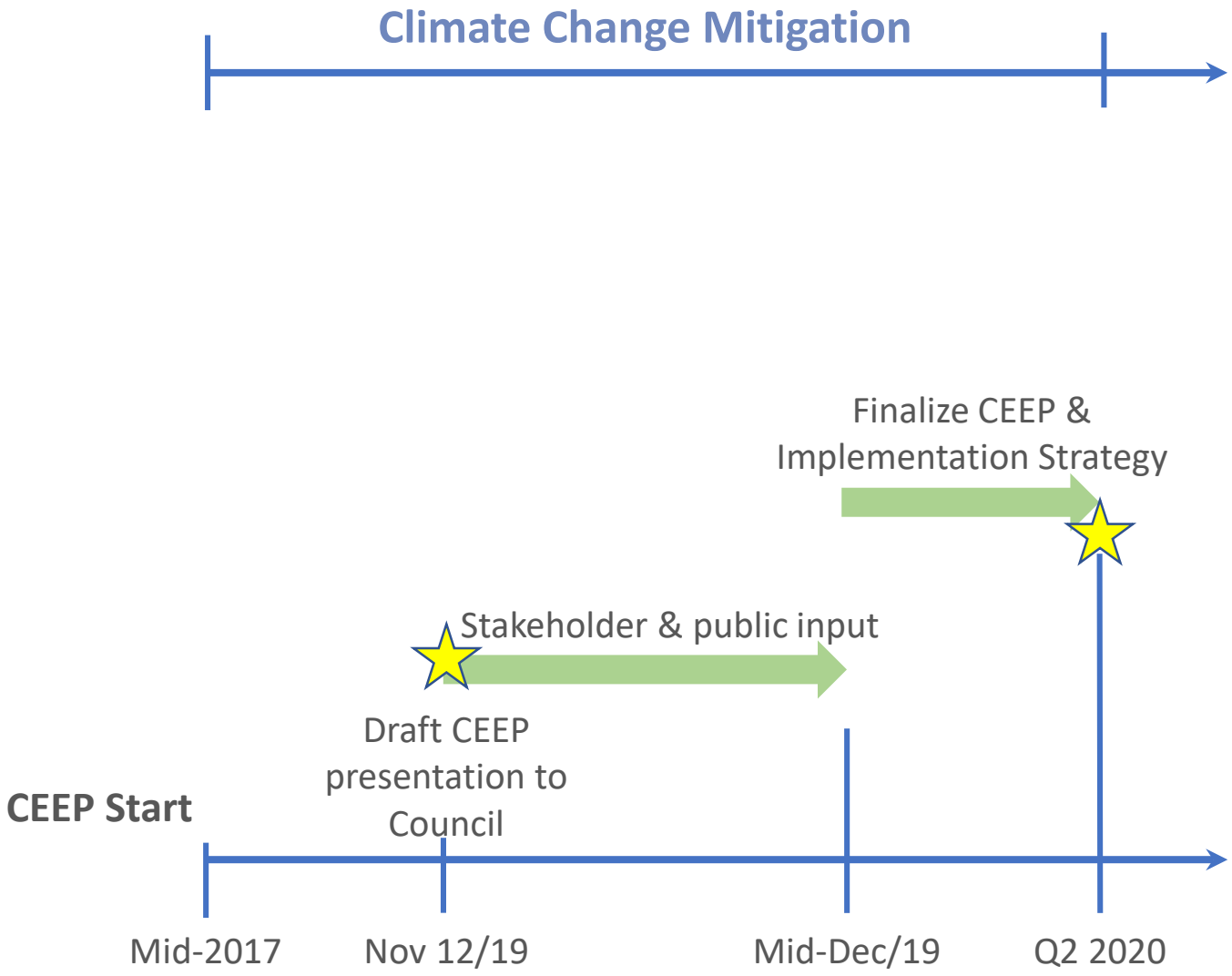
POWER NOW
GREATER SUDBURY
Our energy future.

