Electric Options to Replace Small Engine Equipment

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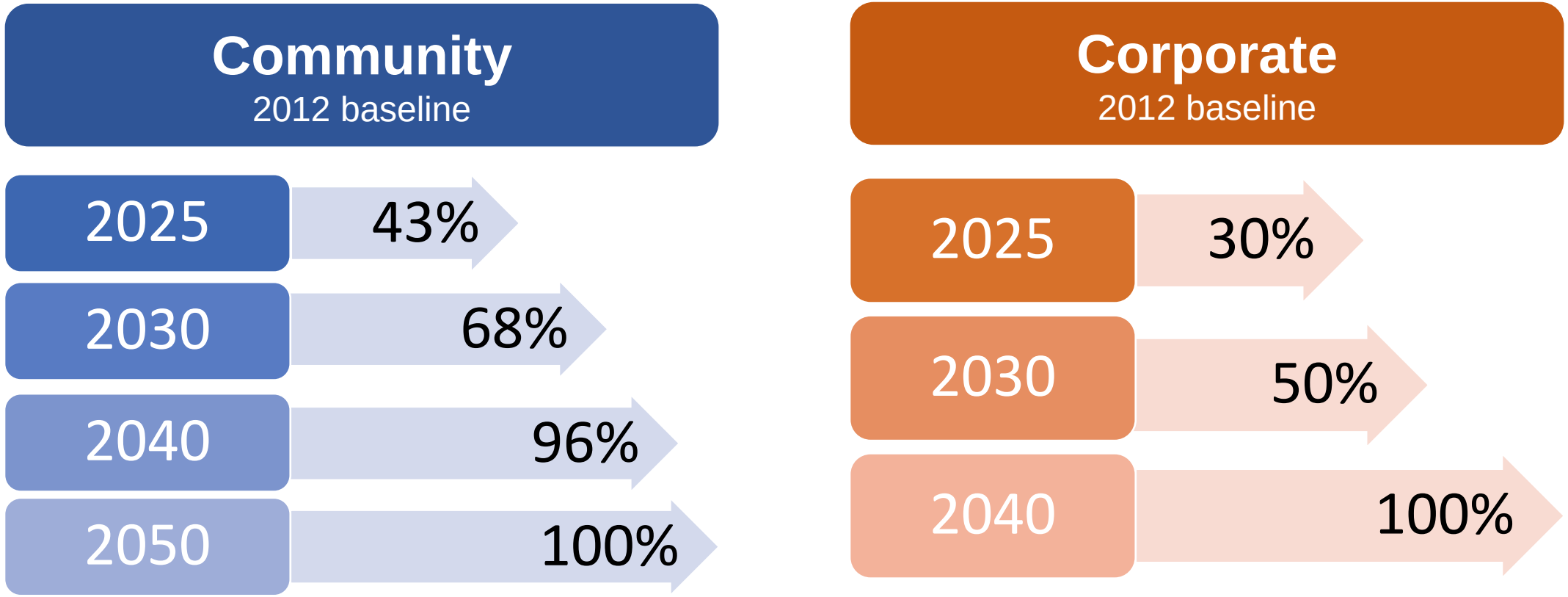
Agenda

- Background
- Council Motion
- Actions completed so far
- Areas of concerns/questions

Ottawa's GHG emission reduction targets



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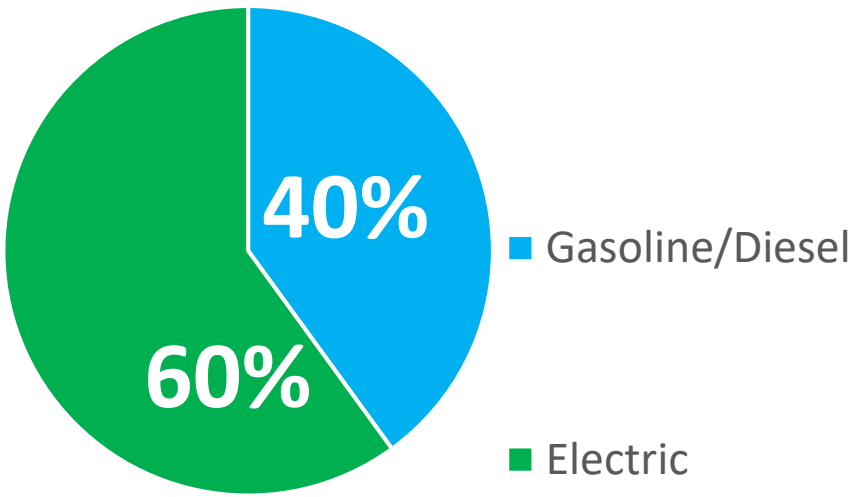
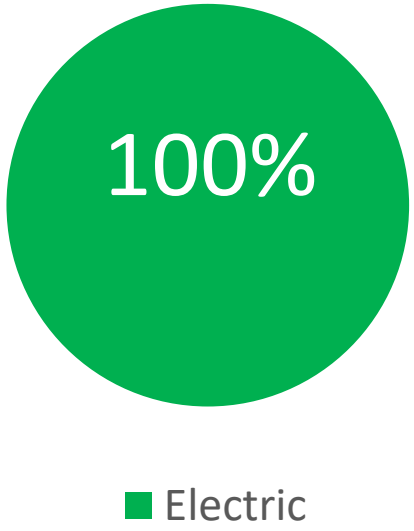
City Fleet – EE Goals

