\$0.6457
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.8576	\$0.8713	\$0.8351
Recovery	100%	100%	100%
v. A167 Linkage price (\$0.6633)	-	97.3%	-

* No other variables changed

A168	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	55	58
Equivalent (\$/doz)	\$6.4314	\$6.5634	\$6.2152
Equivalent (per chick)	\$0.6699	\$0.6837	\$0.6474
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.8593	\$0.8731	\$0.8368
Recovery	100%	100%	100%
v. A168 Linkage price (\$0.6845)	-	100.1%	-

* No other variables changed

A169	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	55	58
Equivalent (\$/doz)	\$6.5681	\$6.7013	\$6.3502
Equivalent (per chick)	\$0.6842	\$0.6981	\$0.6615
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.8736	\$0.8875	\$0.8509
Recovery	100%	100%	100%
v. A169 Linkage price (\$0.7127)	-	102.1%	-

* No other variables changed

The comparison between the two COP's shows that the price as derived by the current Linkage-Based Pricing Model has yielded both higher and lower returns than the proposed COP-based pricing formulae over the past four pricing periods. As not all the effects of the proposed mechanisms and efficiencies are quantifiable at this time, a complete comparison between the current Linkage-based price a stand-alone COP-based price is not possible.

Further Analysis

A170	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	55	58
Equivalent (\$/doz)	\$6.7013	\$6.7137	\$6.3621
Equivalent (per chick)	\$0.6855	\$0.6993	\$0.6627
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.8749	\$0.8887	\$0.8521
Recovery	100%	100%	100%
v. A170 Linkage price (\$0.7090)	-	101.4%	-

* No other variables changed

A171	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	57	58
Equivalent (\$/doz)	\$6.7335	\$6.6222	\$6.5138
Equivalent (per chick)	\$0.7014	\$0.6898	\$0.6785
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.8908	\$0.8792	\$0.8679
Recovery	100%	100%	100%
v. A171 Linkage price (\$0.6915)	-	100.2%	-

* No other variables changed

A172	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	58	58
Equivalent (\$/doz)	\$6.7213	\$6.5011	\$6.5011
Equivalent (per chick)	\$0.7001	\$0.6772	\$0.6772
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.8895	\$0.8666	\$0.8666
Recovery	100%	100%	100%
v. A172 Linkage price (\$0.6709)	-	99.1%	-

* No other variables changed

Post-Submission Analysis

A173	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	58	58
Equivalent (\$/doz)	\$6.8217	\$6.5988	\$6.5988
Equivalent (per chick)	\$0.7106	\$0.6874	\$0.6874
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.9000	\$0.8768	\$0.8768
Recovery	100%	100%	100%
v. A173 Linkage price (\$0.6681)	-	97.2%	-

* No other variables changed

A174	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	58	58
Equivalent (\$/doz)	\$6.9859	\$6.7567	\$6.7567
Equivalent (per chick)	\$0.7277	\$0.7038	\$0.7038
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.9171	\$0.8932	\$0.8932
Recovery	100%	100%	100%
v. A174 Linkage price (\$0.6782)	-	96.4%	-

* No other variables changed

A175	Base New (2020) COP	Current Lay Cycle*	Target Lay Cycle*
Lay cycle (weeks)	56.1	60	58
Equivalent (\$/doz)	\$7.2035	\$6.7603	\$6.9674
Equivalent (per chick)	\$0.7504	\$0.7042	\$0.7258
Hatchery margin (fixed)	\$0.1894	\$0.1894	\$0.1894
Day-old (per chick)	\$0.9398	\$0.8936	\$0.9152
Recovery	100%	100%	100%
v. A175 Linkage price (\$0.7023)†	-	99.7%	-

* No other variables changed † BCFIRB preapproval of BC Chicken live price formula change granted (upper guardrail increase)

Note that in Period A171 the lay cycle increased to 57 weeks, and in Period A172 to 58 weeks. As of Period A172, the target lay cycle was achieved and is why this and the current lay cycle columns have equal values.

Summarizing the tables above of the six periods:

Price	A167	A168	A169	A170	A171	A172
New (2020) COP, Per S.C.	\$0.6819	\$0.6837	\$0.6981	\$0.6993	\$0.6898	\$0.6772
Linkage-COP, per S.C.	\$0.6633	\$0.6845	\$0.7127	\$0.7090	\$0.6915	\$0.6709
Difference	(\$0.0186) (1.86¢)	\$0.0008 0.08¢	\$0.0146 1.46¢	\$0.0097 0.97¢	\$0.0017 0.17¢	(\$0.0063) (0.63¢)
% Recovery vs. Linkage-COP-derived price	97.3%	100.1%	102.1%	101.4%	100.2%	99.1%

Price	A173	A174	A175
New (2020) COP, Per S.C.	\$0.6874	\$0.7038	\$0.7042
Linkage-COP, per S.C.	\$0.6681	\$0.6782	\$0.7023†
Difference	(\$0.0193) (1.93¢)	(\$0.0256) (2.56¢)	(\$0.0019) (0.19¢)
% Recovery vs. Linkage-COP-derived price	97.2%	96.4%	99.7%

† BCFIRB preapproval of BC Chicken live price formula change granted (upper guardrail increased)

The comparison, possible by using the same lay cycle length for each period, and holding other variables constant, shows that the New (2020) COP-derived price exceeds the Linkage-COP-derived price in Periods A167 and A172 at 100% recovery. For Periods A168 to A171, the New (2020) COP-derived price is less than the Linkage-COP-derived price at 100% recovery.

The percentage recovery comparison ranges from 97.3% to 102.1%, or a band of 4.8% (1.86¢ deficient to 0.97¢ excessive, or a band of 2.83¢).

For periods A173 and A174, increasing feed prices and an upper guardrail limit caused returns as compared to the Linkage-derived price to decrease below a full return, at 97.2% and 96.4%, respectively. For Period A175, the preapproval by BCFIRB to change the BC Chicken live price formula (to increase the upper guardrail) in response to escalating feed costs resulted in an increase to the Linkage-derived price and a return of 99.7% when compared.

Mechanisms Added

To further the analysis, the following table is presented to view the layering in of the mechanisms:

Price per Saleable Chick	A167	A168	A169	A170	A171	A172
New (2020) COP, Per S.C.	\$0.6819	\$0.6837	\$0.6981	\$0.6993	\$0.6898	\$0.6772
Mechanisms						
+/- Feed ¹	-	-	-	-	-	-
+/- Processing dates ²	-	-	-	-	-	-
+/- Breeder chick ³	-	-	-	-	-	-
+/- Vaccine adjustment ⁴	-	-	-	-	-	-
+/- Utilization ⁵	-	-	-	-	-	-
+/- Industry Benefit Index ⁶	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010
+/- Hatch average ⁷	-	-	-	-	-	-
+/- Ancillary revenues ⁸	(\$0.0085)	(\$0.0085)	(\$0.0085)	(\$0.0085)	(\$0.0085)	(\$0.0085)
+/- New costs ⁹	-	-	-	-	-	-
New (2020) COP with Mechanisms	\$0.6744	\$0.6762	\$0.6906	\$0.6918	\$0.6823	\$0.6697

Price per Saleable Chick	A173	A174	A175
New (2020) COP, Per S.C.	\$0.6874	\$0.7038	\$0.7042
Mechanisms			
+/- Feed ¹	-	-	-
+/- Processing dates ²	-	-	-
+/- Breeder chick ³	-	-	-
+/- Vaccine adjustment ⁴	-	-	-
+/- Utilization ⁵	-	-	-
+/- Industry Benefit Index ⁶	\$0.0010	\$0.0010	\$0.0010
+/- Hatch average ⁷	-	-	-
+/- Ancillary revenues ⁸	(\$0.0085)	(\$0.0085)	(\$0.0085)
+/- New costs ⁹	-	-	-
New (2020) COP with Mechanisms	\$0.6799	\$0.6963	\$0.6967

¹ No change to process; no change to price currently.

² Processing date (lay cycle) at 58 weeks in A172. Prices set at the then lay cycle length. No change to price.

³ Potential cost formula change, moving profit margin by hatcheries out of cost and into hatchery margin. No net change to day-old chick price to Growers.

⁴ No final formula or additional cost; no change to price currently.

⁵ Recommended approach as previous; no change to utilization outside of survey period. No change to price currently.

⁶ At the example rate of \$100,000 annually.

⁷ Adjustable once tracking of domestic hatch rates on a per-period basis is available. No change to price currently.

⁸ Estimated at lay cycle at 56.1 weeks.

⁹ Prospective mechanism; no change to price currently.

The New (2020) COP with Mechanisms Price would then have the Production Trimming efficiency applied. It should be noted that with having the efficiencies of Saleable Chick Payment and 70% Hatch in the Consolidated Order, the results of the surveys would have these efficiencies embedded already.

Efficiencies Added

Price per Saleable Chick	A167	A168	A169	A170	A171	A172
New (2020) COP with Mechanisms	\$0.6744	\$0.6762	\$0.6906	\$0.6918	\$0.6823	\$0.6697
Expressed as Recovery of Cost	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Efficiencies						
+/- Saleable Chick Payment	-	-	-	-	-	-
+/- 70% Hatch	-	-	-	-	-	-
+/- Production trimming¹	(\$0.0052)	(\$0.0052)	(\$0.0052)	(\$0.0052)	(\$0.0048)	(\$0.0046)
New (2020) COP w/ Mechanisms & Efficiencies – for Pricing	\$0.6692	\$0.6710	\$0.6854	\$0.6866	\$0.6775	\$0.6651
Expressed as Recovery of Cost	99.2%	99.2%	99.2%	99.2%	99.3%	99.3%

¹ Periods A167-170 were at a 55-week lay cycle; A171 at a 57-week lay cycle; A172 at a 58-week lay cycle.

Price per Saleable Chick	A173	A174	A175
New (2020) COP with Mechanisms	\$0.6799	\$0.6963	\$0.6967
Expressed as Recovery of Cost	100.0%	100.0%	100.0%
Efficiencies			
+/- Saleable Chick Payment	-	-	-
+/- 70% Hatch	-	-	-
+/- Production trimming²	(\$0.0049)	(\$0.0050)	(\$0.0048)
New (2020) COP w/ Mechanisms & Efficiencies – for Pricing	\$0.6750	\$0.6913	\$0.6919
Expressed as Recovery of Cost	99.3%	99.3%	99.3%

² Periods A173-174 were at a 58-week lay cycle; A175 at a 60-week lay cycle.

Comparison – Efficient COP vs. Linkage

Comparing the New (2020) COP Price set at 99.2% to 99.3% recovery:

Price per Saleable Chick	A167	A168	A169	A170	A171	A172
New (2020) COP w/ Mechanisms & Efficiencies – for Pricing	\$0.6692	\$0.6710	\$0.6854	\$0.6866	\$0.6775	\$0.6651
Expressed as Recovery of Cost	99.2%	99.2%	99.2%	99.2%	99.3%	99.3%
Linkage-COP, per S.C.	\$0.6633	\$0.6845	\$0.7127	\$0.7090	\$0.6915	\$0.6709
Difference	(\$0.0059) (0.59¢)	\$0.0135 1.35¢	\$0.0273 2.73¢	\$0.0224 2.24¢	\$0.0140 1.40¢	\$0.0058 0.58¢
% Recovery of efficient New (2020) COP-derived price* [Linkage vs. New (2020) COP with Mechanisms]	98.4%	101.2%	103.2%	102.5%	101.3%	100.2%
Spread not covered at Expressed Recovery of Cost	0.8%	-	-	-	-	-

*This is not to be confused with recovery parity (e.g., \$0.6633 / \$0.6744 = 98.4%).

Price per Saleable Chick	A173	A174	A175
New (2020) COP w/ Mechanisms & Efficiencies – for Pricing	\$0.6750	\$0.6913	\$0.6919
Expressed as Recovery of Cost	99.3%	99.3%	99.3%
Linkage-COP, per S.C.	\$0.6681	\$0.6782	\$0.7023 [†]
Difference	(\$0.0069) (0.69¢)	(\$0.0131) (1.31¢)	\$0.0104 1.04¢
% Recovery of efficient New (2020) COP-derived price* [Linkage vs. New (2020) COP with Mechanisms]	98.3%	97.4%	100.8%
Spread not covered at Expressed Recovery of Cost	1.0%	1.9%	-

*This is not to be confused with recovery parity (e.g., \$0.6633 / \$0.6744 = 98.4%).

