

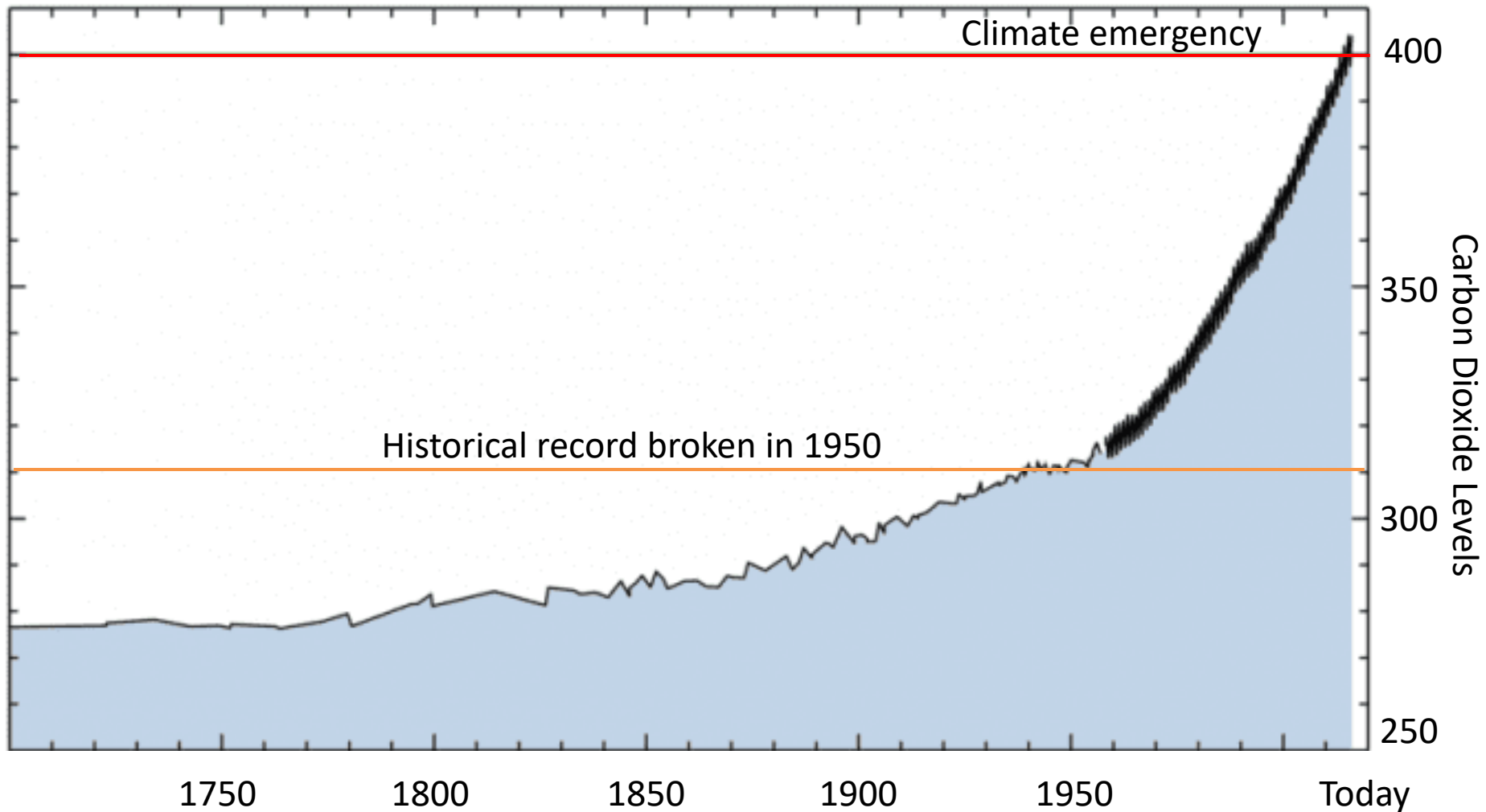
CLIMATE ACTION AT SURREY SCHOOLS

CLIMATE CHANGE ACCOUNTABILITY REPORT

2020 UPDATE

Introduction

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Surrey Schools and Climate Change

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Climate Action

- Provincial requirements for public service organizations
 - Track and report annual greenhouse gas (GHG) emissions
 - Maintain carbon neutrality through purchase of offsets
 - Achieve emission reduction targets

- UN has declared climate emergency and there is limited time to reduce emissions

- SD36 Board policy #6530: Energy Management & Conservation objectives include minimizing GHGs

- Impacts
 - Higher temperatures: more days where schools will be too hot to occupy e.g. recent heat dome
 - Rental incomes may be reduced

Surrey Schools and Climate Change

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Surrey Schools' Greenhouse Gas Emissions and Energy Management Program