Community Energy & Emissions Plan

Greater Sudbury CEEP Timeline



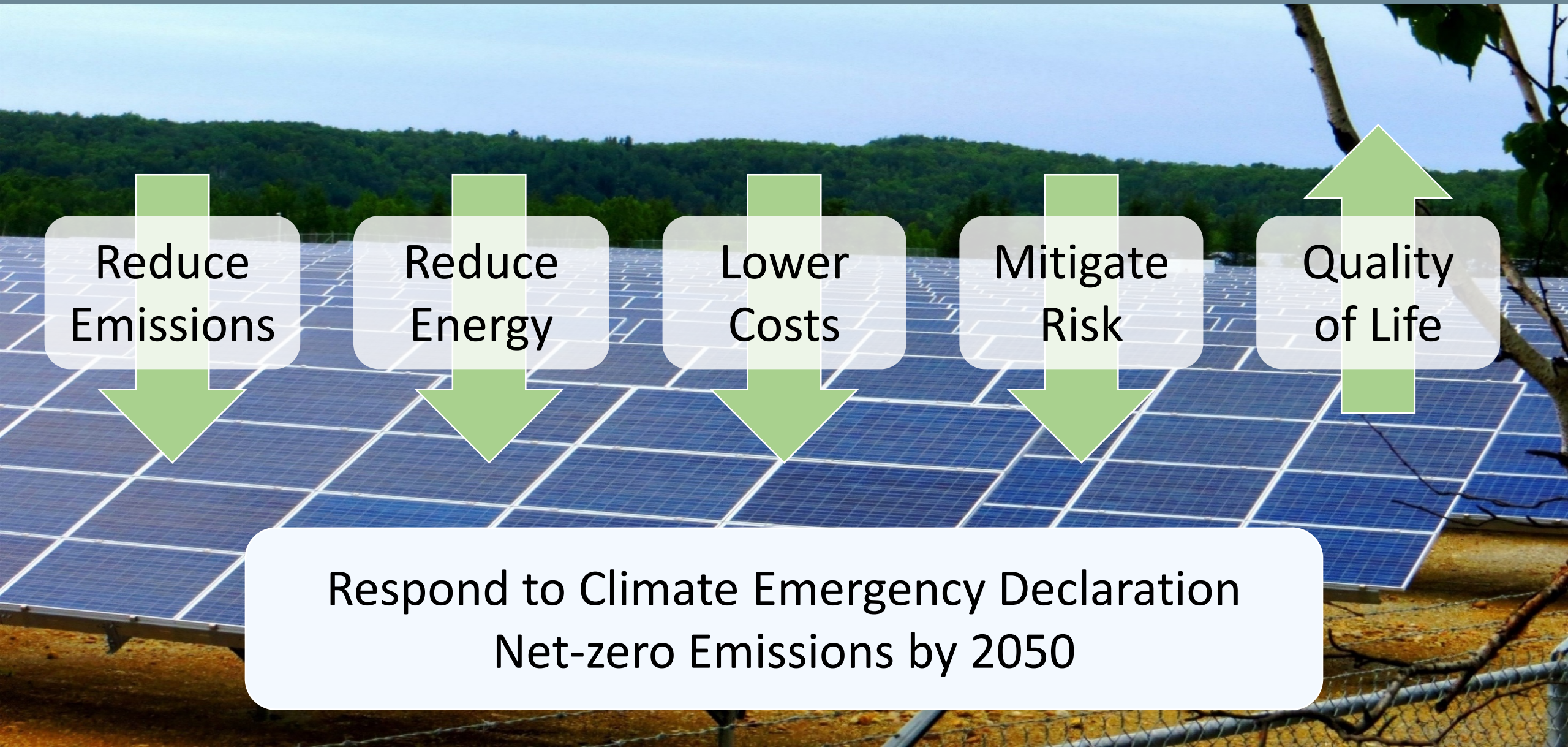
SUSTAINABILITY SOLUTIONS GROUP

Decarbonized, healthy, equitable cities for everyone.

Jeremy Murphy
Principal

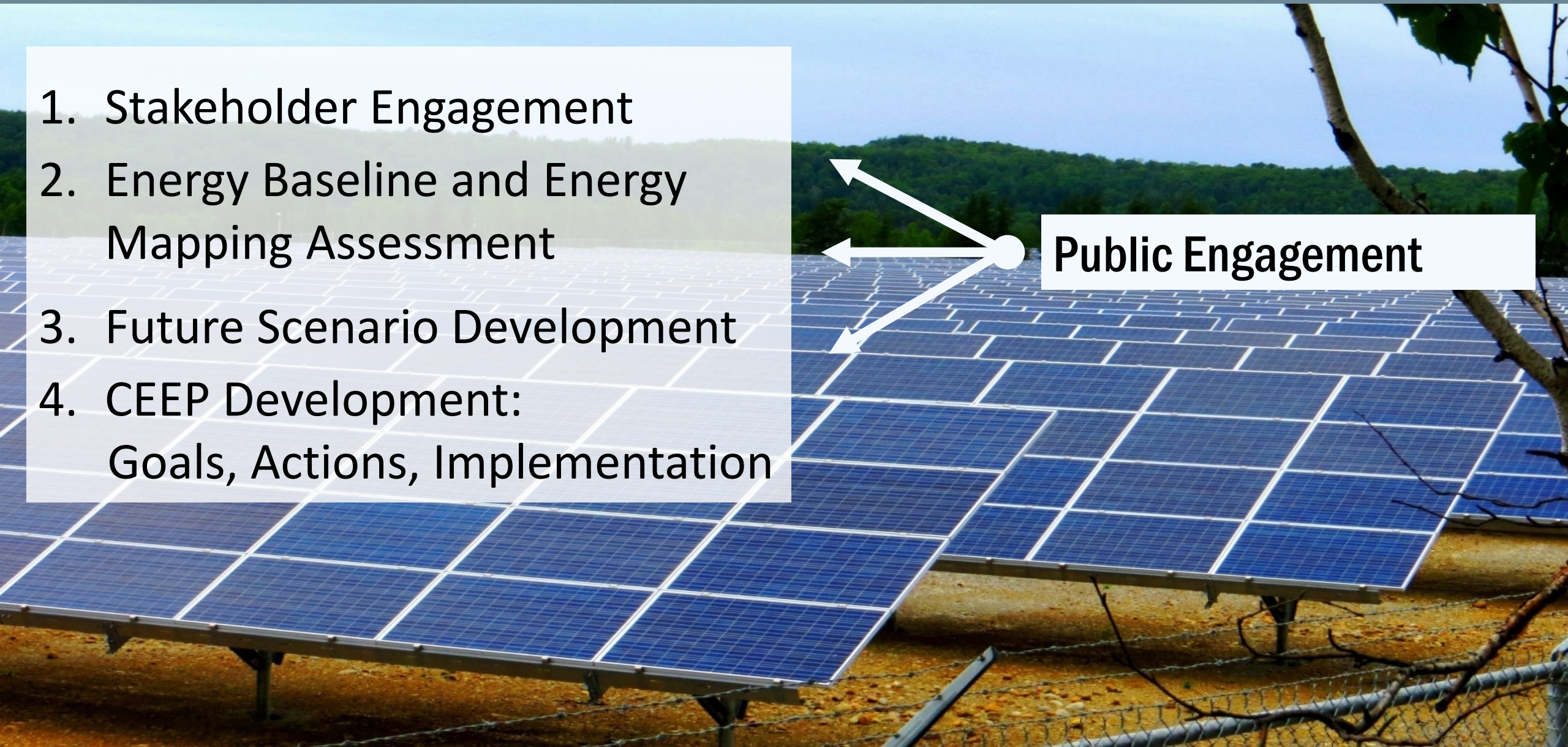
Thunder Bay	Toronto
Hamilton-Burlington	Halifax
Guelph	Ottawa
Caledon	Bridgewater, NS
Richmond Hill	Edmonton
Durham Region, ON	Banff
York	Red Deer, AB
Markham	Saskatoon