[†]BCFIRB preapproval of BC Chicken live price formula change granted (upper guardrail increased)

In one (now three) of these pricing periods, it is shown that the current Linkage-COP-derived price is less than the efficient New (2020) COP-derived price. Therefore, we would anticipate a phased-in approach for a transition period.

Phase-In Approaches

There were two potential approaches reviewed:

1. Add an incremental percentage to the Linkage-COP-derived price, over 'X' periods, unless and until the efficient New (2020) COP-derived recovery is consistently achieved, capping the maximum at the efficient New (2020) COP-derived price in any one period.
2. Use a rising floor to the efficient New (2020) COP-derived recovery, over 'X' periods, and take the maximum price between this and the current Linkage-COP-derived price, capping the maximum at the efficient New (2020) COP-derived price in any one period.

Under both approaches, the price set would never exceed the efficient New (2020) COP-derived price, even in instances where the Linkage-COP-derived price would indicate such a price is valid.

First Approach

An incremental percentage of 0.5% is added to the “% Recovery of efficient New (2020) COP-derived price” each period, with a maximum cap set at the efficient New (2020) COP-derived price in any one period.

Single period example:

A167 Linkage-COP-derived price	\$0.6633
% Recovery of efficient New (2020) COP-derived price*	98.4%
Full return (100%)	\$0.6744
x Recovery + incremental percentage	<u>x 98.9% [98.4% + 0.5%]</u>
	\$0.6670 [A]
Efficient New (2020) COP-based price at 99.2%	\$0.6692 [B]
Maximum price, recovery [lesser of A or B]	\$0.6670, 98.4%

**This is not to be confused with recovery parity.*

Based on recovery percentages over the past few years, 20 pricing periods would equal 10.0% and should more than cover any spread between the Linkage-COP-derived price and the efficient New (2020) COP-derived price. At this point, the price set is the efficient New (2020) COP-derived price.

For Periods A167-A172 (now A175):

Period	A167	A168	A169
Linkage-COP-derived price	\$0.6633	\$0.6845	\$0.7127
% Recovery of efficient New (2020) COP-derived price*	98.4%	101.2%	103.2%
Full return (100%)	\$0.6744	\$0.6762	\$0.6906
x Recovery + incremental percentage	<u>x 98.9% [98.4% + 0.5%]</u>	<u>x 102.2% [101.2% + 1.0%]</u>	<u>x 104.7% [103.2% + 1.5%]</u>
	\$0.6670 [A]	\$0.6911 [A]	\$0.7231 [A]
Efficient New (2020) COP-based price at 99.2-99.3%	\$0.6692 [B]	\$0.6710 [B]	\$0.6854 [B]
Maximum price, recovery [lesser of A or B]	\$0.6670, 98.9%	\$0.6710, 99.2%	\$0.6854, 99.2%

**This is not to be confused with recovery parity.*

Period	A170	A171	A172
Linkage-COP-derived price	\$0.7090	\$0.6915	\$0.6709
% Recovery of efficient New (2020) COP-derived price*	102.5%	101.3%	100.2%
Full return (100%)	\$0.6918	\$0.6823	\$0.6697
x Recovery + incremental percentage	$\times 104.5\% [102.5\% + 2.0\%]$	$\times 103.8\% [101.3\% + 2.5\%]$	$\times 103.2\% [100.2\% + 3.0\%]$
	\$0.7229 [A]	\$0.7082 [A]	\$0.6911 [A]
Efficient New (2020) COP-based price at 99.2-99.3%	\$0.6866 [B]	\$0.6775 [B]	\$0.6651 [B]
Maximum price, recovery [lesser of A or B]	\$0.6866, 99.2%	\$0.6775, 99.3%	\$0.6651, 99.3%

*This is not to be confused with recovery parity.

Period	A173	A174	A175
Linkage-COP-derived price	\$0.6681	\$0.6782	\$0.7023 [†]
% Recovery of efficient New (2020) COP-derived price*	98.3%	97.4%	100.8%
Full return (100%)	\$0.6799	\$0.6963	\$0.6967
x Recovery + incremental percentage	$\times 101.8\% [98.3\% + 3.5\%]$	$\times 101.4\% [97.4\% + 4.0\%]$	$\times 105.3\% [100.8\% + 4.5\%]$
	\$0.6921 [A]	\$0.7060 [A]	\$0.7336 [A]
Efficient New (2020) COP-based price at 99.2-99.3%	\$0.6750 [B]	\$0.6913 [B]	\$0.6919 [B]
Maximum price, recovery [lesser of A or B]	\$0.6750, 99.3%	\$0.6913, 99.3%	\$0.6919, 99.3%

*This is not to be confused with recovery parity.

[†] BCFIRB preapproval of BC Chicken live price formula change granted (upper guardrail increased)

The first phase-in approach shows that in Periods A168 to A172 and A175, there is no incremental percentage required to be applied as the Linkage-COP-derived price exceeds that which would be set under the efficient New (2020) COP.

In Period A167, the spread of 0.8% is reduced by the incremental percentage of 0.5%, leaving 0.3% unrecovered.

In Period A173, the spread of 1.0% is eliminated by the incremental percentage of 3.5%.

In Period A174, the spread of 1.9% is eliminated by the incremental percentage of 4.0%.

It is important to note that in each pricing period, the maximum price does not exceed an efficient recovery of 99.2%-99.3%.

Second Approach

Maximum of current Linkage-based price or floor of 95.0% of the efficient New (2020) COP-derived price is established, increasing incrementally by 0.5% per period for 'X' periods until the price is set at the efficient recovery percentage (99.2% to 99.3%), with a maximum cap set at the efficient New (2020) COP-derived price in any one period.

While it would take 9 pricing periods, or 72 weeks, to fully implement this approach, in periods in which the current Linkage-based price exceeds the efficient New (2020) COP-derived price, the efficient New (2020) COP-derived price would effectively be in place.

Single period example:

A167 Efficient New (2020) COP-derived price	\$0.6692 [A]
% Recovery	99.2%
Full return (100%)	\$0.6744
x Floor	x 95.0%
	\$0.6407 [B]
Linkage-COP-derived price	\$0.6633 [C]
[Greater of B or C]	\$0.6633 [D]
Capped return [A]	\$0.6692
Maximum price, recovery [lesser of A or D]	\$0.6633, 98.4%

For Periods A167-A172:

Period	A167	A168	A169
Efficient New (2020) COP-derived price	\$0.6692 [A]	\$0.6710 [A]	\$0.6854 [A]
% Recovery	99.2%	99.2%	99.2%
Full return (100%)	\$0.6744	\$0.6762	\$0.6906
x Floor	x 95.0%	x 95.5%	x 96.0%
	\$0.6407 [B]	\$0.6458 [B]	\$0.6630 [B]
Linkage-COP-derived price	\$0.6633 [C]	\$0.6845 [C]	\$0.7127 [C]
[Greater of B or C]	\$0.6633 [D]	\$0.6845 [D]	\$0.7127 [D]
Capped return [A]	\$0.6692	\$0.6710	\$0.6854
Maximum price, recovery [lesser of A or D]	\$0.6633, 98.4%	\$0.6710, 99.2%	\$0.6854, 99.2%

Period	A170	A171	A172
Efficient New (2020) COP-derived price	\$0.6866 [A]	\$0.6775 [A]	\$0.6651 [A]
% Recovery	99.2%	99.3%	99.3%
Full return (100%)	\$0.6918	\$0.6823	\$0.6697
x Floor	x 96.5%	x 97.0%	x 97.5%
	\$0.6676 [B]	\$0.6618 [B]	\$0.6530 [B]
Linkage-COP-derived price	\$0.7090 [C]	\$0.6915 [C]	\$0.6709 [C]
[Greater of B or C]	\$0.7090 [D]	\$0.6915 [D]	\$0.6709 [D]
Capped return [A]	\$0.6866	\$0.6775	\$0.6651
Maximum price, recovery [lesser of A or D]	\$0.6866, 99.2%	\$0.6775, 99.3%	\$0.6651, 99.3%

For Periods A173-A175:

Period	A173	A174	A175
Efficient New (2020) COP-derived price	\$0.6750 [A]	\$0.6913 [A]	\$0.6919 [A]
% Recovery	99.3%	99.3%	99.3%
Full return (100%)	\$0.6799	\$0.6963	\$0.6967
x Floor	x 98.0%	x 98.5%	x 99.0%
	\$0.6663 [B]	\$0.6859 [B]	\$0.6897 [B]
Linkage-COP-derived price	\$0.6681 [C]	\$0.6782 [C]	\$0.7023 [†] [C]
[Greater of B or C]	\$0.6681 [D]	\$0.6859 [D]	\$0.7023 [D]
Capped return [A]	\$0.6750	\$0.6913	\$0.6919
Maximum price, recovery [lesser of A or D]	\$0.6681, 98.3%	\$0.6859, 98.5%	\$0.6919, 99.3%

[†] BCFIRB preapproval of BC Chicken live price formula change granted (upper guardrail increased)

The second phase-in approach shows that in Periods A167 to A172, A173 and A175, the floor is not the limit, but instead the Linkage-COP-derived price is [C]. For A174, the floor is the limit (at 98.5%).

It is important to note that in each pricing period, the maximum price does not exceed an efficient recovery of 99.2%-99.3%.

Summary of Phased-In Approaches

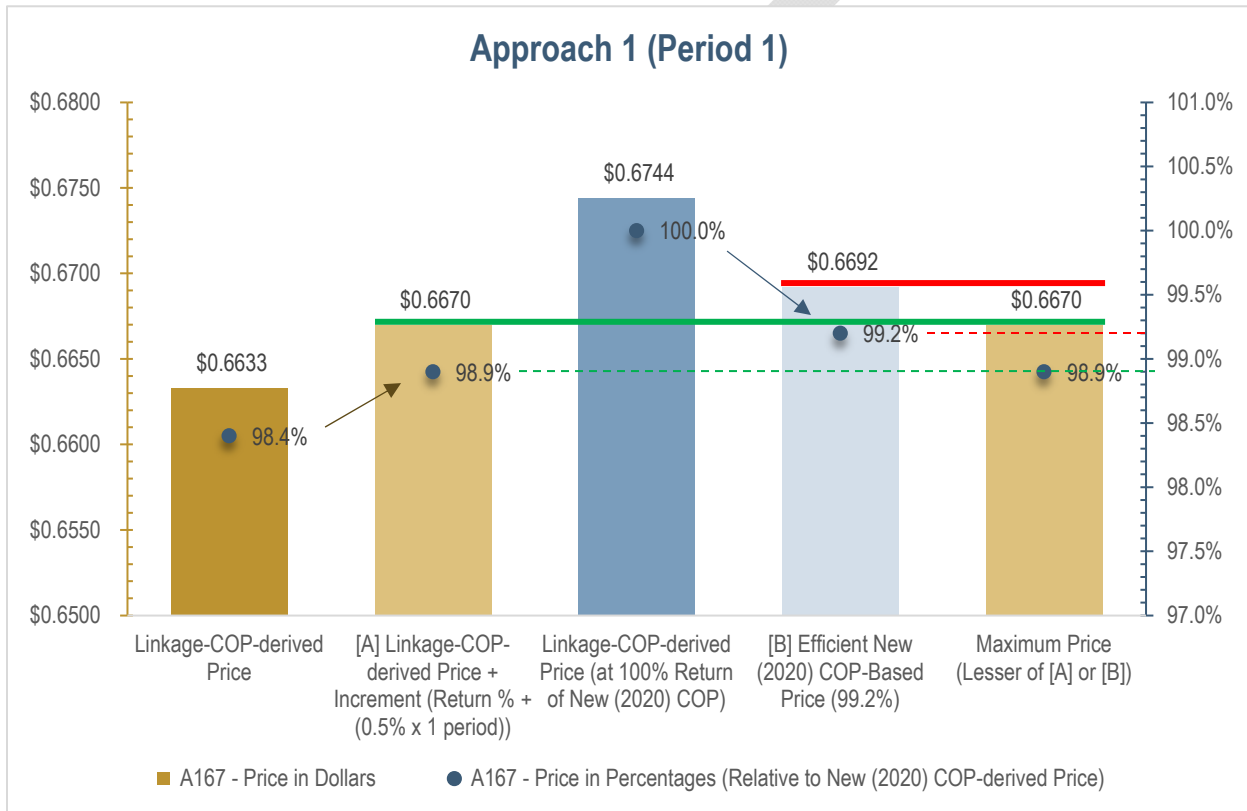
Price	A167	A168	A169	A170	A171	A172
First approach	\$0.6670, 98.9%	\$0.6710, 99.2%	\$0.6854, 99.2%	\$0.6866, 99.2%	\$0.6775, 99.3%	\$0.6651, 99.3%
Second approach	\$0.6633, 98.4%	\$0.6710, 99.2%	\$0.6854, 99.2%	\$0.6866, 99.2%	\$0.6775, 99.3%	\$0.6651, 99.3%
Difference	(\$0.0037), (0.5%)	\$0.0000, 0.0%	\$0.0000, 0.0%	\$0.0000, 0.0%	\$0.0000, 0.0%	\$0.0000, 0.0%

