From: Josh at Dueck Builders
Sent: Wednesday, June 7, 2023 4:19 PM
To:
Cc:
Subject: RE: Winnipeg.ca : Submit communications to Council / Register in delegation

I would like the attached spreadsheet with a quick explainer sent out for info ahead of Monday's meeting. Looking forward to presenting to the council.

Explanation:
This spreadsheet was developed between myself, a custom home builder, and Gio from PrairieHouse Performance (an energy modeller) to determine estimated costs for each tier to the new energy code. The reference house was an intricate custom home with way above average glazing. This would certainly make our costing on the higher end of average, and the savings on the lower end of savings (ie most homes would cost less to build at higher level, with more energy savings). Our final build was just a bit shy of tier 5.

Each column compares the cost of building the reference house (a home we built on Bobiche) at a current level, tier 1 level, tier 2 level etc. and an idea of expected energy savings. All tiers pay back the expected costs within ~15 years based solely on energy usage. This doesn't include utility rates increasing, carbon taxes increasing, or maintenance savings from a) reduced load on mechanical equipment, b) better windows that have less thermal stress, c) issues with mold/humidity etc that come with lower air tightness etc. It also doesn't factor the added comfort or reduced carbon footprint.

Having communicated with numerous peers and vendors in the industry it seems most builders are already building at a tier 3 level. Adopting at tier 3 would not require re-training, supply chain adaptations or costly consulting for builders. Efficiency MB prescriptive path would provide the tier 3 certification.

Having paybacks within 15 years, seems a no-brainer as I'm confident that even the builders who wish to adopt at tier 1 could handle building a home that lasts for 15 years. It seems to be a consumer protection issue, and Winnipeg is one of the toughest climates in the world to build in. Let's make sure we are all building smart, efficient homes!

Josh Friesen

DUECK
BUILDERS

	2010 Code		
	Desc	**Cost from Prv**	
Wall Assembly	2x6 @ 24" o/c c/w r-20 fiberglass	$	-
Windows	Dual Pane Low-e Argon Windows	$	-
DWHR	ThermoDrain	$	-
Air Conditioning	13 Seer	$	-
Energy Modelling	No	$	-
Attic	r-50		
			Total Cost (R
			Total yearly savings (R

****Yearly Savings****

$12/yr for A/C from 13 to 14.5 seer
25% of home heat loss through walls, space heating/cooling accounts for 44% energy usage, wall insulation based on that portion of overall expectd energy

Assumed Costs		
MB Hydro Rate (/kwh)	$	0.0932

Tier 1			Tier 2
Desc	**Cost from Prv**		**Desc**
2x6 @24" o/c c/w r-22 fiberglass	$	1,288.17	2x6 @24" o/c c/w r-22 fiberglass
Dual Pane Low-e Argon Windows	$	-	Dual Pane Low-e Argon Windows
None	-$	946.95	None
14.5 Seer	$	500.76	14.5 Seer
None	$	-	Yes (1.5 ACPH)
r-50			r-50
Savings % from 2010 Code		10%	Savings % from 2010 Code
tef House) compared to 2010 Code	$	841.98	
Cost/cubic M	$	1.30	
tef House) compared to 2010 Code	$	53.88	
Savings/Cubic M	$	0.08	
Payback in Years		15.6	

	Cost from 2010	Tier 3 Desc		Cost from Prv
$	1,288.17	2x6 @24" o/c c/w r-22 fiberglass	$	1,288.17
$	-	30x48 Triple Low-e Argon	$	3,773.05
-$	946.95	None	-$	946.95
$	500.76	14.5 Seer	$	500.76
$	250.00	Yes (1.0 ACPH)	$	250.00
		r-50		
	20%	Savings % from 2010 Code		41%
$	1,091.98		$	4,865.03
$	1.69		$	7.53
$	95.77		$	318.59
$	0.15		$	0.49
	11.4			15.3

Tier 4		
Desc		**Cost from Prv**
2x6 @ 24" o/c c/w r-21 Cellulose and 2" exterra	$	8,097.50
30x48 Triple, dLE, argon	$	5,332.77
Yes		
14.5 Seer	$	500.76
Yes (.6 ACPH)	$	250.00
r-80	$	1,072.50
Savings % from 2010 Code		52%
	$	15,253.53
	$	23.62
	$	999.28
	$	1.55
		15.3