



Sustainable  
Development  
Program  
2020



# Need for Change

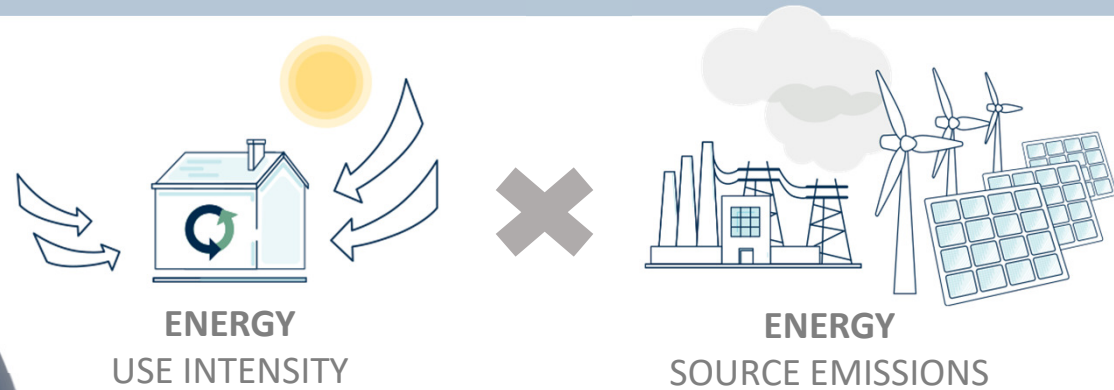
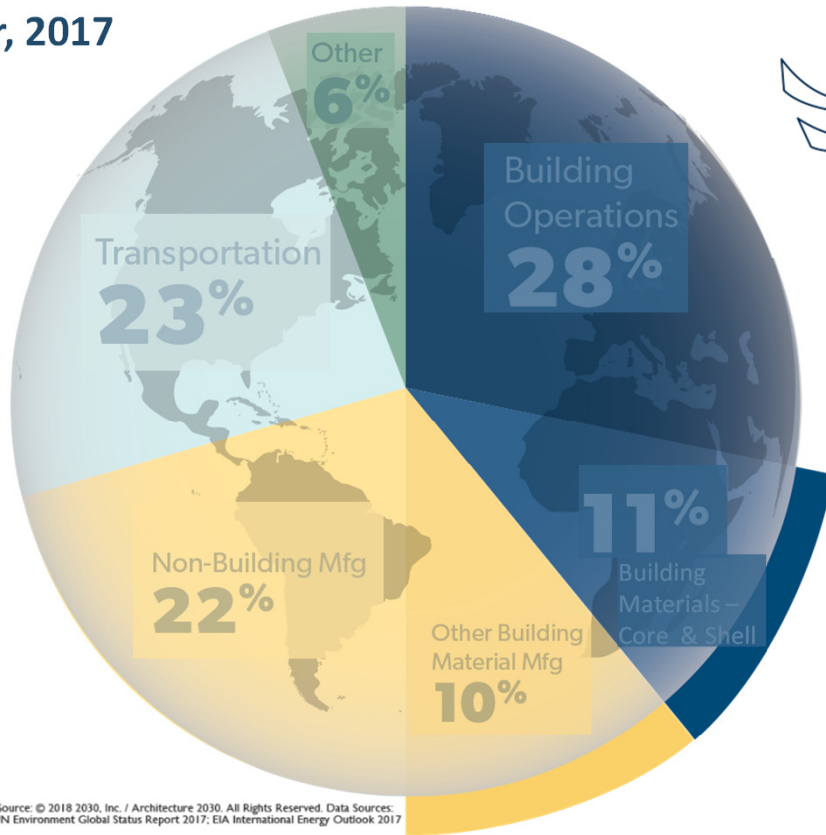
- In 2016 Douro-Dummer signed on to the Greater Peterborough Area Climate Change Action Plan
- Community Sector overall reduction target of 29%
- New residential buildings specifically targeted for reductions in Strategy H2