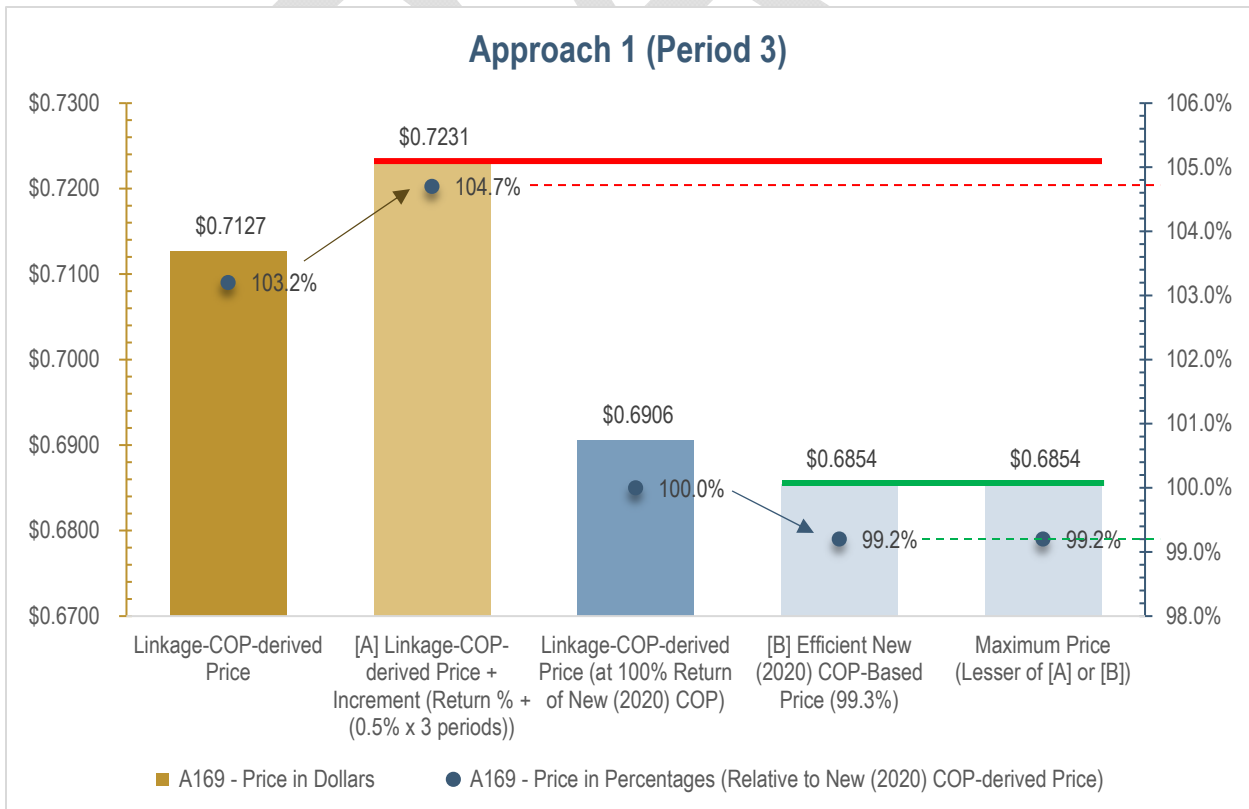
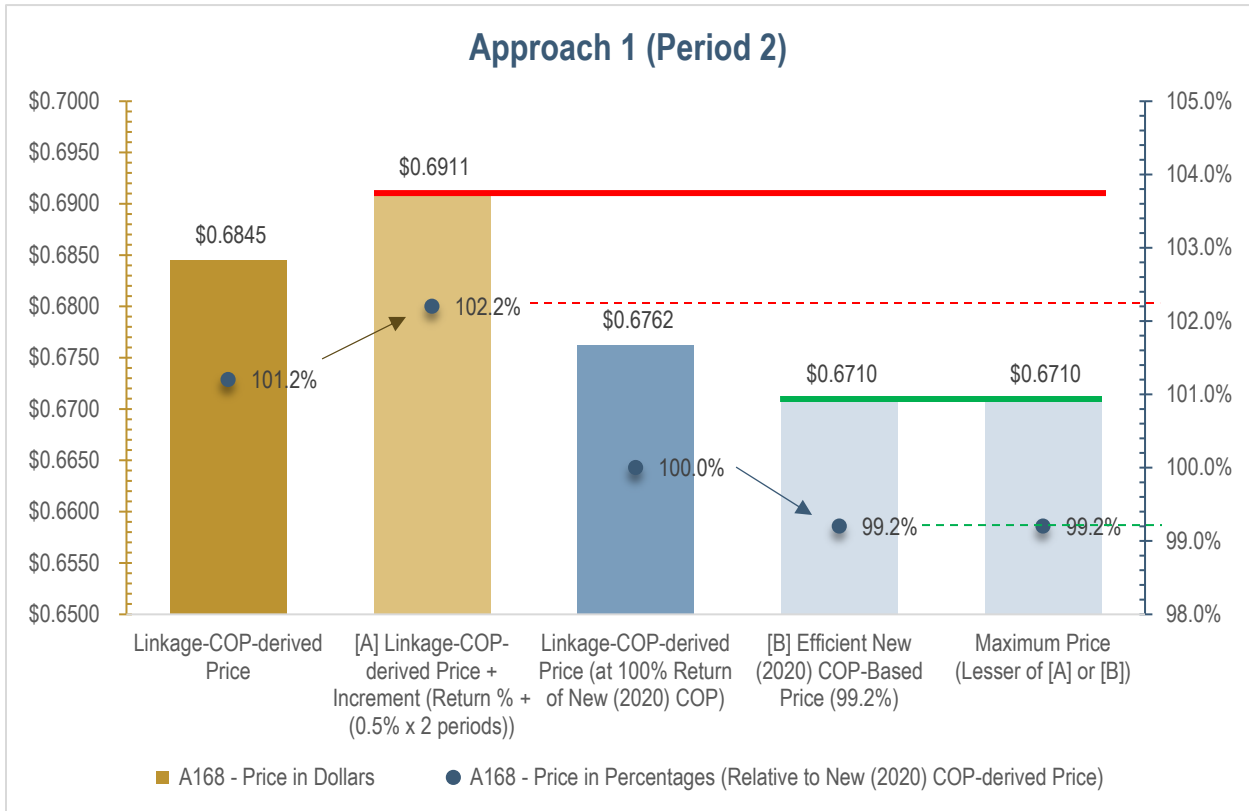
Price	A173	A174	A175
First approach	\$0.6750, 99.3%	\$0.6913, 99.3%	\$0.6919, 99.3%
Second approach	\$0.6681, 98.3%	\$0.6859, 98.5%	\$0.6919, 99.3%
Difference	(\$0.0069), (1.0%)	(\$0.0054), (0.8%)	\$0.0000, 0.0%

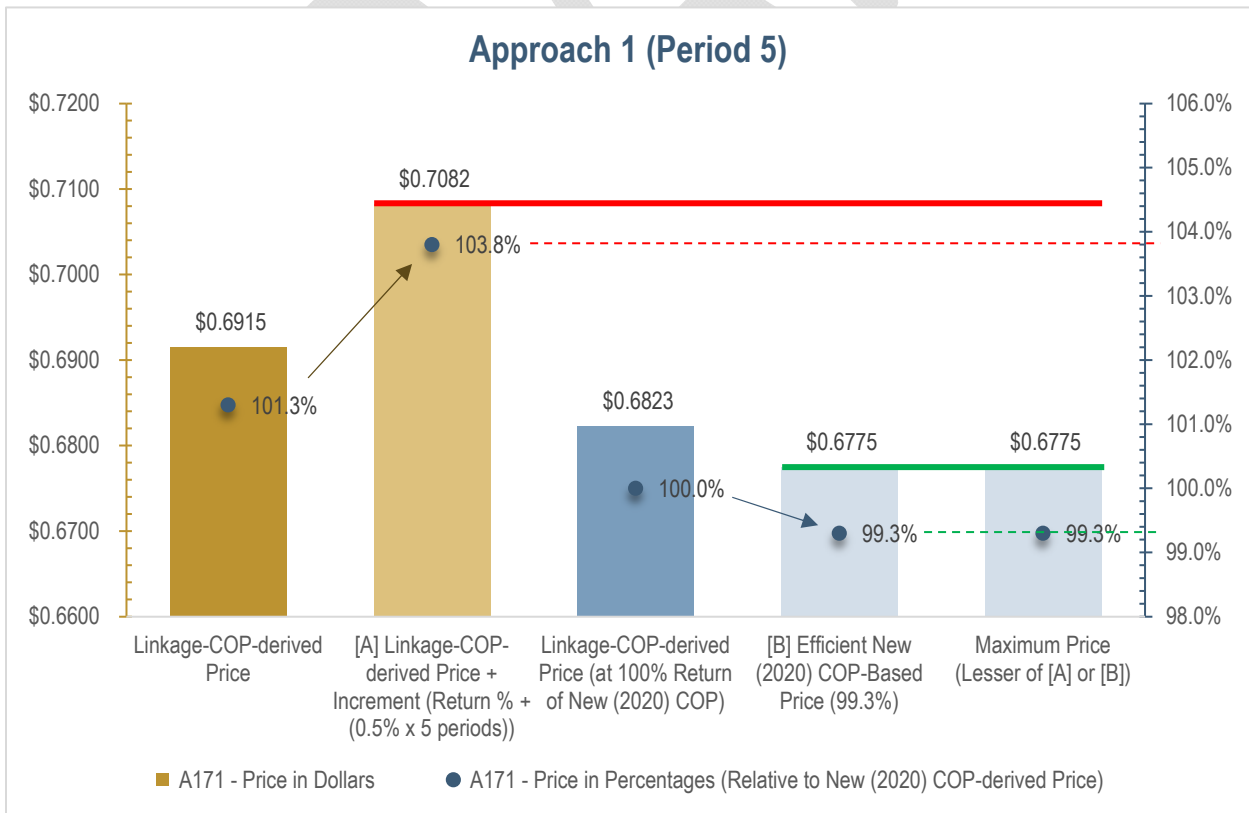
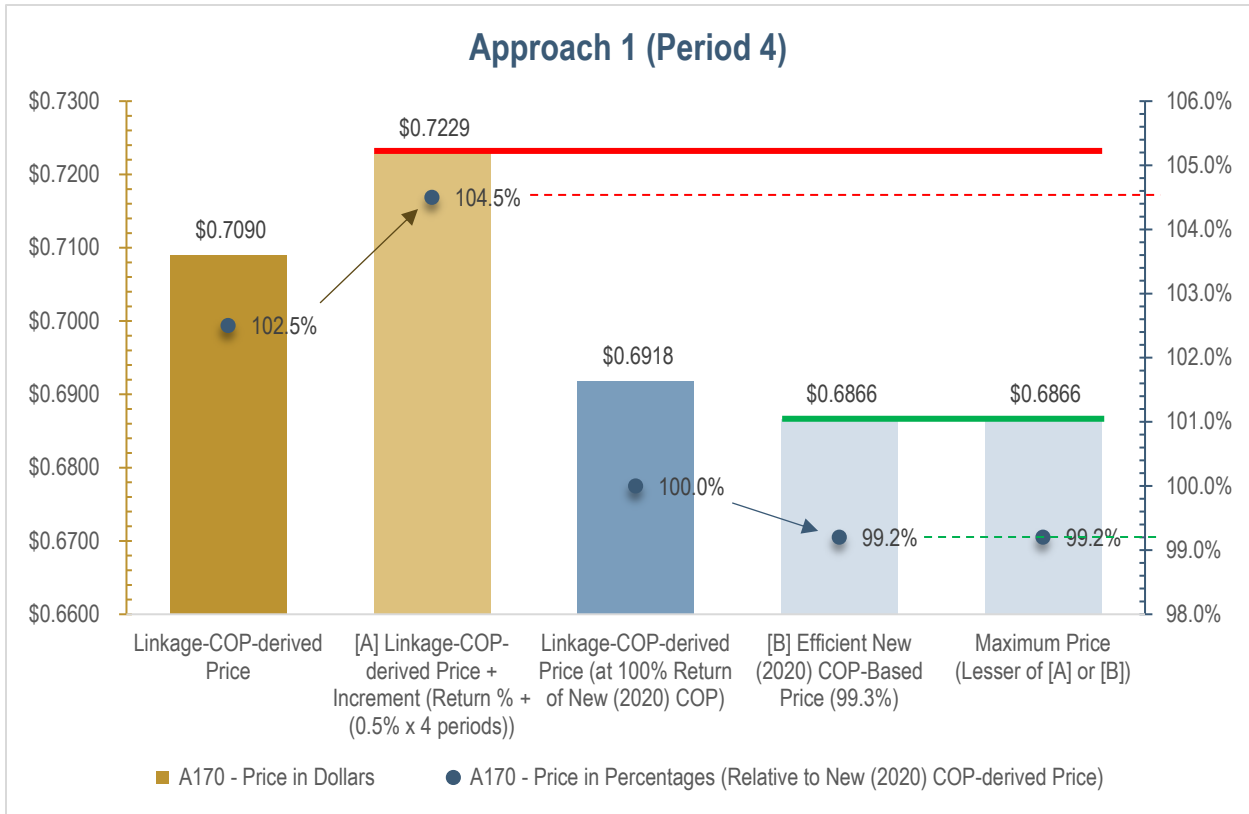
The results and comparison of the phased-in approaches are similar, and are generally capped at the maximum of the efficient New (2020) COP-derived price; this is due to the efficient New (2020) COP costs being comparable or slightly less overall than the current Linkage-COP used.