➤ Energy and GHG Management

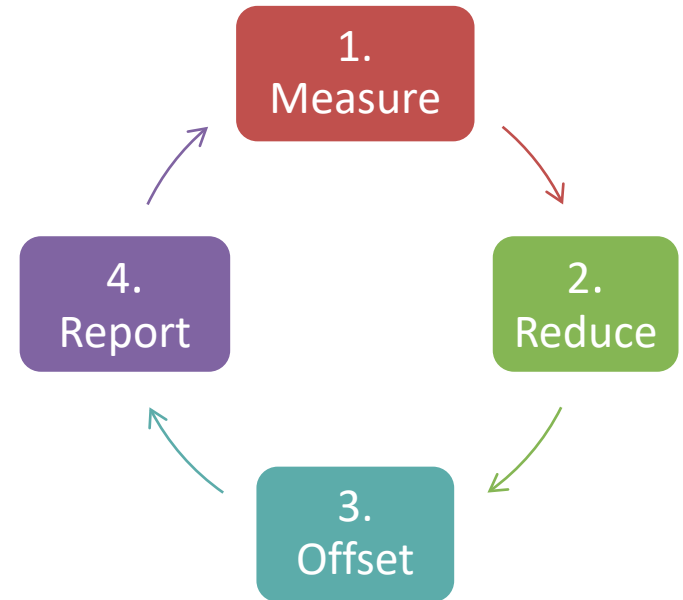
- An energy management (EM) program has been active since 2010 and is conducted through two positions in the Secretary-Treasurers office
- EM = reducing greenhouse gas emissions, energy use, and utility costs
- Heating and cooling of buildings cost the district \$8,000,000 per annum

Climate Change Accountability Reporting

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Provincial Direction on GHG Management

1. Track and measure annual emissions
2. Reduce emissions through energy efficiency
3. Achieve annual carbon neutrality by purchasing offsets
4. File a Climate Change Accountability Report (formerly CNAR) on annual GHG emissions



1. Measure: Targets

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Greenhouse Gas Targets

- Internal target to reduce emissions 25% by 2020: 19% was achieved
- Internal targets to 2025 and 2030 are being developed
- Aggressive provincial targets



Challenges

- Need to retrofit > 100 buildings
- Limited capital
 - Alignment with AFG projects is the primary source of reductions
 - Carbon tax rebate was a key source of funding but has been eliminated
 - CNCP does fund two projects per year
- Ensuring new schools and additions have low-carbon and energy efficient design

1. Measure: Tracking

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Greenhouse Gas Emission Tracking