**Strategy H2: Build new homes to be more efficient and have a smaller environmental footprint**

# How much do buildings CONTRIBUTE TO CLIMATE CHANGE?

Total global emissions by sector, 2017



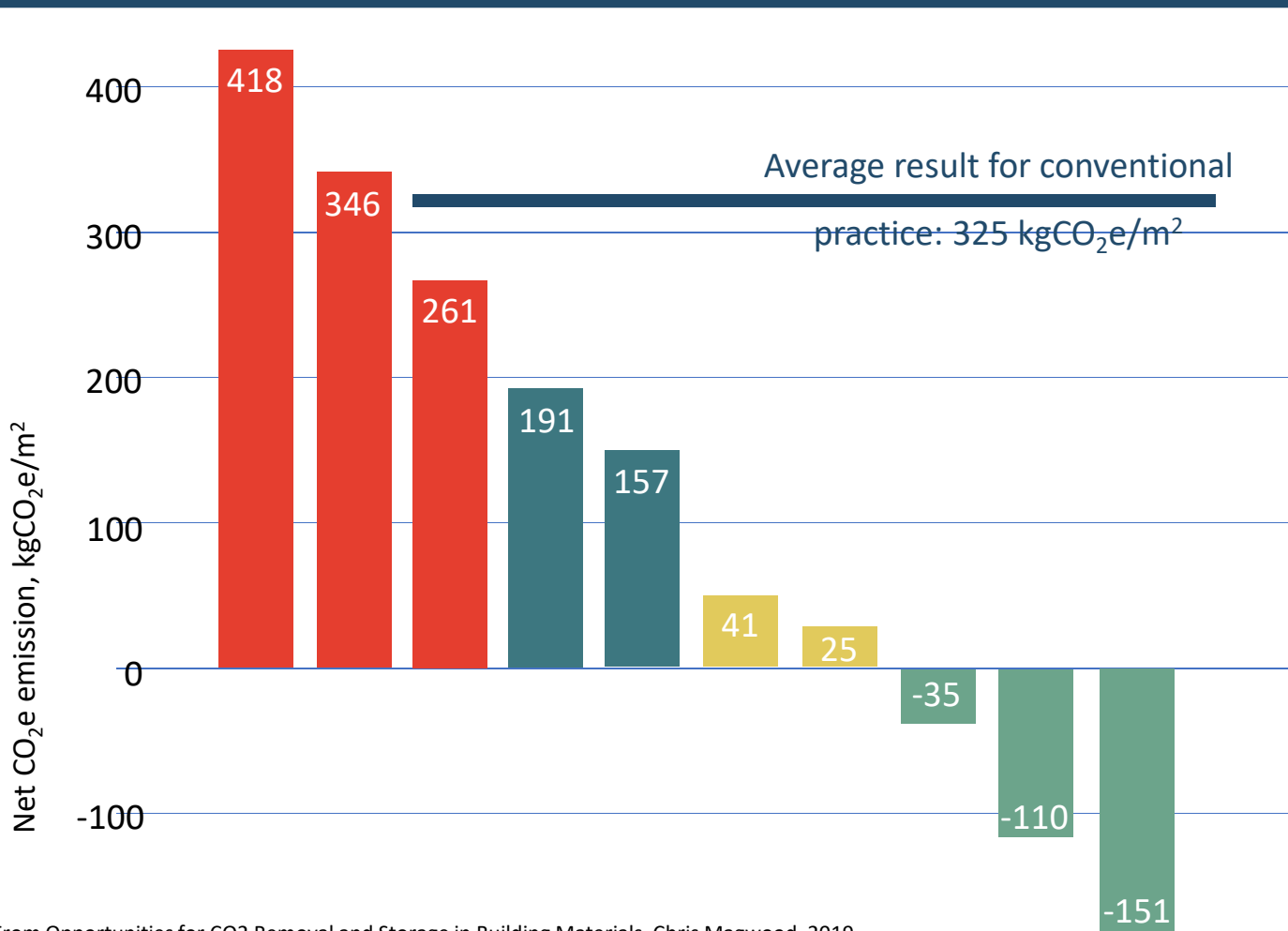
**= Operational Carbon**



**= Up-front Embodied Carbon**

We can't meet global targets without addressing buildings

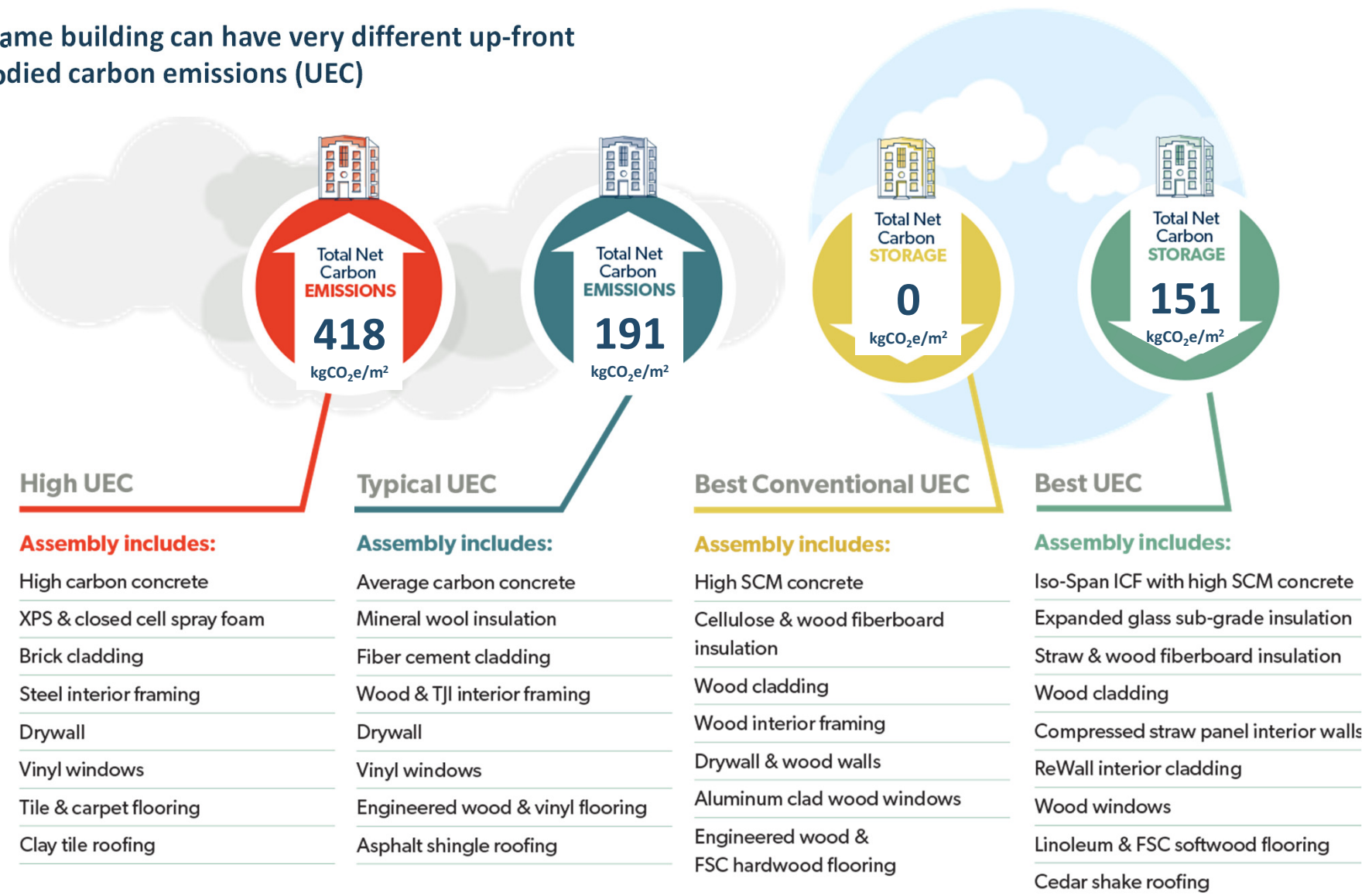
## Range of Up-front Embodied Carbon Results for Single Family Residence



Builders for Climate Action study shows that material selection can make a dramatic difference in a building's up-front carbon emissions.

This provides a unique opportunity to greatly lower emissions at the construction phase, by 250kg/m<sup>2</sup> or 50 tonnes per 200m<sup>2</sup> (2150ft<sup>2</sup>) house!

## The same building can have very different up-front embodied carbon emissions (UEC)



# Program Goal

Incentivize builders to reduce up-front AND operational emissions with a program that is:

- Easy to use
- Cost-neutral
- Significant reductions in GHG emissions



# Program Structure

## **Reduction in permit fees** for reducing GHG emissions:

- 40% reduction in permit fees for achieving lower up-front (materials) emissions
- 80% reduction for also achieving near net-zero operating emissions
- FCM Funding application underway which should offer up to 400% permit fee grant