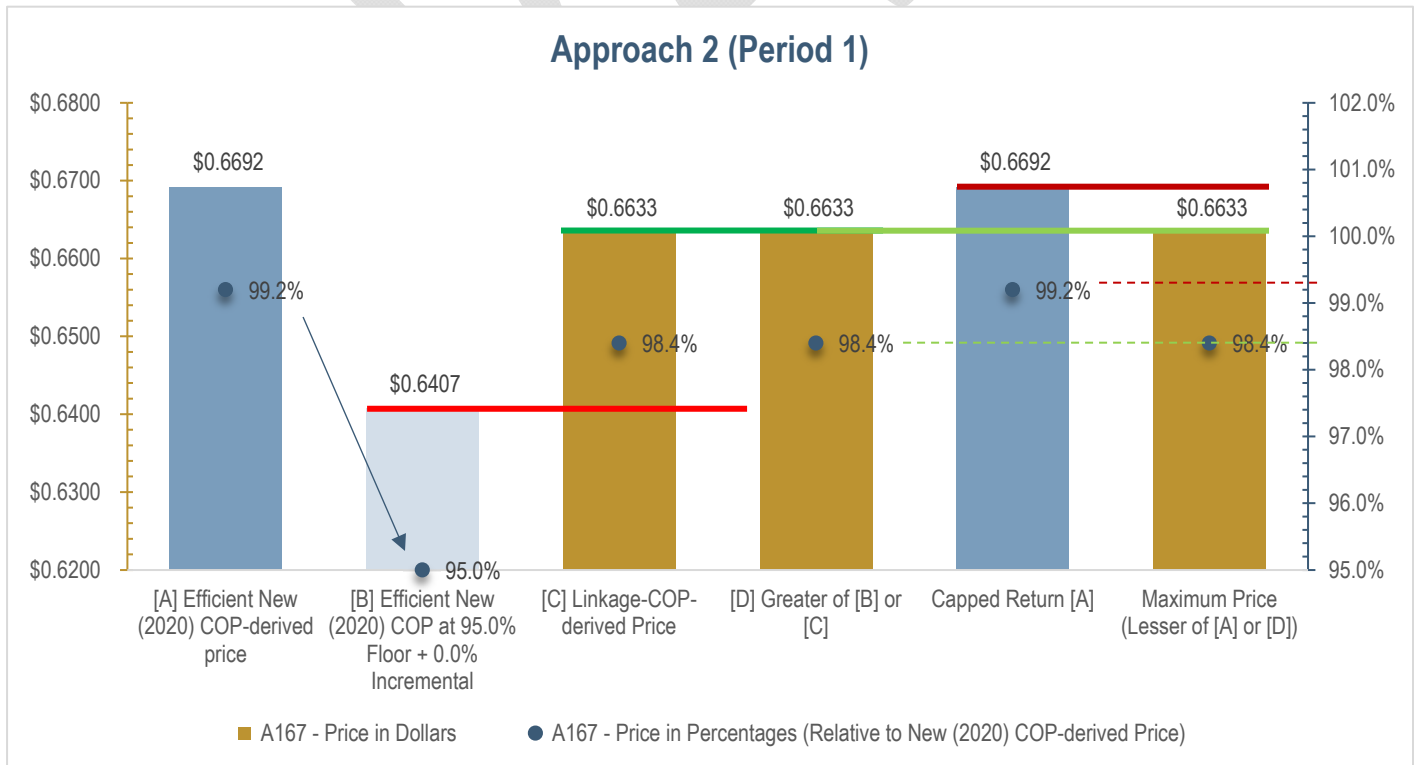
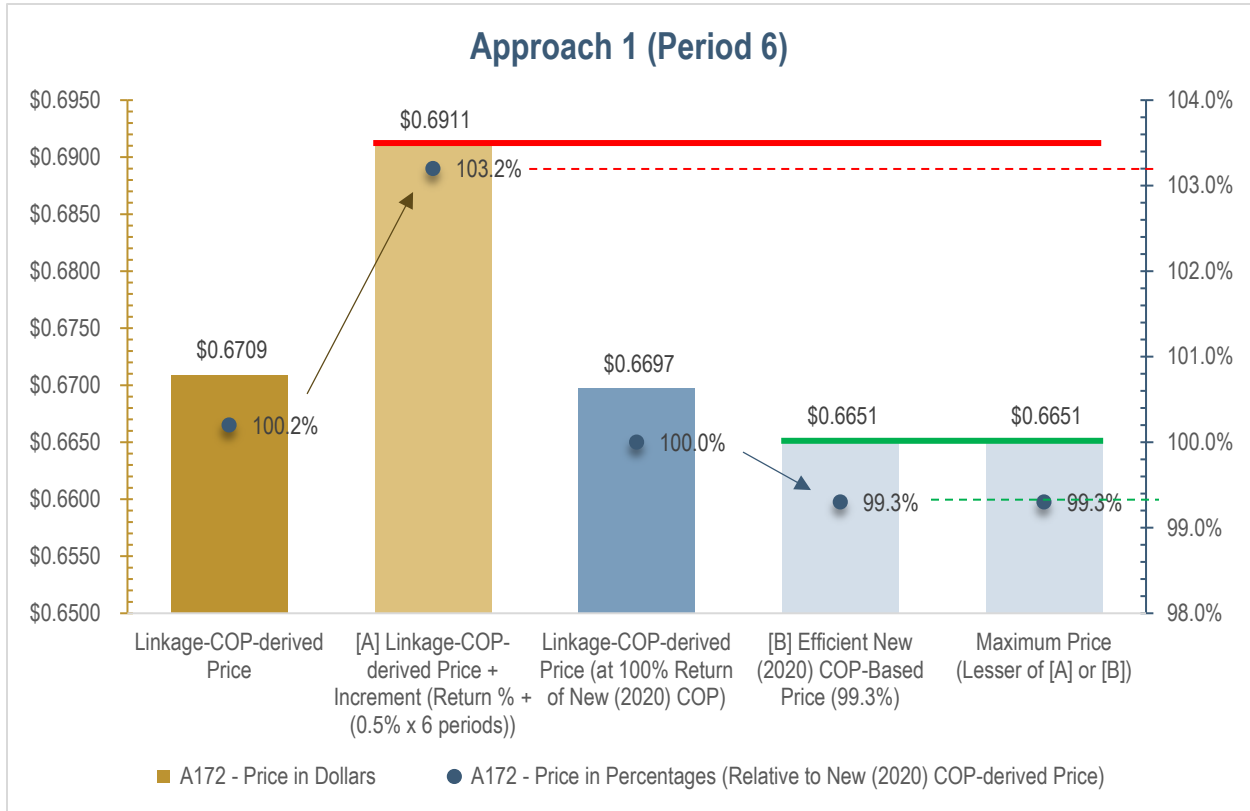
Therefore, it is not anticipated that the supply chain would be significantly affected in moving to the efficient New (2020) COP, either during the transition period or thereafter.

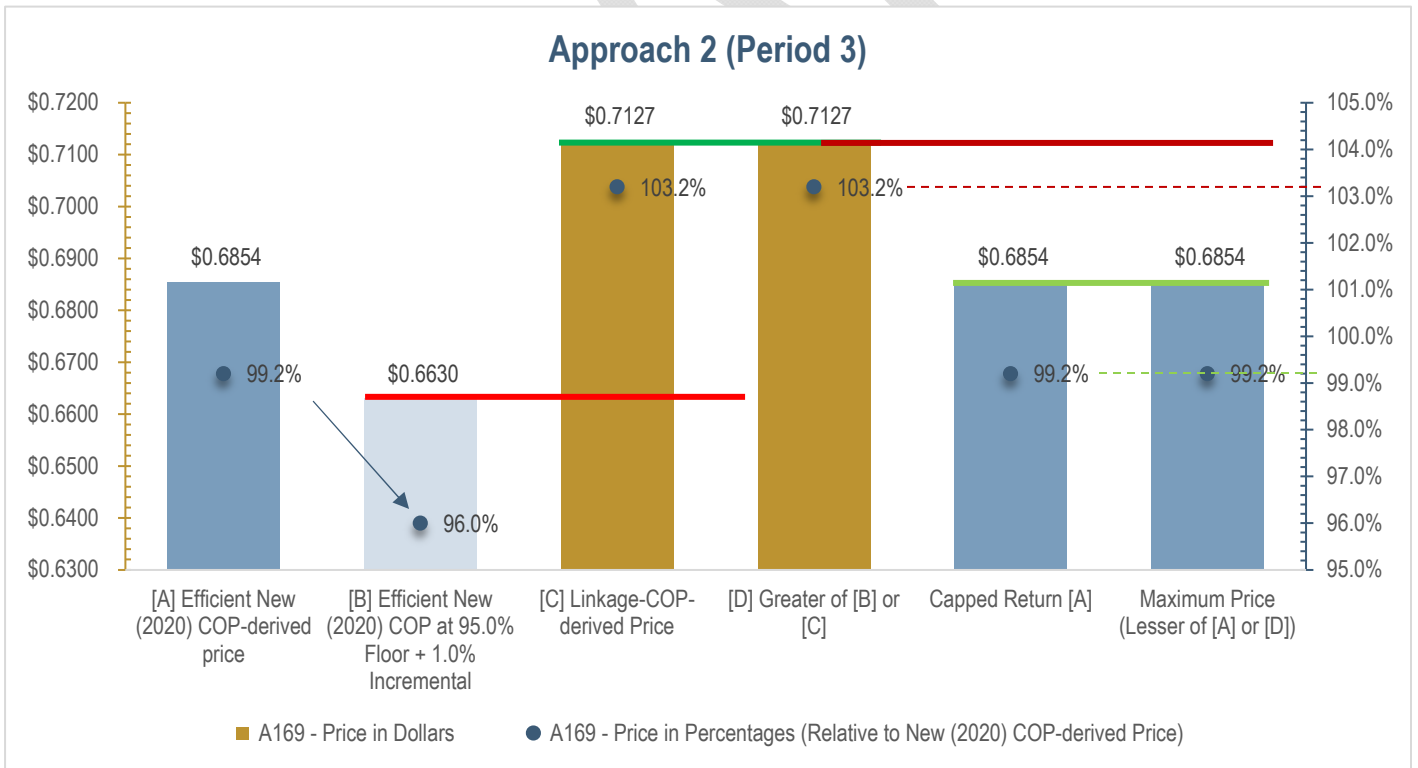
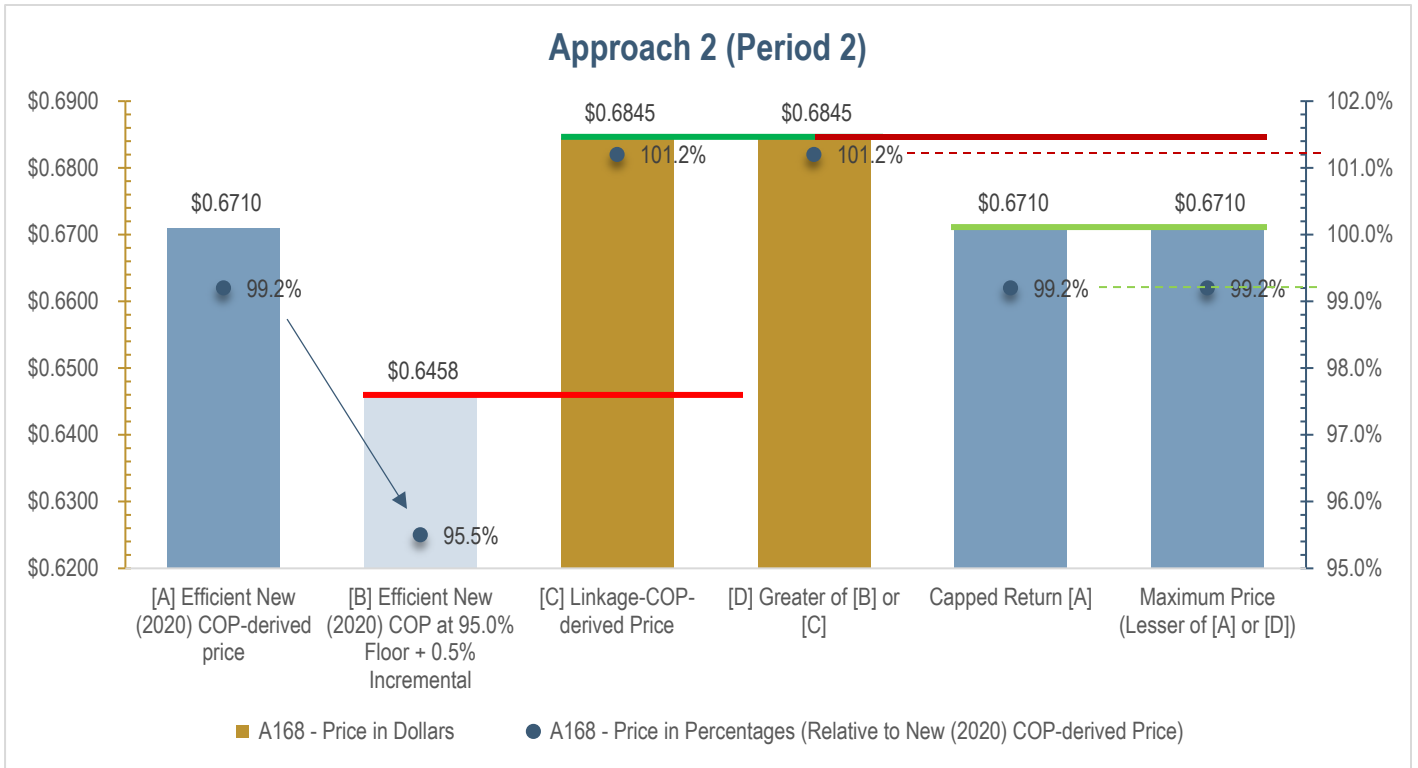
Illustrations of Phased-In Approaches