Percentage of Vehicle Drivetrains - 2030



Percentage of Vehicle Drivetrains - 2040



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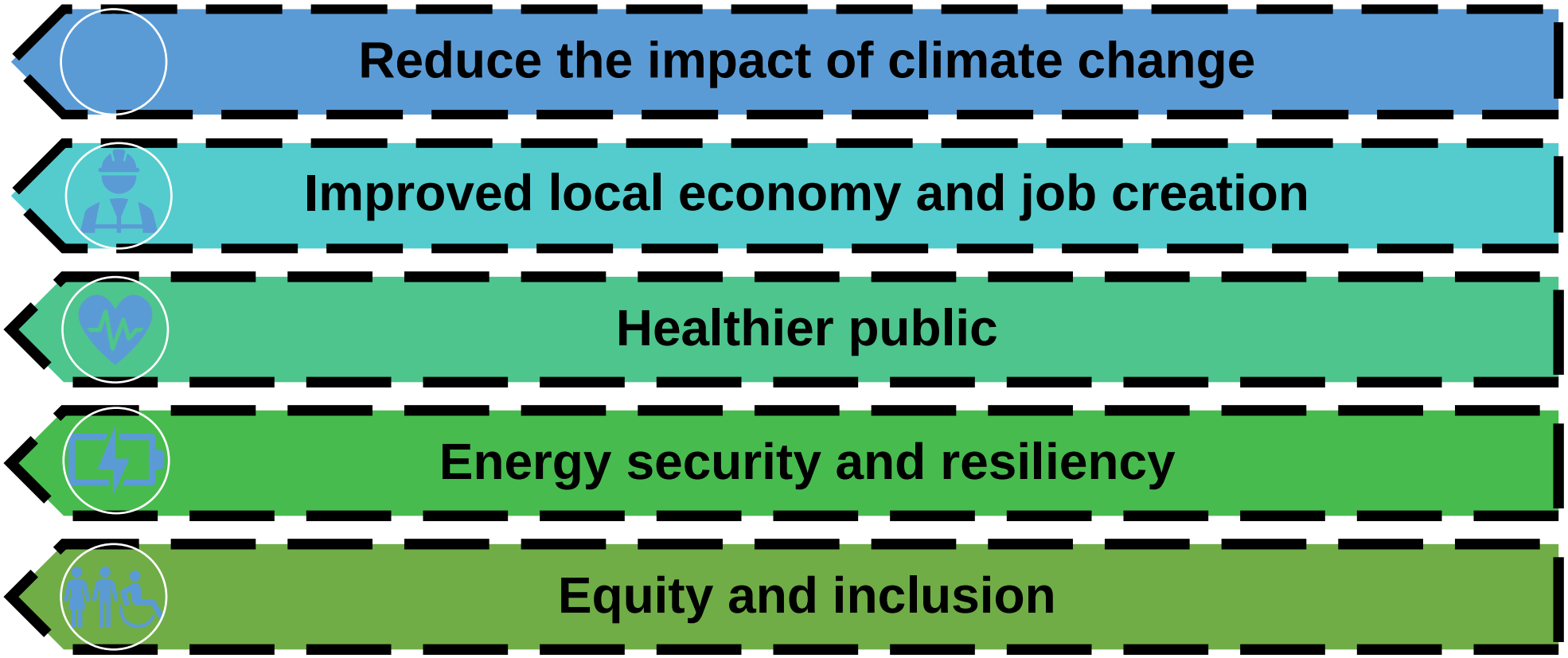
The benefits of reducing GHG emissions



Motion

- Being considered by Environmental Protection and Waste Water Management Committee on February 15th.
- *The City of Ottawa's Public Works and Environmental Services (PWES) Department will* **commit to phasing out the use of gas-powered lawn and yard equipment** *when said equipment requires replacement and an electric alternative is available that* **meets operational needs within both City-owned and contracted services**
- *Phasing out activities begin as quickly as possible, starting with* **summer operations planning in Q1 2022** *and report back to the Standing Committee on Environmental Protection, Water and Waste Management as part of a Departmental Green Equipment Plan in Q4 2022.*

Reason for Action

- Concerns around air pollution from incomplete combustion linked to poorer worker health
- Small engines are not fuel efficient
- Small engine equipment are loud for both users and local residents

Impetus for Action

- NCC (Federally-contracted grounds maintenance crews) already committed to eliminating the use of gas-powered equipment from contracts
  - First two contracts take effect this year, and will be active for next 2 years.
  - Goal to reduce vehicle and equipment emissions by 80% by 2030.
  - City and NCC have reciprocal maintenance agreements for various lands throughout Ottawa.