# Program Rollout

- Applications open March 1<sup>st</sup>, 2020 for Douro-Dummer
- Program Administration completed by Builders for Climate Action
- Applicants will apply for building permit normally
- Program criteria and more information in toolkit
- Municipal toolkit will be available for other government agencies to work with BFCA to roll out the program for other municipalities



# Program Impact

- 25 single detached dwelling built per year in Douro-Dummer
- 50 tonnes saved on average per detached single dwelling
- Total of 1250 tonnes of CO<sub>2</sub>e avoided each year
- 213 single detached dwelling in Peterborough County last year, totaling 10,650 tonnes of CO<sub>2</sub>e each year saved.

# One Tonne of CO<sub>2</sub>

- A single tonne of CO<sub>2</sub> is equivalent to driving a vehicle for 5400km (8L/100km at 2.31kgCO<sub>2</sub>e/L gasoline)
- 50 tonne equal to 270,000km driven, or 13.5 cars taken off the road each year (per house!)
- 1250 tonne equal to 6.75 Million km, or almost 9 return trips to the moon. Also the same emissions as 338 cars each year.
- 10,650 tonne equal to 57.5 Million km, or the same carbon sequestered by planting 175,725 tree seedlings grown for 10 years. Also the same emissions as 2,875 cars each year.



For more information:

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