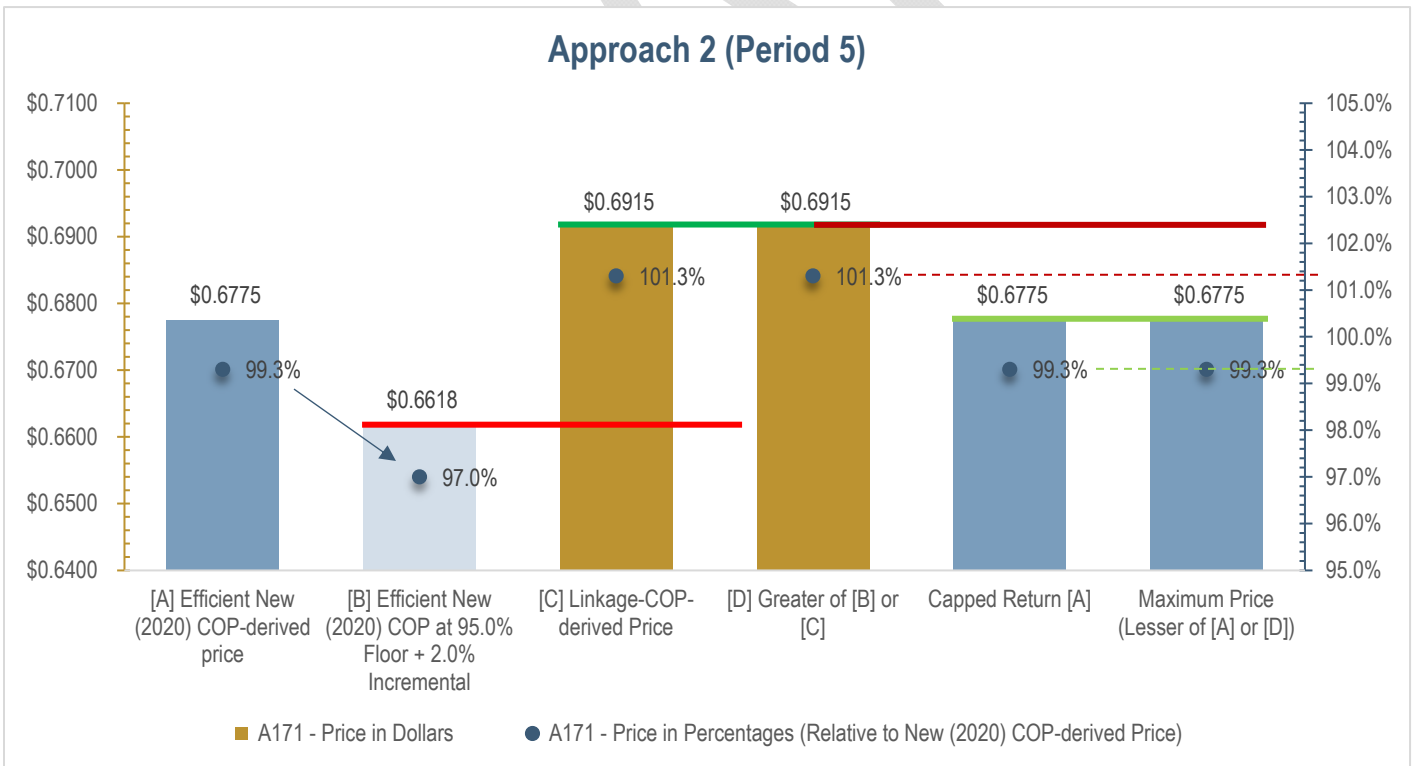
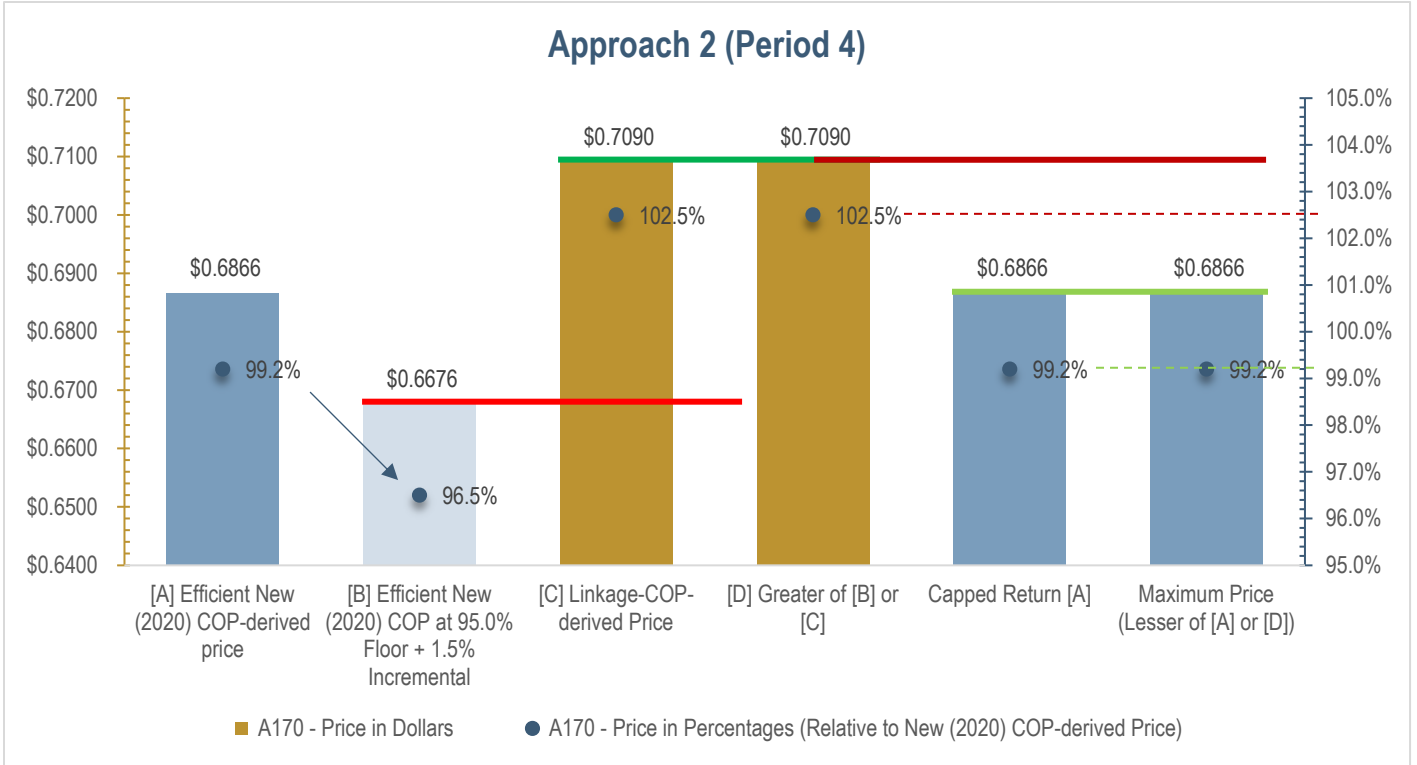


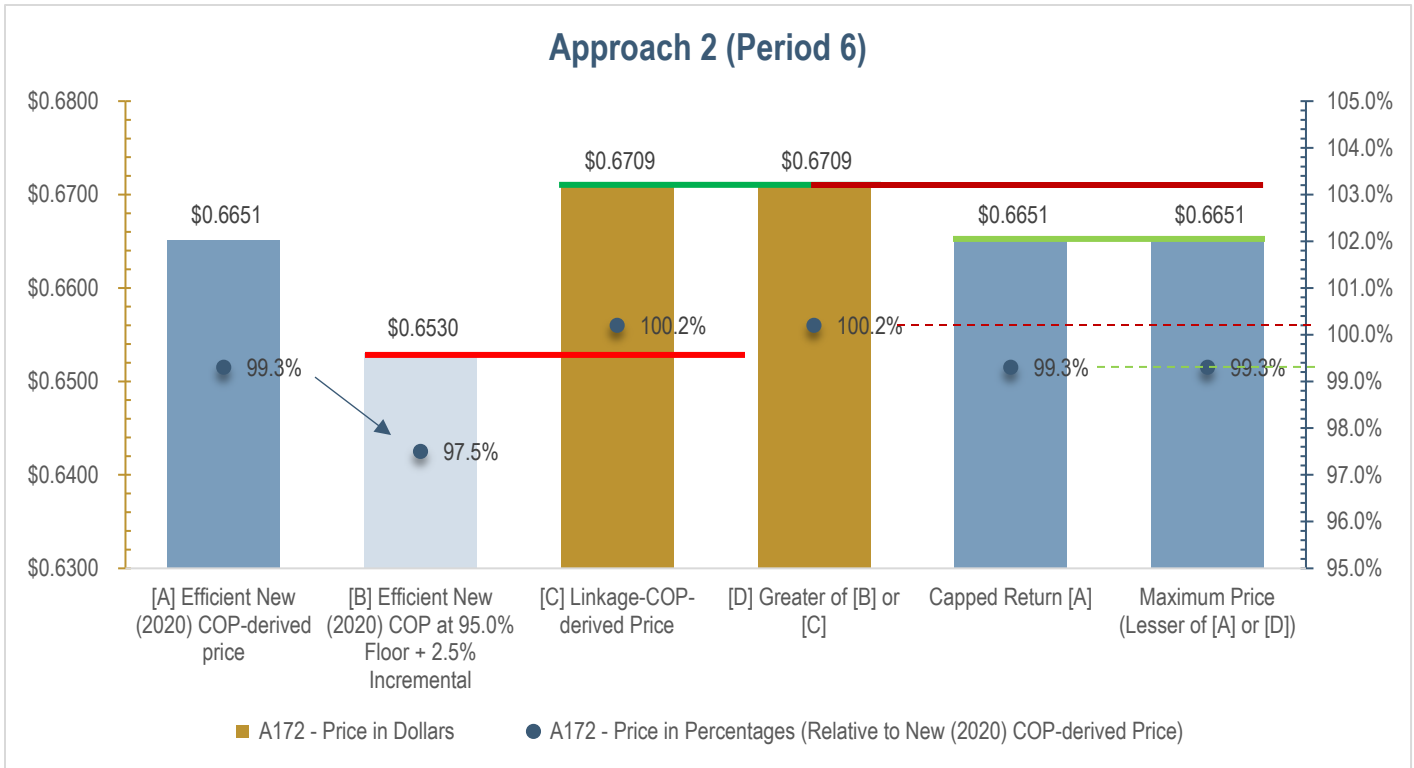












Recommended Phased-In Approach

There were two potential approaches reviewed:

1. Add an incremental percentage to the Linkage-COP-derived price, over ‘X’ periods, unless and until the efficient New (2020) COP-derived recovery is consistently achieved, capping the maximum at the efficient New (2020) COP-derived price in any one period.
2. Use a rising floor to the efficient New (2020) COP-derived recovery, over ‘X’ periods, and take the maximum price between this and the current Linkage-COP-derived price, capping the maximum at the efficient New (2020) COP-derived price in any one period.