Three sources of GHGs



91%



6%



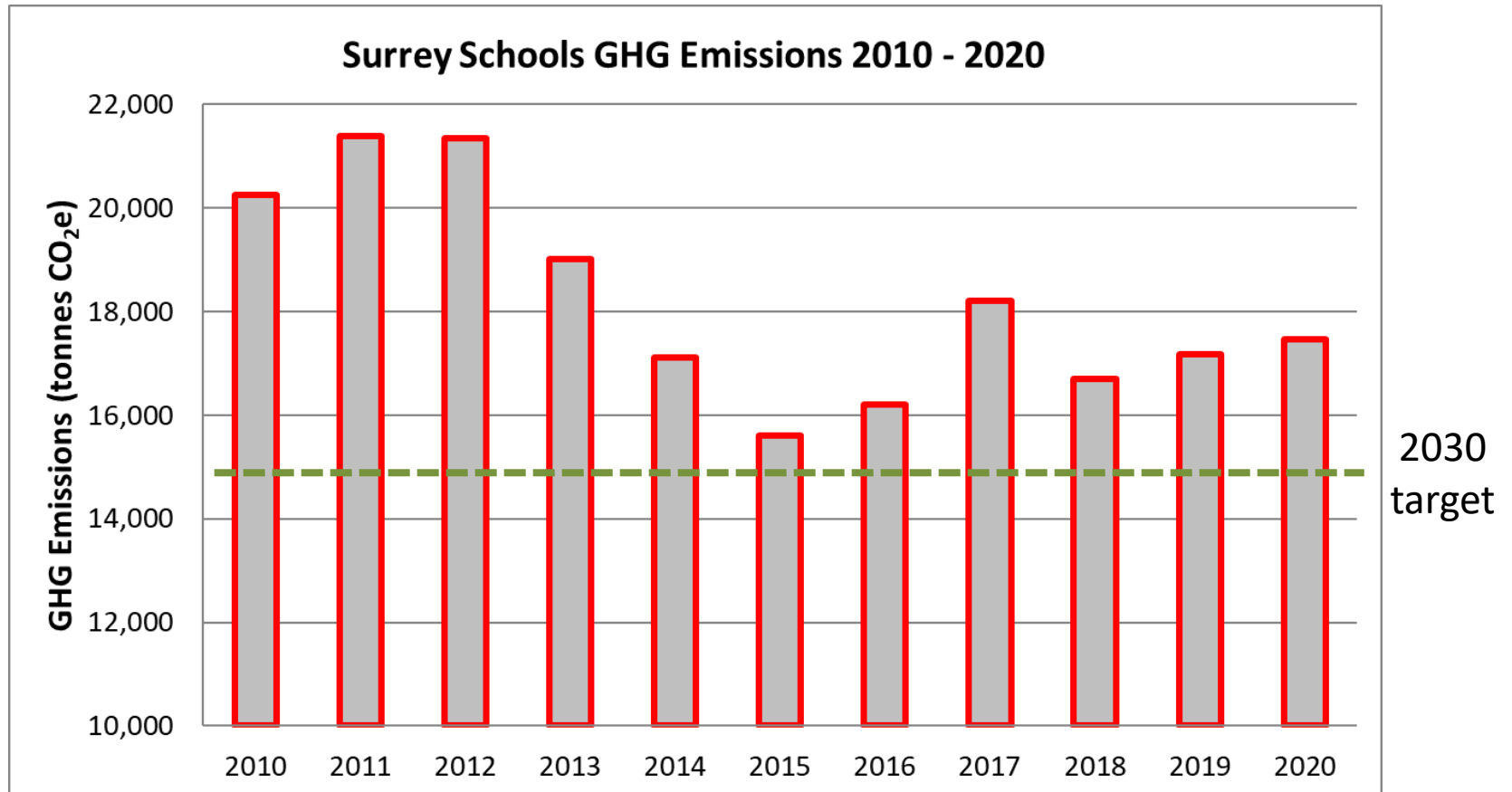
3%

- Up 5% from 2019
- Down 6% from 2019
- Down 35% from 2019

1. Measure

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Total Emissions Trend



2. Reduce: Fleet

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Reducing Vehicle Emissions

- Installed four EV chargers at DEC for use by staff and future electric fleet
- Replacement vehicles typically have better fuel economy

Future Initiatives

- Two electric school buses and chargers for spring of 2022



2. Reduce: Office Paper

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Reducing Paper Use

- Printing management technology at DFC

Future Initiatives

- Adding centralized printing at more sites
- Persistence of digital teaching options would help maintain lower paper consumption
- More paperless administrative processes



2. Reduce: Buildings

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Reducing Building Emissions

- Jessie Lee HVAC electrification

Future Initiatives

- Building retrofits
 - Displace use of natural gas boilers with electric heat pumps
 - Upgrade and maintain the systems that control equipment
- New schools and additions
 - Good envelope to minimize heat loss from walls and windows
 - Electric equipment for heating
 - Design guidelines that limit energy use and GHG emissions



3. Offset

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Achieving Annual Carbon Neutrality

Carbon Offset:

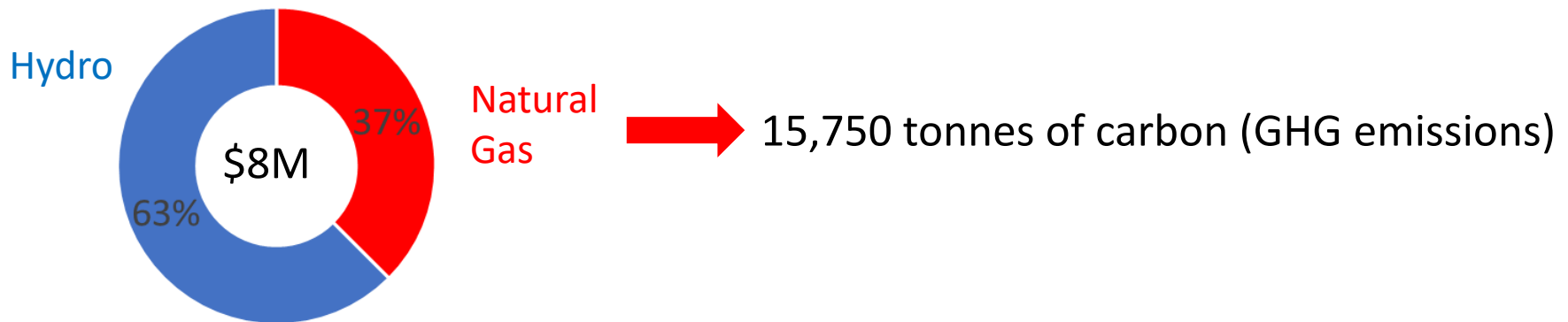
Investment in external greenhouse gas reduction project(s) to compensate for (offset) equivalent amount of annual emissions produced by an organization