CEEP Goals

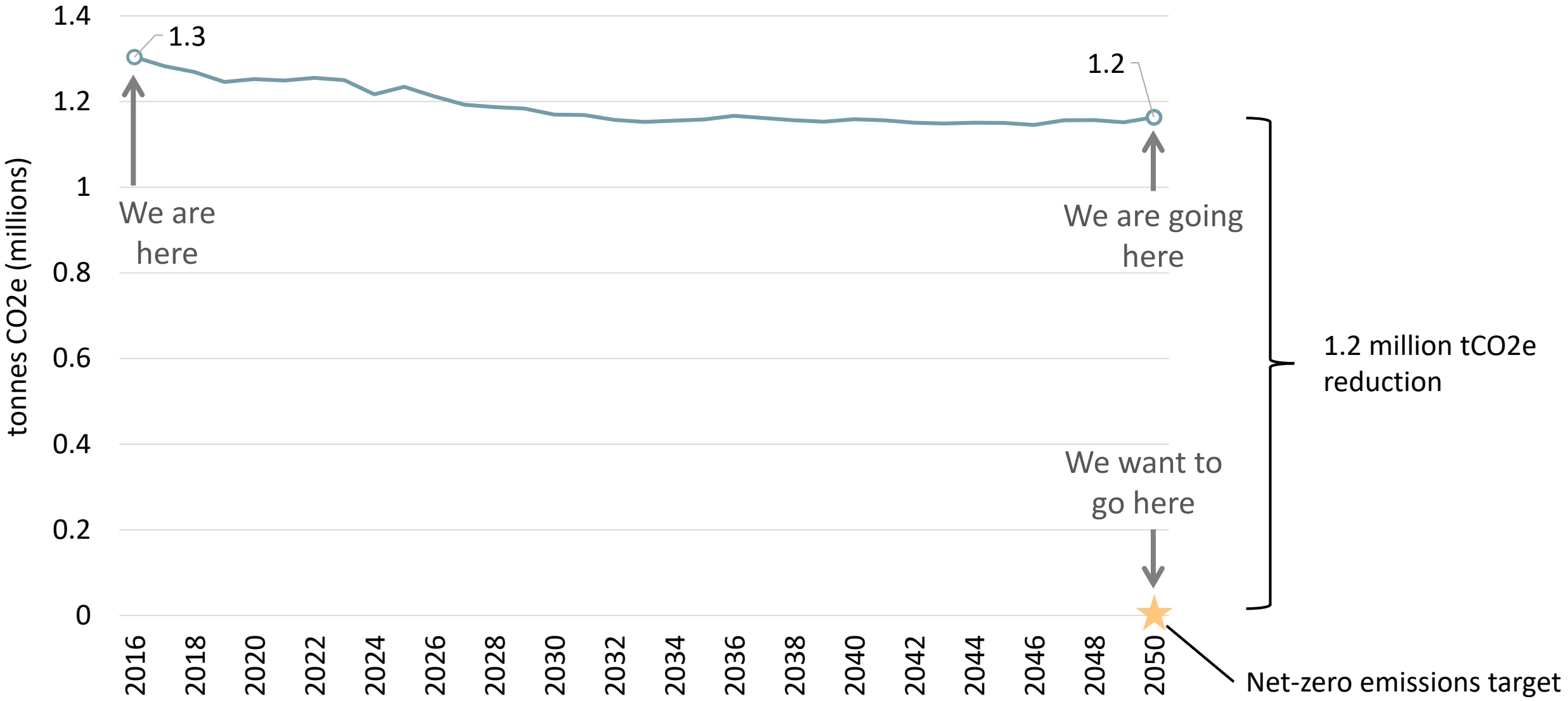

Reduce Emissions
Reduce Energy
Lower Costs
Mitigate Risk
Quality of Life
Respond to Climate Emergency Declaration
Net-zero Emissions by 2050

CEEP Process

1. Stakeholder Engagement
2. Energy Baseline and Energy Mapping Assessment
3. Future Scenario Development
4. CEEP Development: Goals, Actions, Implementation