The second approach is recommended as it provides clarity to the return at which each pricing period is to be set, and a timeline of approximately 9 pricing periods, or 72 weeks, to fully implement (should the efficient New (2020) COP-derived recovery percentage remain at 99.2-99.3%).

Further, the “take the maximum price between this and the current Linkage-COP-derived” portion is not recommended, for added clarity and assurance, thereby revising the second approach to:

2. Use a rising floor to the efficient New (2020) COP-derived recovery, over ‘X’ periods.

The following phase-in schedule can be constructed, with estimated actual pricing periods:

Pricing Period	Estimated Actual Pricing Period	Starting Date	New (2020) COP-derived recovery
1	A176	May 8, 2022	95.0%
2	A177	July 3, 2022	95.5%
3	A178	August 28, 2022	96.0%
4	A179	October 23, 2022	96.5%
5	A180	December 18, 2022	97.0%
6	A181	February 12, 2023	97.5%
7	A182	April 9, 2023	98.0%
8	A183	June 4, 2023	98.5%
9	A184	July 30, 2023	99.0%
10*	A185	September 24, 2023	99.2% (estimate)

*The actual final period of the phase-in is dependent on the Production Trimming efficiency, which is recalculated for each pricing period as detailed previously.

Hatchery Margin, Breeder Chick & Vaccine Pricing

Sub-Committee

To further discussion on pricing-related topics, a sub-committee was established between the BC Egg Hatchery Association (BCEHA) and the BC Broiler Hatching Egg Commission (BCBHEC). These topics fell into three main categories:

1. Hatchery Margin
2. Breeder Chick Costs
3. Vaccine Costs

Discussions were productive and a summary document was prepared that laid the groundwork for what was tabled to the BCEHA representatives to take back to its members in October 2019. The proposal was tabled with the Commission PPAC but not response has been received from the BCEHA with respect to the methodologies agreed to in the proposal.

Hatchery Margin

Background

The hatchery margin is the amount earned by the hatchery, on a per chick basis, between what they pay to Producers (saleable chick price) and the price they charge to Growers (day-old chick price).

The hatchery margin is fixed at \$0.1894 per chick.

In the current Linkage-based pricing model, the prices received by Producers for their saleable chicks and paid by Growers for their day-old chicks are heavily influenced by the live kg price.



The price for kilograms of eviscerated chicken, as set by the BCCMB (per its pricing model) is inputted into the Linkage algorithm which is set to balance the returns between Producers and Growers: parity.

The extent to which the saleable chick and day-old prices may move each period to achieve parity does not affect the hatchery margin – it remains at \$0.1894 as demonstrated below:

Period	Saleable Chick	Hatchery Margin	Day-Old Chick	Live Price	Recovery (Parity)
A165	\$0.6330	\$0.1894	\$0.8224	\$1.684/kg	93.16%
A166	\$0.6431	\$0.1894	\$0.8325	\$1.690/kg	93.18%
A167	\$0.6633	\$0.1894	\$0.8527	\$1.757/kg	96.11%
A168	\$0.6845	\$0.1894	\$0.8739	\$1.812/kg	96.56%

The hatchery margin since the establishment of Linkage has been a fixed margin. Beginning in period A108 and over three periods, an additional 2.0 cents (11.8%) were added to the margin to address stakeholder concerns, on the argument of increasing costs and gross margin comparisons.

Period	Effective Date (Chicks)	Saleable Chick	Hatchery Margin	Day-Old Chick
A107	October 30, 2011	\$0.5606	\$0.1693	\$0.7299
A108	December 25, 2011	\$0.5386	\$0.1793 (\$0.0100 ↑)	\$0.7179
A109	February 19, 2012	\$0.5220	\$0.1793	\$0.7013
A110	April 15, 2012	\$0.53075	\$0.1893 (\$0.0100 ↑)	\$0.7200

Per the joint BCCMB and Commission communiqué dated March 26, 2012, the inclusion of a 10 cent per kilogram fowl price increase was realized, and those savings (within the Hatching Egg COP) helped achieve an agreed-upon split of 75% / 25% (Chicken / Hatching Eggs) of how the margin increase was to be included. There was a 1.5 cent increase in the day-old broiler chick price and a 0.5 cent reduction in the saleable chick price.

Now, as was the case then, there is no set review period regarding the hatchery margin. Consultations with affected stakeholders are required to facilitate any request to change (increase) the hatchery margin as they arise.

In other provinces, notably Ontario, hatcheries fully participate in the pricing system with a COP. The COP is a full Cost of Production for Ontario Hatching Egg Producers, Pullet Growers and Hatcheries. This allows for a transparent and equitable approach to the setting of price and, thus, sharing of returns; this in turn provides for a hatchery margin that is not fixed.

At this time the BCEHA has not supported a third party-verified hatchery COP comparable to that of Ontario's COP, but instead to a third party-verified specific costs report on those it believes are most directly attributable to the incubation and hatching of hatching eggs (e.g., hydro and labour). The Commission reviewed this possibility through the lens of a CPI/COLA hatchery margin mechanism. Although the Commission appreciates that such an approach could be a useful transition to a full hatchery COP, it remains of the opinion that costs should not be selectively chosen; when conversely, all costs and ancillary revenue streams are captured by Hatching Egg Producers' latest COP.

Hatchery Margin Increase Request

The initial request made by the BCEHA at the Sub-Committee level was for a 3.0 cent increase to the hatchery margin but subsequently agreed to a 1.75 cent increase.

Current	Increase	New
\$0.1894	\$0.0175 (9.2%)	\$0.2069

This equates to a 9.2% increase. With the last increase in April 2012, nine years ago, the effective annual compound rate would be approximately 1.0%, as illustrated:

Year	Rate	New Price
2013	1.0%	\$0.1913
2014	1.0%	\$0.1932
...
2020	1.0%	\$0.2049
2021	1.0%	\$0.2069

As illustrated at the Roundtable on the Commission's COP, as lay cycle increases, price per saleable chick and day-old chick price decrease.

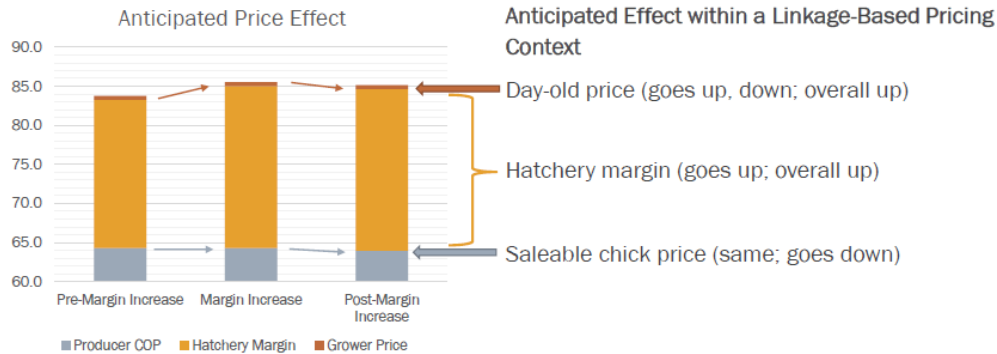
Again, it is important to note that as the hatchery margin is static, hatcheries may not participate in efficiencies that may be experienced in the system as more chicks are throughput (beyond current + incremental costs divided by a higher chick throughput number). A third party-verified COP of hatcheries would better enable the Chicken Industry to

identify and address hatchery competitiveness as part of an overall approach to increasing the competitiveness of the BC industry generally.

Pricing Effects

Difficulties arise in building scenarios given the many inter-related aspects of pricing. However, based on the live kg pricing algorithm, it is generally understood that 75% of any increase in day-old price is, over time, recovered through the live kg price.

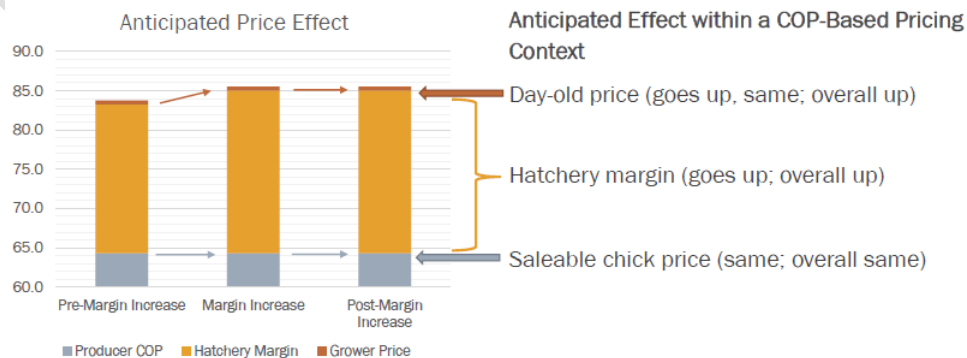
Illustrated below is the effect under the Linkage-Based Pricing Model currently employed:



Under the Linkage-Based Pricing Model, returns to Producers and Growers are equalized (parity) with the price paid by Processors ultimately decided by the Pricing Model employed by BCCMB. The day-old chick price differential between BC and Ontario (Ontario live price is upon which the Pricing Model is based) is permitted to be added to BC's live kg price at an inclusion rate of 75%. Therefore, if the hatchery margin is increased, the day-old chick price is increased of which 75% is captured (25% unrecovered in the system), all else equal.

Producers and Growers would see this increase in their price but not returns through an increased live kg price. Over at least the last nine years, farmers have not been receiving a full return of their costs and any hatchery margin increase would result in farmers being out-of-pocket 25% of the hatchery margin increase.

Illustrated below is the effect under the recommended COP-Based Pricing Model:



Under the recommended COP-Based Pricing Model, the hatching egg price, continuing to be expressed as both a per dozen and saleable chick, would be set at the price derived by the Hatching Egg COP (less any adjustments contemplated as part of a transition period). The saleable chick price would remain unchanged under a hatchery margin increase as Hatching Egg Producers will have received their full costs back; the hatchery margin would be 'added on' and the result would be the day-old chick price, all else equal.

BC's hatching egg allocation, 2022 (first allocation)	124,209,571 eggs
Current hatchability rate, 2021 YTD	83.6%
Less cull rate, estimate	<u>(2.0%)</u>
Saleable Chick rate	<u>81.6%</u>
Saleable Chicks	101,355,010
Hatchery Margin increase, per Chick	<u>\$0.0175</u>
Hatchery Margin increase, total cost	\$1,773,713

Hatchery Margin Increase Mechanism

It has been noted by all parties that historically there has been no set review period, hatchery efficiency standards requirement, or memorandum of understanding that lays out the hatchery margin request process. The Commission has recognized that an established, regular process that is not relationship dependent is best in removing the acrimonious and ad-hoc nature of the current process.

In its October 2019 proposal, the Sub-Committee explored the prospect of a CPI-type margin adjustment mechanism that would automatically adjust the hatchery margin and be verified through a third-party review of costs/COP at regular intervals. The costs most noted by hatcheries were hydro and labour, with a full COP of hatchery costs not supported by BCEHA representatives.

