



Towards a **Green Budget** Framework in Canada

Earth Angel Canada
(with CMPA updates March 2023)





Introduction

In 2022, the CMPA contracted Earth Angel (EA) to further develop the industry's understanding of the budgetary implications of more **sustainable content production** in Canada, compared to business-as-usual practice.



Objective

This project was undertaken to help the Canadian industry focus its time and attention on areas that will have the most impact and benefit, in light of growing imperatives to address the climate emergency.



Presentation Contents

1. **Context** on objective, scope and project activities completed.
2. **Result highlights** from the green expense research on key impact areas.
3. **Recommendations** on the priorities and needs resulting from the research.
4. **Longer term work needed** to grow sustainable content production in Canada.



1. Context:

Objective, Scope and Project Activities



Scope

The work was scoped to focus on six key production hubs across Canada: Vancouver, Calgary/Edmonton, Winnipeg, Toronto, Montréal and Halifax.

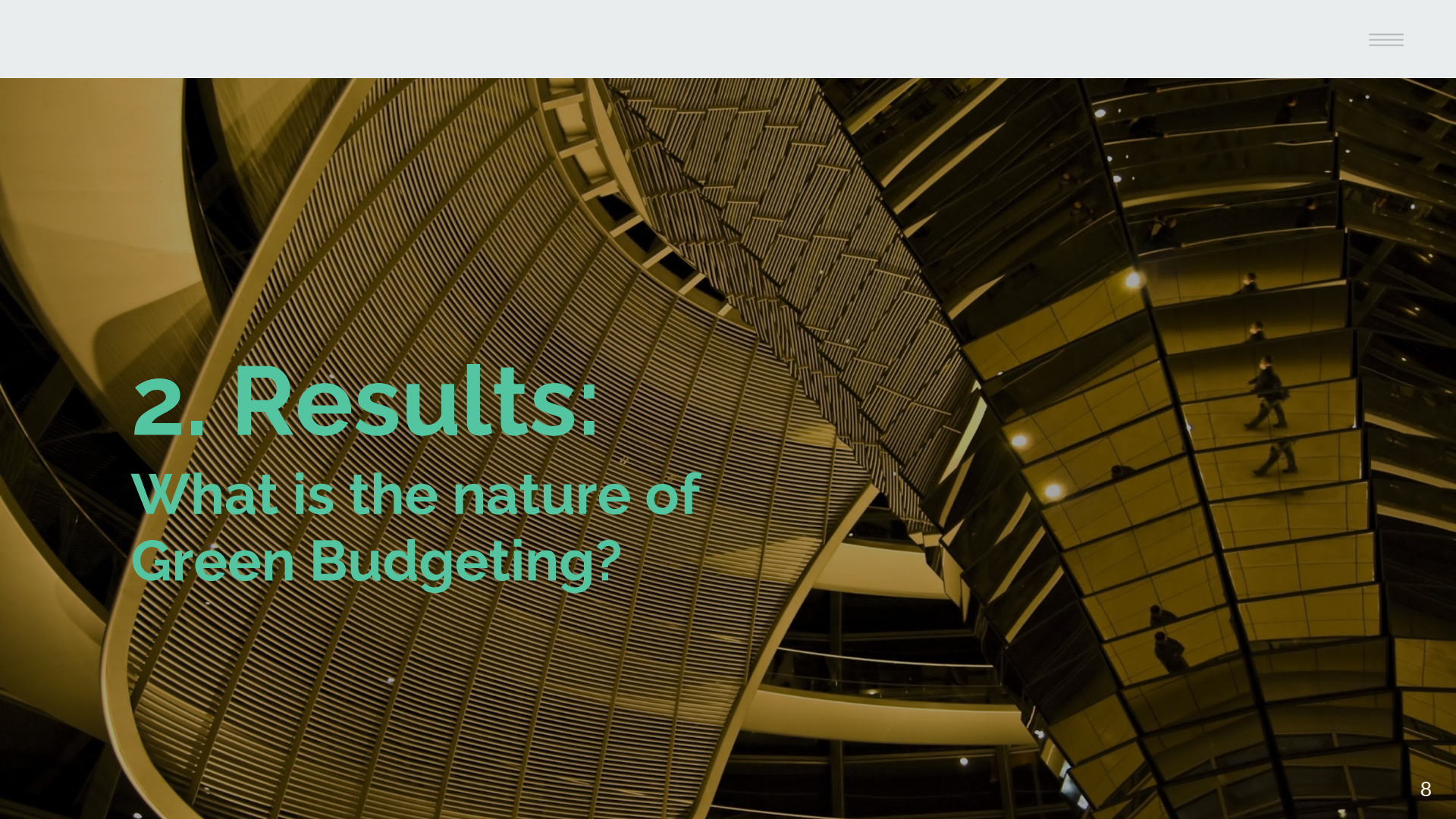
Green budget research was limited to four areas: (1) electric generator alternatives, (2) greener studio offerings, (3) electric vehicle options, and (4) improved waste management and circularity opportunities – these were selected due to their high potential environmental impact. **Labour/human resources were not included in this research project.**