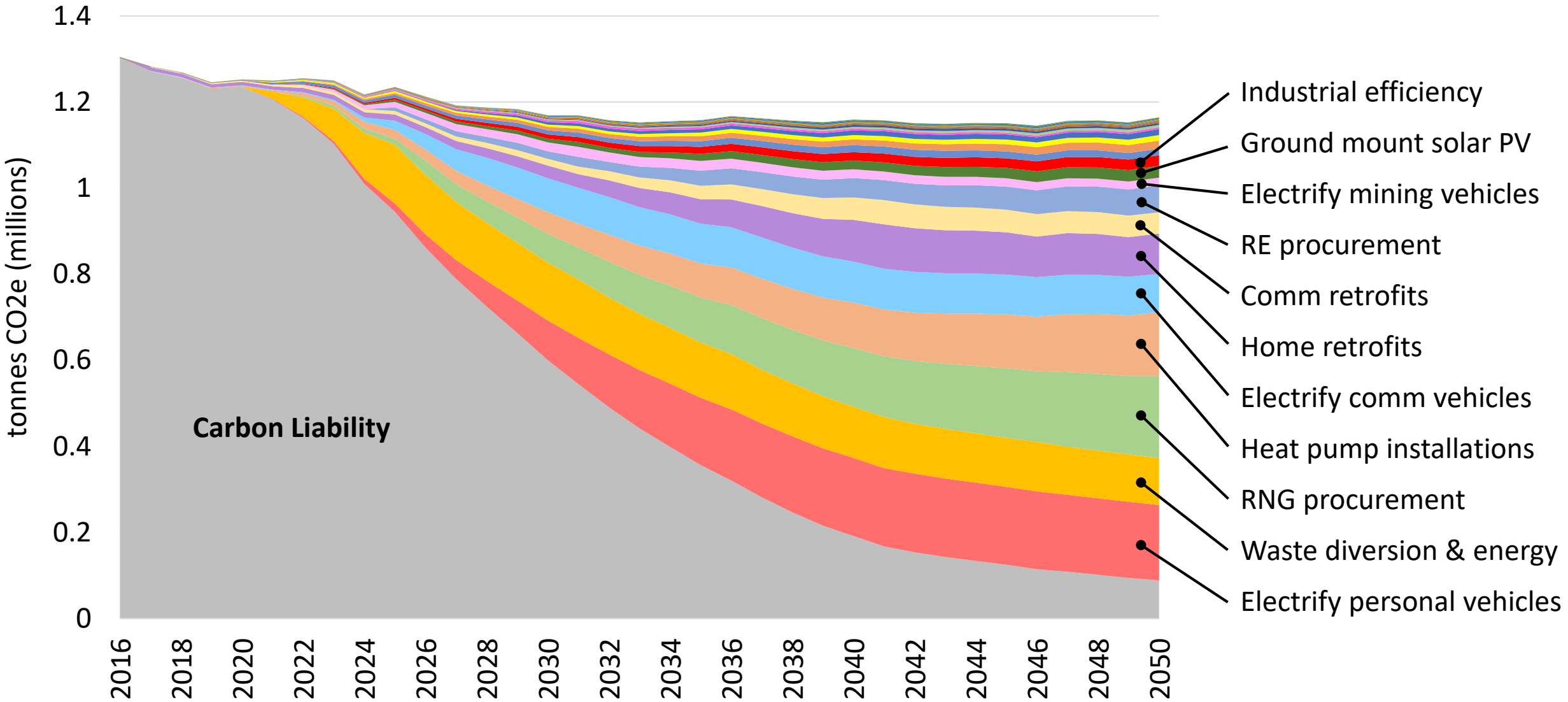
Business as Usual vs Climate Emergency Target



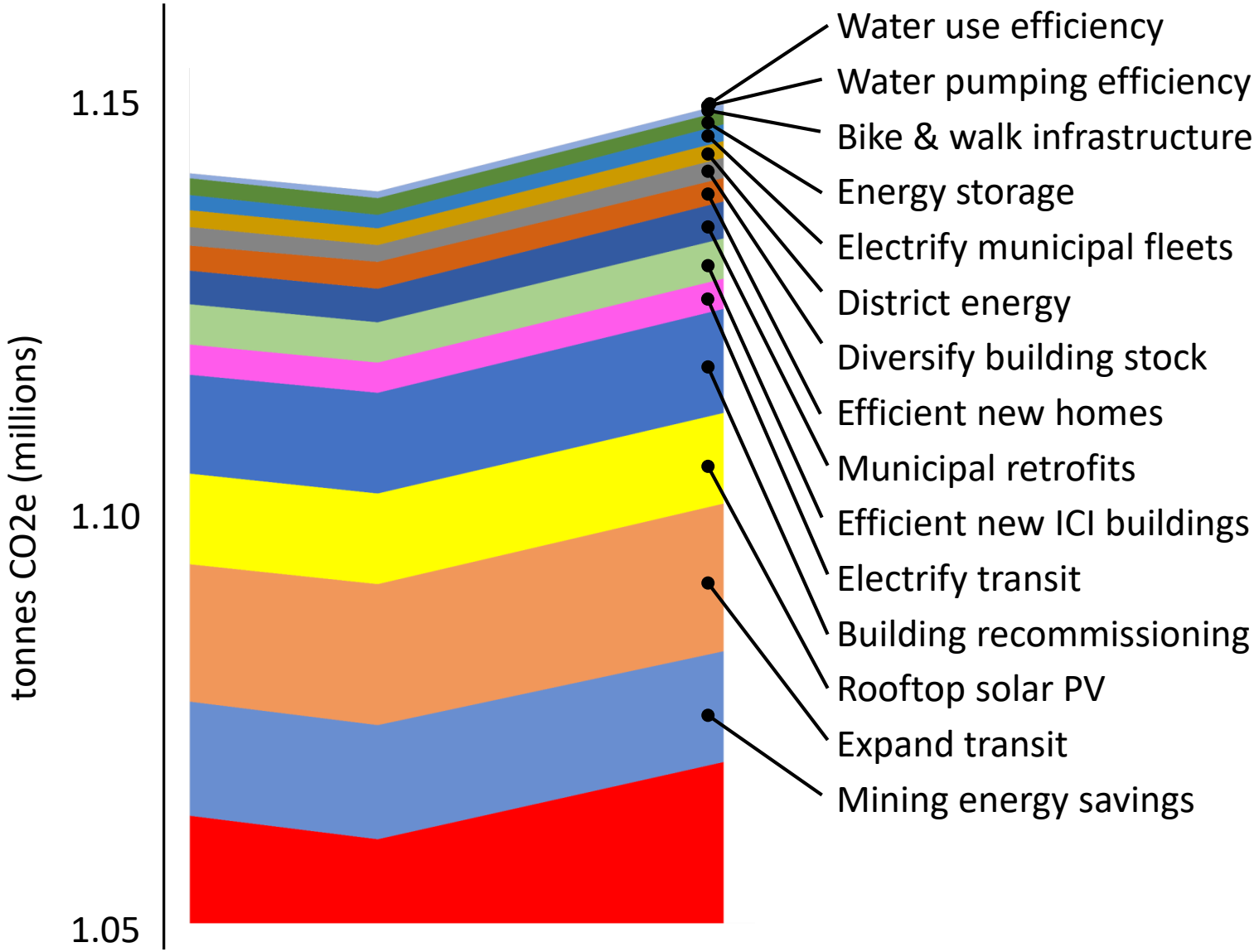
Strategy Sectors for Energy & Emissions Reductions