- Current BC offset rate: \$25/tonne
- Building, fleet and paper emissions for Surrey Schools totalled 8,000 tonnes in 2020
- Cost of offsets to achieve carbon neutrality in 2020 was \$450,000

Energy & Emissions Management: Costs

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Carbon Tax and Financial Risk: Building Utilities

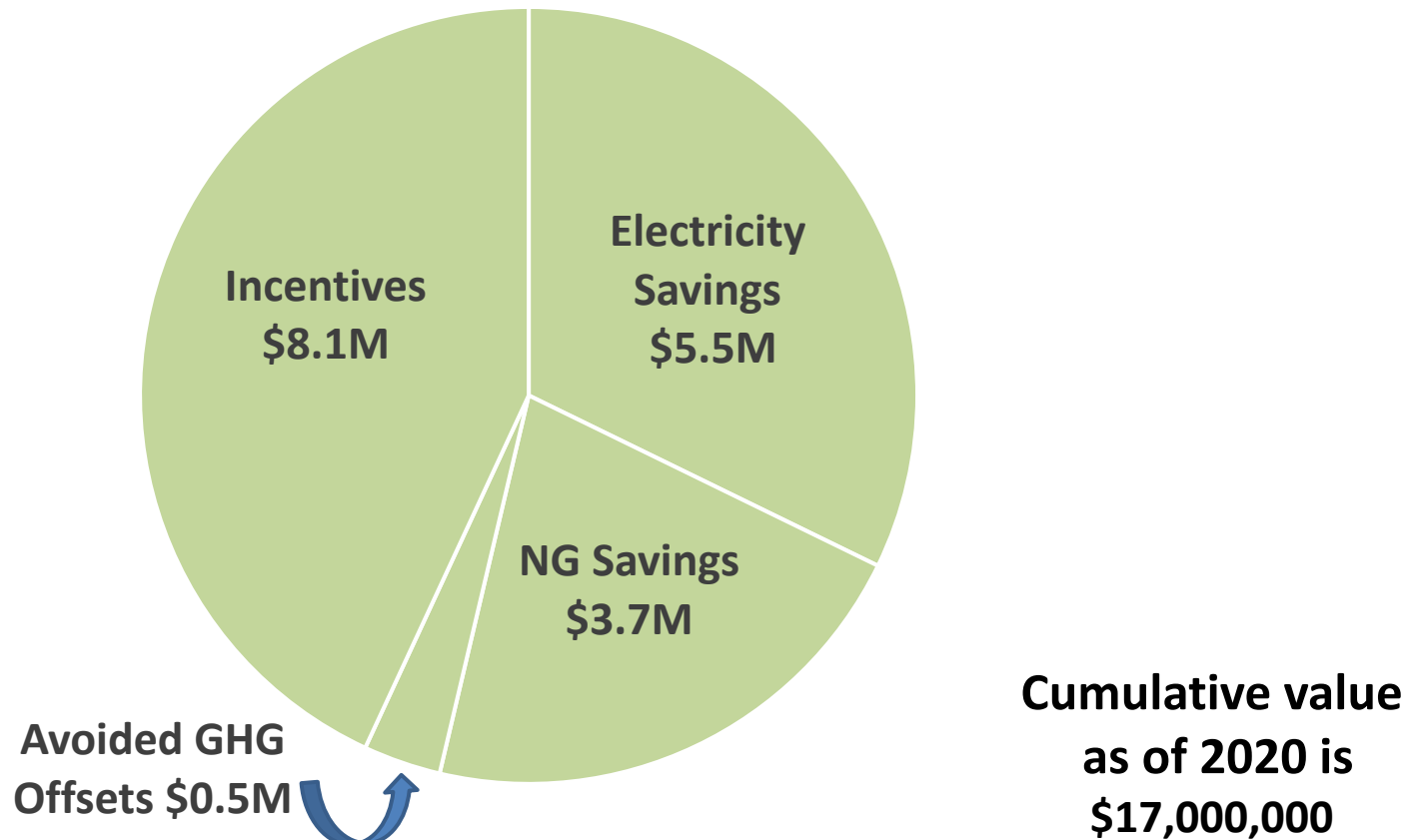


	Carbon Tax (per tonne)	Cost of Carbon Tax Portion of Natural Gas Bill (based on 2020 emissions)
2020	\$40	\$630,000
2021	\$45	\$708,000
2022	\$50	\$790,000
2030	\$170	\$2,700,000

Energy & Emissions Management: Value

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Value of Energy and Emissions Projects Since Energy Management Program Started in 2010



Questions?

CLIMATE ACTION AT SURREY SCHOOLS