Project Activities

- 1 Conducting 25+ industry, producer and vendor **interviews** across Canada.
- 2 Building an **inventory of costs** for the four impact areas across Canada, for both BAU and greener alternatives.
- 3 Sourcing redacted **budget estimates** and **industry consultation** to develop production archetypes.
- 4 Gathering **utility costs** and **grid emission factors** for the regions of interest.
- 5 Estimating **energy use** and **costs** to understand how greener alternatives compare to BAU practice.
- 6 Calculation of associated **emissions savings** per impact area for production archetype.
- 7 Identification of regional **policy** context, relevant **associations** and regional **clean technology** opportunities.
- 8 Development of **national/regional outreach** and green production “**action tables**”.



2. Results:

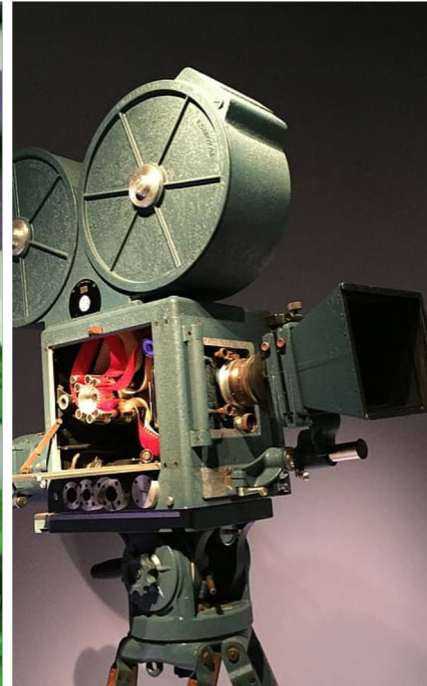
What is the nature of
Green Budgeting?



Experience across Canada varies, but all interviewees agreed that they typically **experience a cost premium and/or some other existing barrier to production greening**, whether this relates to awareness/interest, technology availability, infrastructure and other factors.

The availability of greening options and activity ranges across the regions reviewed.

Not surprisingly, provinces with historical climate ambition often have the best infrastructure in place to support and enhance such efforts.





A green premium seems real enough...

From our costing research, all four impact areas reviewed exhibit a moderate to a high net green premium compared to business-as-usual (BAU), ranging from **9%** to **+40% higher than BAU** for these specific line items.





... however operational savings change the equation.

When accounting for operational resource use, cost savings can be net positive for producers. Two areas in particular - EVs and electric generators - result in a **return on investment and on greenhouse gas (GHGs) savings**. This suggests that (1) productions should initially focus on making sustainability gains in these two areas; (2) making progress on waste and greener studios is of less immediate benefit.



CAD Production Archetype, Feature film (\$10M)

January 2023

Shoot Days	22.5			
Transport	BAU		Greener option	
Green Rental Premium	14.70%	Avg. of costs collected for various vehicle types		
Transportation Rental Cost	\$262,216.00	Full production period	\$303,674.00	Full production period
Fuel Costs (gasoline)	\$51,250.00	Shoot period only	\$5,125.00	Shoot period only, assuming some hybrid fuel use
Net Cost Savings			\$3,542.00	
GHG Savings (tonnes)			60.60	

Studios	BAU		Greener option	
Green Rental Premium	9.95%	Avg. of costs collected		
Studio Rental Fee	\$73,125.00	15,000 ft2 space	\$85,500.00	15,000 ft2 space
Utility Costs	\$2,567.20	Winter shoot (conservative estimate)	\$1,638.80	Winter shoot, electricity savings only
Net Cost Savings			-\$10,736.20	
GHG Savings (tonnes)			3.78	

Generators	BAU		Greener option	
Green Rental Premium	44%	Avg. of costs collected		
Generator Rental Costs	\$35,100.00		\$50,490.00	
Fuel Costs (diesel)	\$39,600.36		\$0.00	
Net Costs Savings			\$24,210.36	
GHG Savings (tonnes)			52.9	

Waste	BAU		Greener option	
Green Processing Premium	26.06%	Avg. of costs collected		
Waste Processing Costs	\$7,350.00		\$9,265.12	
Net Cost Savings			-\$1,915.12	
GHG Savings			1.85	

When accounting for resource use, we see a net cost and material emissions savings for certain impact areas (red circles), and net costs for others.*

* This finding is affected by the pricing of the BAU and greener options, archetype projected, assumptions made for operational savings, utility cost inputs (which vary across Canada), and more.