- Compact, complete communities
- Efficient buildings
- Water, Wastewater, and Solid Waste
- Low-carbon transportation
- Industrial Efficiency
- Local clean energy generation
- Low-carbon energy procurement
- Carbon sequestration

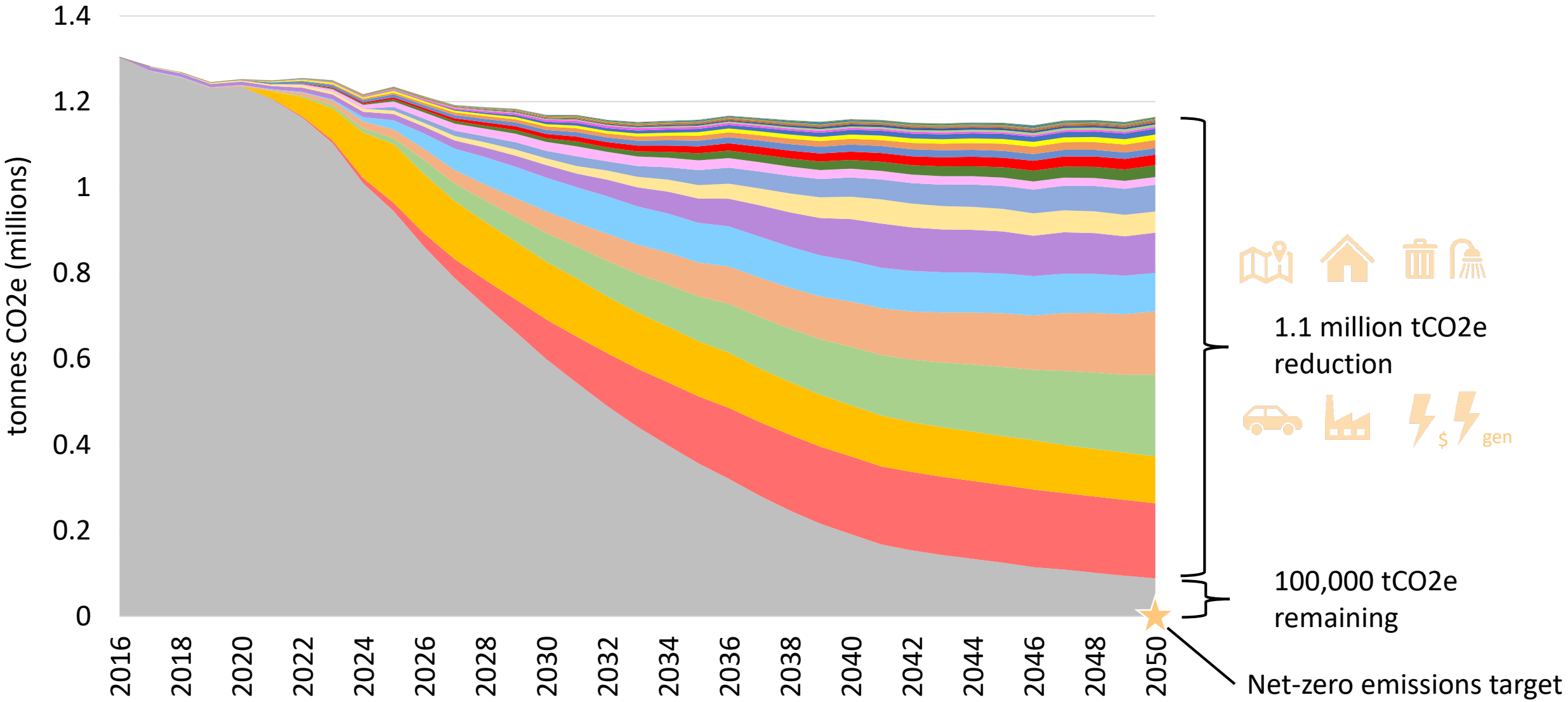
CEEP Emissions Reductions by Action



CEEP Emissions Reductions by Action



CEEP Emissions Reductions by Action



The Last 100,000 Tonnes

Some combination of:

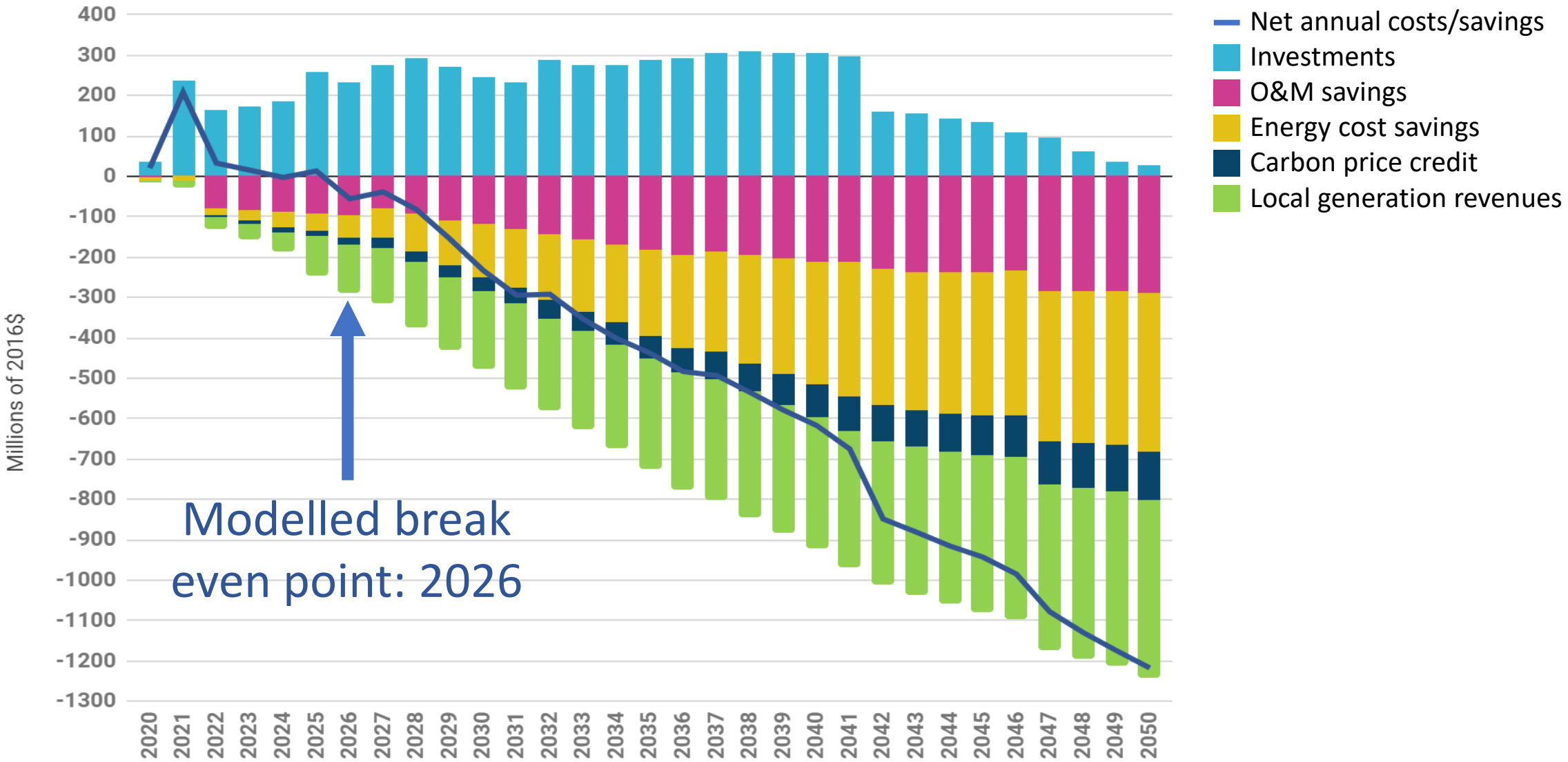
- Carbon sequestration: Increase tree planting through the Greater Sudbury Regreening Program
- Scale up RNG generation and procurement from 75% to 100%
- All industrial operations are electrified and/or use biofuels
- 100% landfill gas capture
- Net export renewable energy