The Sub-Committee reviewed possible indices that may be suitable for these purposes while acknowledging that there may yet be one more suitable to representing hatchery costs:

Sampled Indices	April 2012 – October 2018
CPI – all items, Canada	1.44%
CPI – all items, BC	1.40%
Industrial Products Price Index (IPPI) – excl. petroleum & coal	1.44%
IPPI – meat, fish and dairy products	1.90%
Raw Materials Price Index (RMPI)	Excluded – below 0%
RMPI – excl. mineral fuels	Excluded – below 0%
RMPI – animal and animal products	Excluded – below 0%
Employees, average hourly wages – Natural resources, agriculture and related production occupations	3.07%

No one index produced 'stable' results or consistency on a year-over-year basis outside of the CPI, which, by its nature, encompasses a wide 'basket' of goods and services that go well beyond the purview of the Commission. Significant variability existed in all others, whether a price or cost index. It would not be in keeping with the historical nature of the hatchery margin or understanding of hatchery costs to peg its margin to a highly variable index, not to mention of introducing pricing instability into the system.

Alternatively, while most hatchery wages may be set well above minimum wage standards, the percentage increase in the provincial minimum wage may act as the best proxy to eliminate some variability.

Costs generally increase over time, but the underlying costs that hatcheries consider most directly attributable to the incubation and hatching of hatching eggs (e.g., hydro and labour) may not actually do so predictably.

Under any index that may be employed, a general three-year review of the underlying costs was assumed; this would parallel the usual timeline of the Hatching Eggs COP update.

Hatchery Efficiencies

A common refrain by certain stakeholders is production efficiency in the Hatching Egg Producer's COP. The Commission agrees that efficiencies and driving costs out of the system are important. These are concepts that should apply equally to all stakeholders, including the non-farmer benefactors of supply management – notably the Hatcheries and Processors. Increasing the competitiveness of the BC industry should be a priority for all stakeholders.

As shown under the pricing effects above, the costs of any hatchery margin increase are borne by those further down the supply chain. To what extent depends both upon the underlying pricing model and efficiency factors. It is not lost on the Commission that hatchery efficiency, and definitions thereon, were not addressed by the Sub-Committee while awaiting the BCEHA's response to the proposed formulae. It is now critical to establish a hatchery margin increase mechanism and efficiencies in support of implementing the proposed formulae.

Recommendation

The proposed 1.75 cent per saleable chick hatchery margin increase equates to an approximate 1.0% annualized increase over the nine years since last changed. In consideration of the costs incurred by hatcheries, which were generally described as hydro and labour, it is recommended that the margin be increased by the 1.75 cents as proposed within the context of a COP-Based Pricing Model only. It would be neither sustainable nor palatable to require farmers (Producers and Growers) to pay for one-quarter of the hatchery margin increase while continuing to not receive their full COP returns.

With respect to the hatchery margin being updated annually, the Commission remains of the opinion that a full COP of BC hatcheries, similar to the process in other provinces, would yield the best cost 'index' to use in updating the hatchery margin on a consistent basis. This considers the unique and somewhat protected business environment in which Hatcheries find themselves operating.

Likewise, without such a COP it is difficult for the Commission to attribute a sufficient and appropriate return for the Hatcheries. Setting the Hatchery margin is a regulatory pricing decision of the Commission that must be defensible. As the same time, the purpose of the proposed formulae approach is to establish a constructive approach to addressing the Hatchery margin issue without introducing further pricing instability into the system.

Before implementing the new hatchery margin with a COLA-type mechanism, the Commission will work with the BCEHA and undertake further consultation with the BCCMB to confirm an acceptable cost verification method that will provide for better transparency and stability while enhancing stakeholder confidence in the pricing system.

Breeder Chick Pricing

Background

A significant cost input in the HE COP is the breeder chick price (Pullets line item). As the BC Broiler Hatching Egg industry operates using a hen-based quota system, staff run an Official Flock Schedule to ensure the right eggs at the right time, and that the right hens are ordered, based on the most recent data available. Few decisions regarding placements and breeder chicks remain with the Producer.

Current Approach

Placement Orders

- Female breeder chick – number, extras, date and by which hatchery, are all set by the Commission.
- Breed choice (Ross vs. Cobb) and supply method (breeder eggs hatched locally vs. chick fly-ins/truck-ins) are determined by hatcheries.
- Producers decide the number of male breeders to purchase (the Commission recommends 12-13% of the female breeder number).

Placement Cost

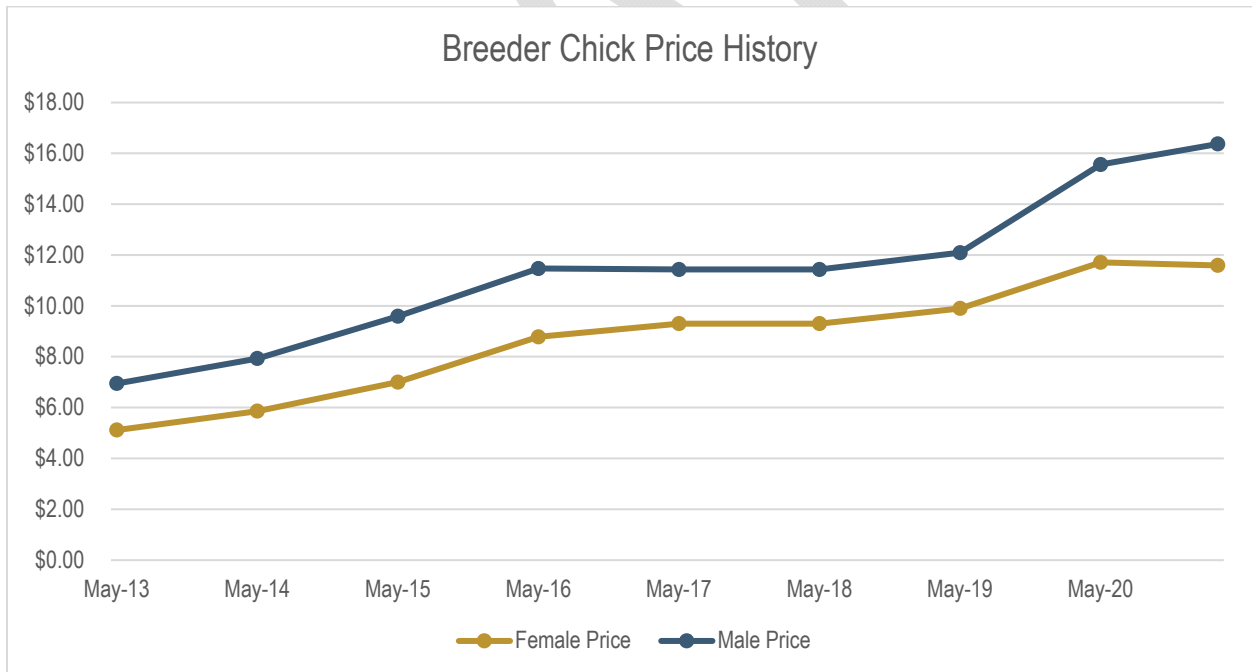
- Hatcheries advise the Commission at the beginning of each pricing period the female and male breeder chick price they will charge to their assigned producers who have placements in that period.
 - o These costs are incorporated into the COP.
- Hatcheries provide one female breeder chick price, and one male breeder chick price.
- Hatcheries do not provide a breakdown or rationale on the cost.
- A significant portion of the costs are in United States Dollars, then converted.
- A significant portion of the costs are generally not within the control of either the hatchery or producer (e.g., breeder company prices, foreign exchange, etc.).
- The cost incorporates an approximate 20% margin to the hatcheries.
- Services and time provided by the hatcheries to supply the female and male breeder chicks generally remain the same regardless of the change in costs.
 - o Therefore, if foreign exchange costs increased, an additional 20% is pass through into the COP system.
- As agreed to by the Sub-Committee, the cost does not factor in other benefits received by hatcheries, such as:
 - o Breeder company reward programs
 - o Reductions in price with faster payment terms
 - o Offlines placed resulting from hatching breeder eggs locally (viable chicks in excess of the breeder chick order as set by the Commission that are placed onto broiler farms); such offlines are counted against domestic producers' allocation on a one-to-one basis.
- Breeder companies generally increase the price once a year and those increases have exceeded inflation for several years.
- Producers are required by the Consolidated Order to pay their hatchery chick bill within 30 days.
 - o Hatcheries are permitted to withhold other payments to producers (i.e., on saleable chicks) to resolve the debt.

Price History

A significant increase in pricing has been experienced by the sector. A large amount of the increase is attributable to breeder company price increases, per hatcheries.

Month	Female Price	Male Price
March 2021	\$11.59	\$16.37
May 2020	\$11.71	\$15.56
May 2019	\$9.90	\$12.09
May 2018	\$9.30	\$11.43
May 2017	\$9.30	\$11.43
May 2016	\$8.78	\$11.47
May 2015	\$7.00	\$9.59
May 2014	\$5.86	\$7.93
May 2013	\$5.12	\$6.95

Month	Female Price	Male Price
March 2021	\$11.59	\$16.37
May 2013	\$5.12	\$6.95
Increase	\$6.47 (126%)	\$9.42 (136%)
Annualized	10.8%	11.3%

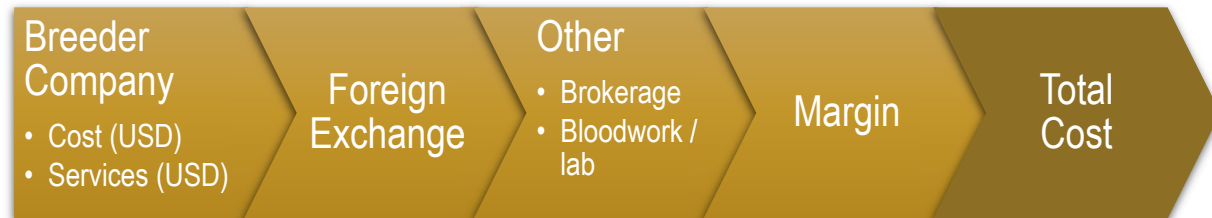


The cost of breeder chicks is factored into the Linkage. Given that the pricing of breeder chicks falls within the purview of the Commission, it is important that this pricing be transparent and defensible while supporting increased cost efficiencies.

Recommended Approach

The parties to the Sub-Committee made a commitment to transparency and establishing formulae to achieve this.

Significant components of the current breeder chick price include the breeder company cost, foreign exchange, other services and a margin:



Breeder Company

Cost (USD)

At this time, prices paid by Producers depend on the breed selected by their assigned hatchery. Therefore, although the Linkage is updated each period, it uses an average price and so Producers do not experience the same costs at the placement of their flock.

Therefore, the Commission would establish a weighted-average cost per female breeder and male breeder each pricing period that would be charged to producers regardless of chosen breed. Specific elements would include:

- The cost as charged by the breeder companies (currently Aviagen and Cobb).
 - Breeder Company cost sheets provided by the BCEHA, or preferably directly from the breeder companies to the Commission. This would reduce administration burden.
- The breed mix, as determined by using a rolling average of actual placements in preceding 12 months.
 - Alternative: use projected placement orders and multiply each hatchery's current market share as determined by chick placements. This adds additional variables and an element of modelling – this alternative is not recommended.
- A separate cost for female and male breeders is calculated.
 - Alternative: use a combined female and male breeder chick cost by 'locking in' an assumed order of male-to-female ratio of 'x' percent, say 10%. This adds additional variables, removes a potential business choice from the Producer (which may be inconsistent with their Spiking Male Farm Plan), does not permit the price of an order to be changed by hatcheries based on a male-to-female ratio that is not 10% and adds elements of modelling – this alternative is not recommended.

Services (USD)

The services or vaccines included by breeder companies as described to the Sub-Committee included:

- Beak trimming
- Merek 2177
- Coccivac
- Merek Innovac ILT

This list was neither completed nor had a cost appropriately ascribed to each element.

It is recommended that the list be finalized, with these costs provided by the BCEHA, or preferably directly from the breeder companies to the Commission each pricing period. Changes to the list would require consultation with the Commission PPAC. No alternatives were identified.