Actions Completed So Far

Actions Completed to Date

- Public Works developing pilot of different suppliers with commercial grade battery-operated equipment suitable for operations.
- Pilot will explore the cost, function, reliability and operational feasibility to determine how fast transition can happen.

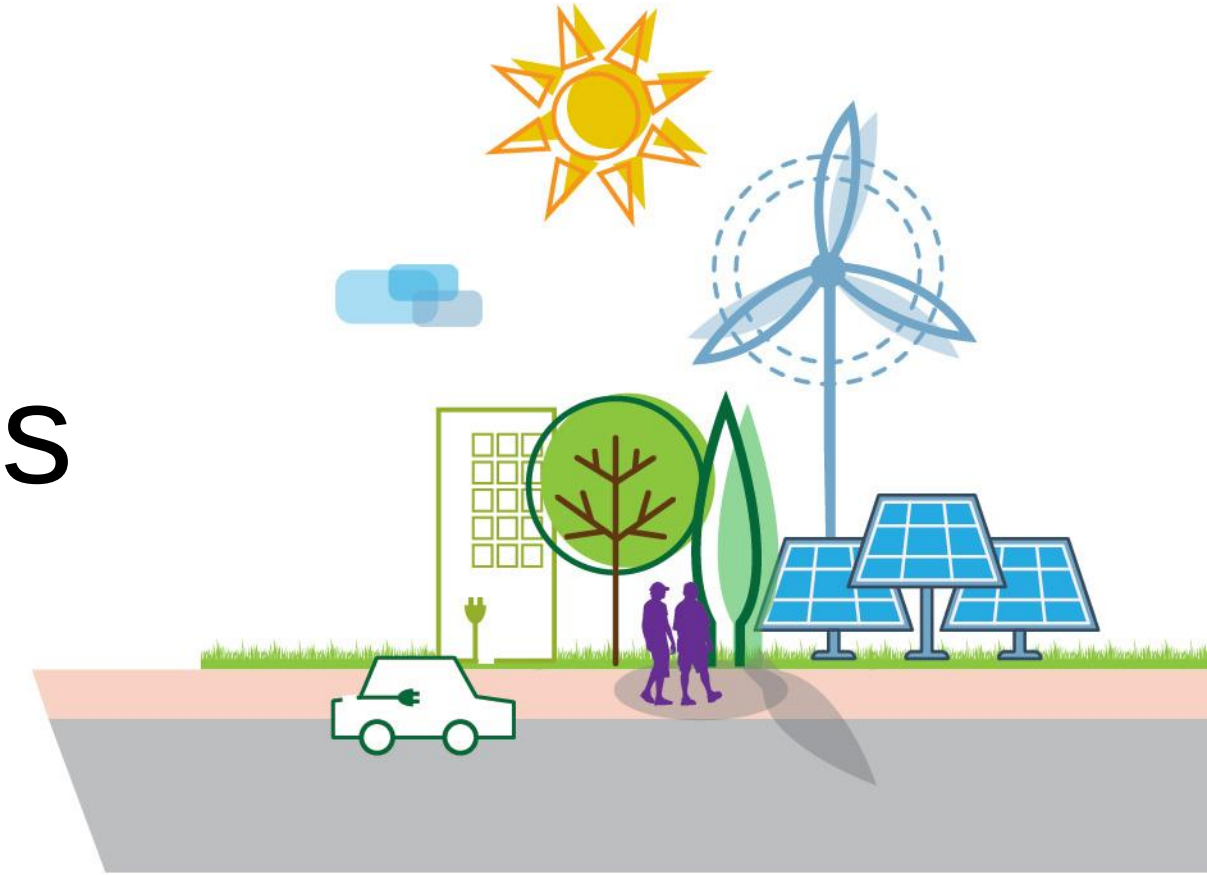
Proposed Pilot Action

- Some crews will be outfitted with only battery equipment, with one supplier type per crew.
- Operations will be compared against gas powered equipment, as well as against other suppliers of battery equipment.
- Assess functionality and performance of the equipment under real-world testing.

Proposed Pilot Action

- Existing pilot tender issues to gauge interest in conversion in 2022.
- Feedback from our teams, as well as other municipalities and NCC to inform next stages of transition.

Areas of Concern/Questions



Areas of Concern/Questions

- How many batteries are needed to keep up with maintenance demands of park crews?
- How to gauge what “Peak” demand is on equipment to ensure proper tooling/battery supply?
- How is energy use affected under real-world conditions (wet grass vs. dry grass; thick grass vs. sports fields)
- How will batteries perform after long periods of limited use in winter?

Areas of Concern/Questions

- How have other municipalities developed their transition initiatives?
- What success/challenges have been encountered through this
- How will infrastructure needs change going forward?
  - New electrical service?
  - Additional conduit in facilities?
  - Updates in 1-3 years, or 5-10 years down the road?
  - Differing needs for urban/rural communities?

Thank You

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