CEEP Investments & Savings over Business as Usual

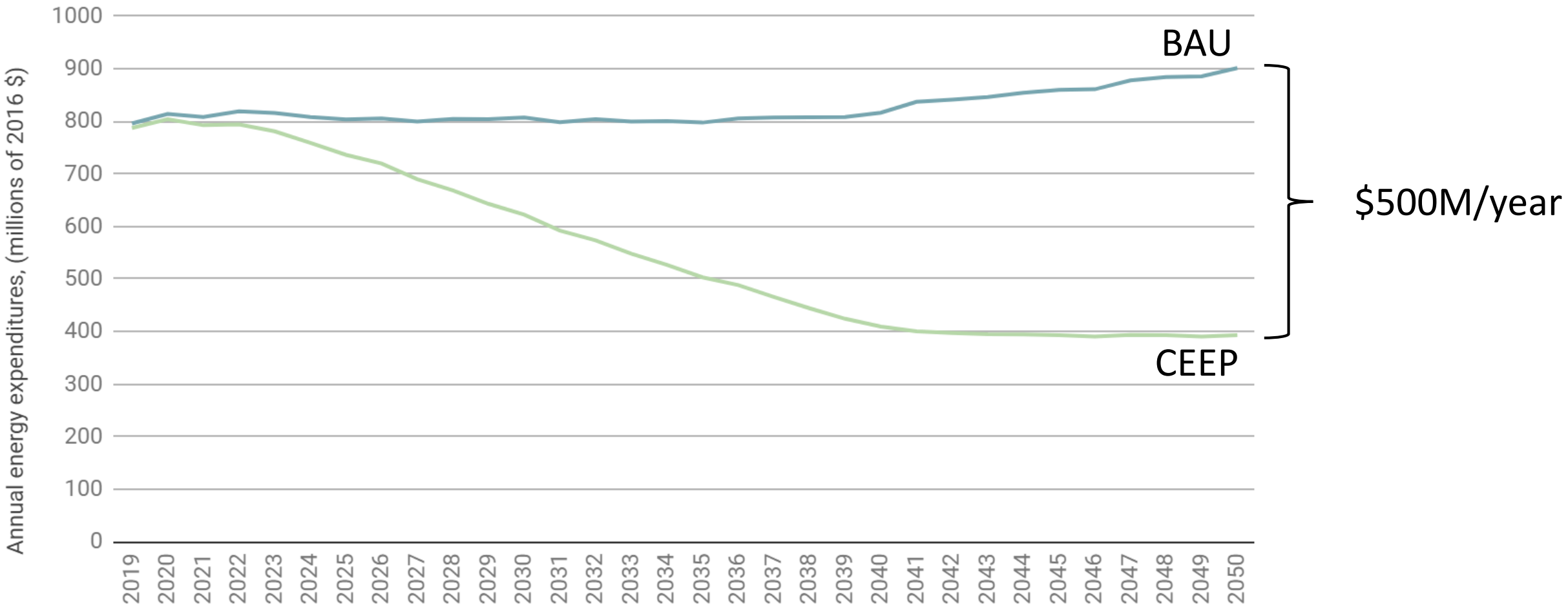
	Cumulative investments and savings to 2050 (undiscounted)	**Net Present Value (3% discount rate)**
Investments	$ (6.5B)	$ (4.3B)
O&M savings	5.2B	2.9B
Energy cost savings	6.4B	3.5B
Carbon price credit	1.8B	1.0B
Local generation revenues	7.7B	4.3B
Net annual (cost)/saving	**$ 14.6B**	**$ 7.4B**

NB: Costs and savings are community-wide

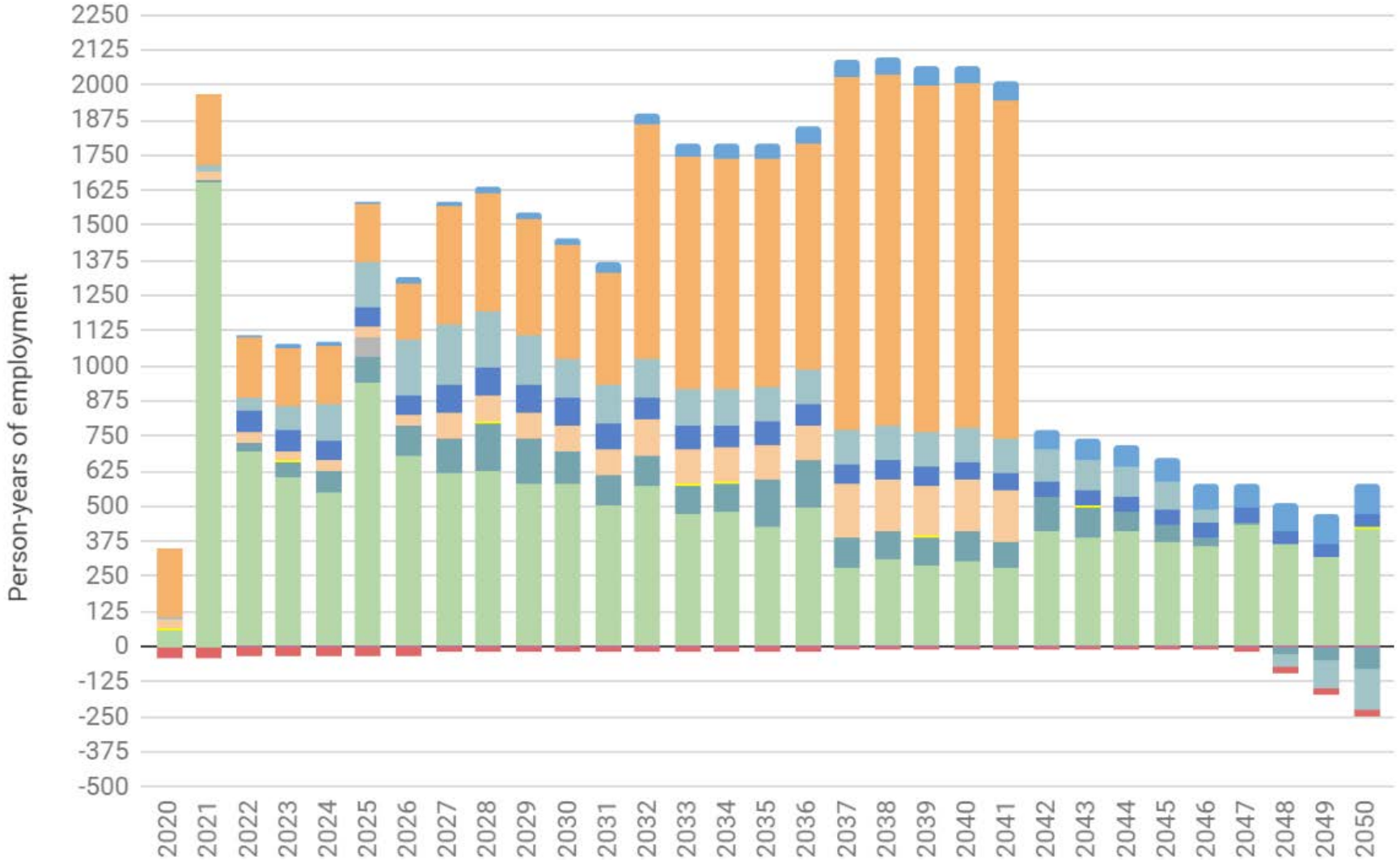
Year-over-year CEEP Costs and Savings over BAU