Foreign Exchange

As the cost and services provided by the breeder companies are denominated in US dollars, an exchange into Canadian dollars is required. Specific elements would include:

- Using the Bank of Canada posted rate
 - Alternative: None identified.
- Using the average monthly rate of the last posted month available.
 - Alternative: use the spot rate. This rate is highly volatile and given its nature may not be as indicative of what the exchange rate may be over the course of the next 8 weeks – this alternative is not recommended.
 - Alternative: rate that aligns with the current period, immediately preceding this one being priced (e.g., A168's exchange rate history for setting A169 breeder chick prices). This rate, close to eight-weeks in length, may not be current enough and is incomplete given pricing is generally set by the week preceding the start of the next period.
- Use the blended buy and sell rate.
 - Alternative: take the buy rate or take the blended rate plus an increment. As neither the Commission nor the hatcheries forecast foreign exchange rate, and such rates may go up or down, adding this additional variable introduces an element of modelling – this alternative is not recommended.

Other Costs

Local costs incurred by hatcheries as described to the Sub-Committee included:

- Brokerage. A price of \$0.1000 per chick was ascribed to brokerage. This figure requires verification before the Commission can include this in its decision to approve the pricing formula.
 - Alternative: None identified.
- Blood work and lab costing \$2,500 for the lab, mileage of \$500 and labour \$500 for each flock. The reported cost on an 8,000-hen flock was \$0.4375 per chick. Upon closer review, the lab cost for the Broiler Breeder Bloods Program is currently paid by the Commission, and no supporting documentation was provided for mileage and labour. It is recommended that this line item is not included in the breeder chick price formulae.
 - Alternative: None identified.

It is recommended that the list be finalized, with these costs provided by the BCEHA to the Commission each pricing period. Changes to the list impacting on pricing would require the approval of the Commission.

Breeder Chick Margin

It was stated that the hatcheries apply a 20% gross margin to the costs of the breeder chick after foreign exchange conversion and brokerage fees. This is to cover the cost of providing the service of placing the breeder chicks on the Producers' farms.

The margin % can be expressed as gross profit / selling price. To achieve what the profit margin in dollars is one multiplies the selling price by the margin % sought. Our understanding of this was confirmed by the BCEHA representatives.

Month	Female Price	20% Margin	Implied Cost before Margin	Male Price	20% Margin	Implied Cost before Margin
March 2021	\$11.59	\$2.318	\$9.272	\$16.37	\$3.274	\$13.096
May 2013	\$5.12	\$1.024	\$4.096	\$6.95	\$1.390	\$5.560
Increase	\$6.47 (126%)	\$1.294	\$5.176	\$9.42 (136%)	\$1.884	\$7.536
Annualized	10.8%			11.3%		

Over the past eight years, the margin has increased while utilization has also increased. As the quota system is hen-based, this has a direct impact upon pricing and the supply chain. Utilization is currently at 96% but has varied from 86% to 106% over this period of time.

The Commission manages 1,766,182 quota hens over a two-year cycle. The effect of this price variance on the industry:

	Females	Males
Quota	1,766,182	-
Per year	883,091	-
Utilization	96%	-
Placed	847,767	105,971 (12.5% ratio assumed)
Increased Margin	\$1.294	\$1.884
Increased Cost to Producer	\$1,097,010	\$199,649

	Total
Cost to Producers & Growers	\$1,296,659
Recovery rate at sub-optimal Linkage-Based Pricing	75%
Cost to Processors, estimated	\$972,494

The breeder chick margin increase is 55%, more than half, of the hatchery margin increase request of 1.75 cents, calculated to be \$1.78 million.

To put this in perspective, the cost of the breeder chick margin increase and total margin included in the price charged to producers can be expressed on a per chick basis, using an average of 115 saleable chicks per hen:

	Per Hen	Per Saleable Chick
Breeder chick margin increase	$\$1.294 + (\$1.884 \times 12.5\%) = \$1.530$	\$0.0133 or 1.33 cents
Breeder chick margin, total	$\$2.318 + (\$3.274 \times 12.5\%) = \$2.727$	\$0.0237 or 2.37 cents

It can be ascertained that due to the increase in breeder chick costs (for which it is acknowledged there is little that can be controlled save for the breeder chick margin hatcheries impose), hatcheries have attained an implied 1.33 cents per saleable chick margin increase when considering the female and male breeder chick margins. It could be stated that most of the 1.75 cent hatchery margin increase request has already been received by hatcheries under this pricing approach where hatcheries set the price without full transparency.

Breeder chick placements are a necessary part of the hatching egg industry; hatcheries must place breeder chicks so that Producers have flocks to meet our provincial allocation obligation. A service is clearly provided, but now clarity on compensation hatcheries receive providing this ancillary service is also required.

In order to achieve this and reduce the deleterious effects that arise from a margin being based on costs not in our control, the Commission recommends 'locking in' or 'crystallizing' the margin or portion thereof. Consistent with the

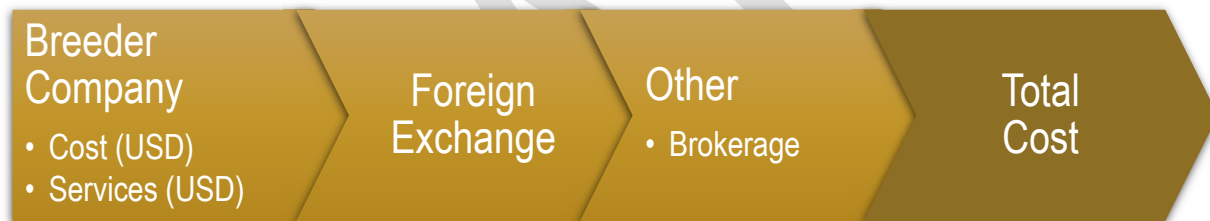
principles of a hatchery margin increase mechanism, no mechanism to change this figure is recommended without consultation with the BCEHA and other stakeholders about an acceptable cost verification method.

The Commission also recommends the margin be expressed on a saleable chick basis, as part of the hatchery margin. This would bring the costing of breeder chicks more closely in line with that of Ontario, where Producers receive a true ‘flow-through’ cost and transparent invoicing.

Under a COP-Based Pricing Model, the expression of the margin as either a cost to Producers on the date of placement (\$ per breeder chick) or addition to the hatchery margin (¢ per saleable chick) results in the same day-old price for Growers. A charge per breeder chick, flowed through the COP, and returned to Producers via their price plus hatchery margin will equal the same as a lower, leaner COP plus hatchery margin plus breeder chick margin expressed on a saleable chick basis (an overall increased hatchery margin). This leaner COP would also have a positive result upon the calculated returns to Producers while having no effect on the day-old chick price paid by the Grower. Therefore, this alternative is recommended.

The Commission recommends crystallization of the breeder chick margin at a rate of 1.25 cents per saleable chick, approximately one-half of the implied 2.37 cent margin within the system currently. This would be an approximate crystallization of a 10.5% breeder chick margin. Combining this with hatchery margin request would equal a net hatchery margin increase of 3.0 cents (1.25 cent breeder chick margin cost translation + 1.75 cent hatchery margin increase). This reflects the agreement reached by the Sub-Committee.

Final breeder chick price formula components:



As discussed by the Sub-Committee, it is acknowledged that this final formula does not address other benefits received by hatcheries under the current pricing method, such as: breeder company reward programs, reductions in price with faster payment terms, or offlines placed as a result from hatching breeder eggs locally. On the other side it does not address the carrying costs incurred by hatcheries in paying the breeder company directly before receiving payments from Producers, whether or not it achieves a reduction in the final bill by way of payment terms.

Example pricing:

	Female	Male
Breeder company cost (USD)	\$7.0000	\$10.0000
Services (USD)	<u>\$0.1444</u>	<u>\$ 0.1444</u>
Subtotal (USD)	\$7.1444	\$10.1444
Foreign exchange – 2021-03	<u>1.2574</u>	<u>1.2574</u>
Subtotal (CAD)	\$8.98	\$12.76
Other – brokerage (CAD)	<u>\$0.10</u>	<u>\$ 0.10</u>
Price (CAD)	\$9.08	\$12.86

The example pricing uses actual data for only the foreign exchange rate.

Further Analysis

An example is provided here layering in potential effects of the breeder chick pricing formulae and hatchery margin, with an estimated price effect on day-old broiler chicks on the final pricing period of the set reviewed previously.

Price	A167	A168	A169	A170	A171	A172
New (2020) COP, Per S.C.	\$0.6819	\$0.6837	\$0.6981	\$0.6993	\$0.6898	\$0.6772
Linkage-COP, per S.C.	\$0.6633	\$0.6845	\$0.7127	\$0.7090	\$0.6915	\$0.6709
Difference	(\$0.0186) (1.86¢)	\$0.0008 0.08¢	\$0.0146 1.46¢	\$0.0097 0.97¢	\$0.0017 0.17¢	(\$0.0063) (0.63¢)
% Recovery vs. Linkage-COP-derived price	97.3%	100.1%	102.1%	101.4%	100.2%	99.1%

Summary table from Further Analysis under COP-Based Pricing Effects.

Comparison with Mechanisms Added

Price per Saleable Chick	A172 (Previous)	A172 (New)
New (2020) COP, Per S.C.	\$0.6772	\$0.6772
Mechanisms		
+/- Feed ¹	-	-
+/- Processing dates ¹	-	-
+/- Breeder chick ²	-	(\$0.0237)
+/- Vaccine adjustment ¹	-	-
+/- Utilization ³	-	-
+/- Industry Benefit Index ⁴	\$0.0010	\$0.0010
+/- Hatch average ³	-	-
+/- Ancillary revenues ⁵	(\$0.0085)	(\$0.0085)
+/- New costs ¹	-	-
New (2020) COP with Mechanisms	\$0.6697	\$0.6460

1 No change.

2 Removal of estimated margin on breeder chicks, as expressed in saleable chick. Breeder chick price (cost) formulae to be finalized, no other changes estimable.

3 Not recommended to be updated on a period-by-period basis.

4 Set at the example of \$100,000 related to industry benefit.

5 Estimated at lay cycle at 56.1 weeks.

Comparison with Efficiencies Added

Price per Saleable Chick	A172 (Previous)	A172 (New)
New (2020) COP with Mechanisms	\$0.6697	\$0.6460
Expressed as Recovery of Cost	100.0%	100.0%
Efficiencies		
+/- Saleable Chick Payment	-	-
+/- 70% Hatch	-	-
+/- Production trimming ¹	(\$0.0046)	(\$0.0044)
New (2020) COP w/ Mechanisms & Efficiencies – for Pricing	\$0.6651	\$0.6416
Expressed as Recovery of Cost	99.3%	99.3%

1 Period A172 was at a 58-week lay cycle. Lower figure of \$0.0044 under new approach is expected as a lower cost is in the COP, as represented by a price per saleable chick of \$0.6460 versus \$0.6697.

Hatchery Margin Added

Price	A172 (Previous)	A172 (New)
New (2020) COP w/ Mechanisms & Efficiencies – for Pricing	\$0.6651	\$0.6416
Hatchery Margin – Current	\$0.1894	\$0.1894
Hatchery Margin – Base increase 1.75¢	\$0.0175	-
Hatchery Margin – Base increase 1.75¢ plus 1.25¢ for breeder chick margin ¹	-	\$0.0300
Day-Old Chick Price	\$0.8720	\$0.8610

1 A total hatchery margin increase of 3.00¢ is proposed with a formula-based approach to breeder chick pricing

Comparison with Linkage-Based Price

Price	A172 (Previous)	A172 (New)
Day-Old Chick Price	\$0.8720	\$0.8610
Linkage-Based Day-Old Chick Price	\$0.8603	\$0.8603
Difference	\$0.0117	\$0.0007
Difference %	1.4%	0.1%

In this example, for period A172 with a 3.00¢ hatchery margin increase (with a formula-based approach to breeder chick pricing), the day-old broiler chick price is similar to the current Linkage-based price at \$0.8610 versus \$0.8603. With all other constants held, this estimated difference of \$0.0007 would be expected to hold under a fixed hatchery margin.

Vaccine Pricing

Background

Vaccinations have a significant impact on Producer flocks' progeny. Similar to the breeder chick price, the amount paid by Producers varies depending on the vaccination schedule of their assigned hatchery.

There are also differences in cost depending on whether the vaccine is commercial or autogenous (more expensive).

Mandatory vaccination schedules are routinely updated by hatcheries in response to disease issues on broiler farms; the inclusion of a cost in the COP/Linkage requires attention to ensure timely incorporation.

Recommendation

The Commission has prepared a separate Work Action Plan to address the vaccination schedule and establishment of a cost sleeve. The current costs of vaccines were captured in the COP, and the updating of these costs as laid out in the COP Update Mechanisms section of this Pricing Package.