Annual Energy Expenditures, BAU vs CEEP



CEEP Employment Outlook

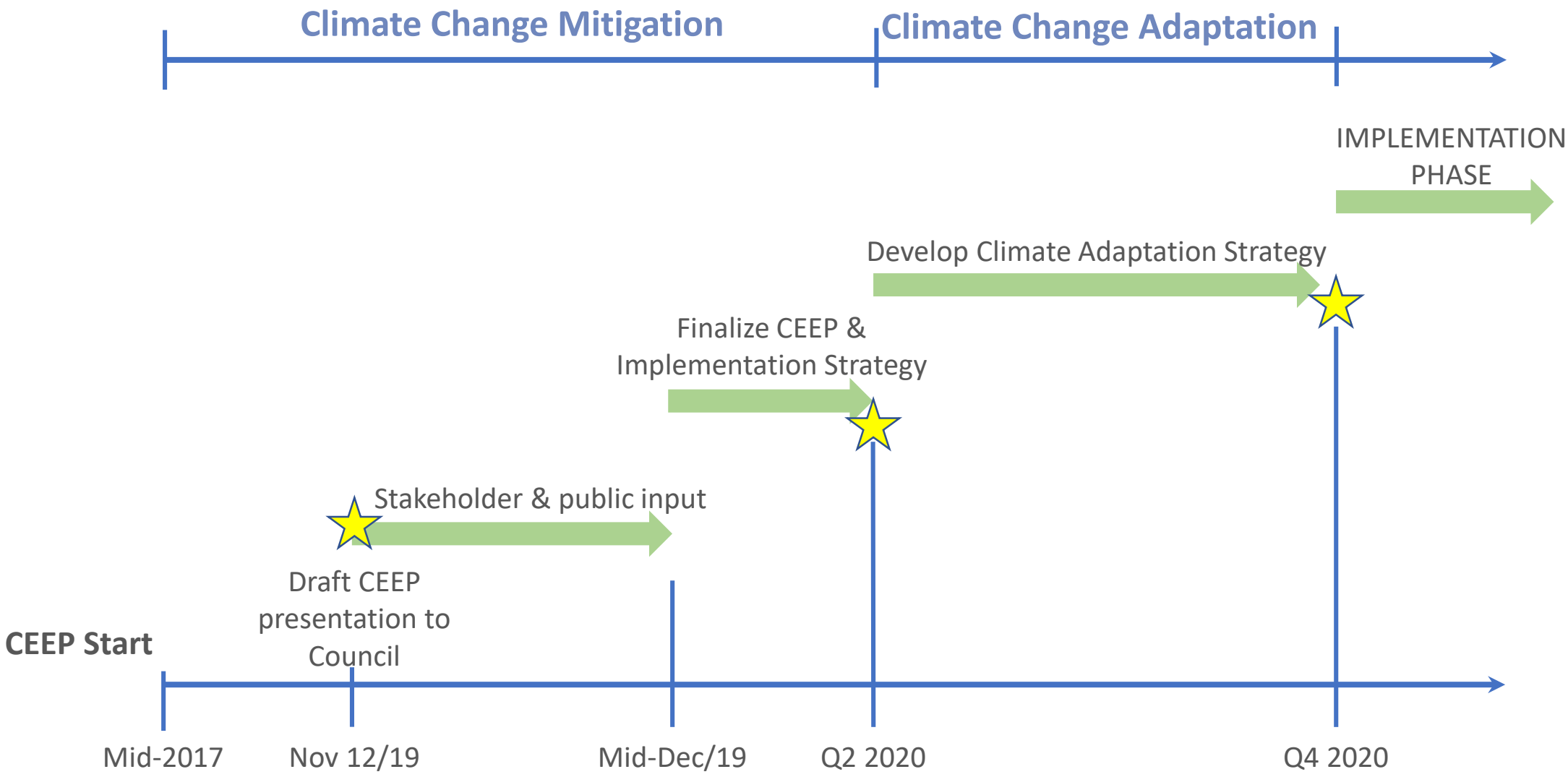


+40,000 person-years

CEEP Summary

- Net-zero emissions target is very ambitious
- The target can be met with ~15 large reductions actions
  + 11 smaller reductions actions
  + Last 100,000 tonnes options
- EVs will help, but need support
- A Renewable Energy Co-op will be needed to coordinate
- A strong retrofits program is needed
- Implementation costs < paybacks & savings
- The CEEP is a local employment generator

Greater Sudbury CEEP & Climate Adaptation Timeline



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