Aggregate savings matter in the long run.

When assuming a production has the ability to adopt the full gamut of green options for the impact areas examined, there is the potential for **an aggregate minor cost savings that mitigates against the extra expenses expressed**. This is due to the operational savings experienced in the archetype calculation, particularly for fuel conserved compared to BAU vehicle and diesel generator use vs. their electrified counterparts.




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Total Costs for Options	\$471,208.56		\$455,692.92	
Net Savings			\$15,515.64	
GHG Savings (tonnes)			121.02	

In aggregate, and for the impact areas only, we see a moderate net savings over the archetype example (noting the prior caveats).

A high GHG emission savings of 121 tonnes is projected, largely from the contributions of e-generators and EVs.



For this example, the total GHG savings estimated from executing activities across impact areas is **121 metric tonnes** - this equates to \$20,573 in carbon value (@ projected 2035 per tonne rates).

Together with the cost savings, this nets out to \$36.2K for the production - in theory.



3. Recommendations:

What are the priorities and needs emerging from this work?

Despite the promise emerging from the costing synthesis, several barriers for producers and vendors exist when it comes to undertaking effective transformation in the areas evaluated. Such **barriers include additional expenses and also other factors such as technology availability, awareness and more.**

The interviews, costing analysis, and accompanying research has uncovered green budgetary increases, regional considerations and potential priorities for the industry across four main impact areas of study. The outcomes and recommendations from the work undertaken are detailed in **Green Action Tables** structured by impact area - these highlights are summarized in the following slides.

Action Tables in the final report also include recommendations on data to be collected, metrics of success and detail on Canadian clean technology companies of interest and relevance to sustainable production.



E-generators

At 44%, e-generator rentals exhibit high budget premiums, but their potential GHG and net fuel cost savings will only intensify over time.

In short: Regional variation in availability, questions around power and particularly cold weather performance hamper uptake. The presence of a national vendor network and the associated operational fuel savings will help build the market.

Needed:

- Third party evaluation and demonstration of emissions and energy performance of e-generators across weather conditions and power configurations.
- Work with national vendors to encourage greater supply in the rental fleet, particularly across key production hubs.
- Promoting awareness and understanding of use of cleaner generators, and emphasis on the pairing power with LEDs.



E-generators

Evolving technology that is aligned with federal electrification directions, and complemented by renewables & energy storage developments.

Industry Priority: **HIGH**

- Promising application with interest from producers across Canada.
- Technology is applicable to smaller producers and location shoots, particularly as renewable charging options such as solar advance.
- Engagement with producers and generator operators is key to understand performance and address concerns through training on how power is used on set and enable a transition to electrification.
- Consideration of partnerships with groups such as FPInnovations and CanmetENERGY for a technical testing path based on industry feedback.

Parallel priority on enabling grid and building tie-in opportunities in urban centres, particularly in regions with electrification interest, high levels of production activity and clean grids.



Greener Studios

Despite a low cost increase (~10%), 'greener' studios only exhibit moderate GHG and minor utility cost savings, however benefits will accrue over the long term & for multiple productions.

In short: Studio costing varies primarily with regional real estate as opposed to whether greener assets are in place, and consequently rental costs vary significantly across Canada. The nature of the split incentive confounds retrofit cost upsides for producers and studio owners.

Needed:

- Asset inventory of existing studio and warehouse stock across the six production hubs to assess the number, vintage, quality and operational performance of buildings available to productions.
- Engagement with the studio community to develop targets around energy performance of Canadian studio/warehouse building stock, based on inventory outcomes.
- Stakeholder consultation and engagement process to set industry standard targets and to connect lagging studio owners with available incentives.
- Consideration of role and opportunity for smaller studios.



Greener Studios

Significant incentives and supports are available and many partner organizations are active in this space across Canada.

Industry Priority: **MODERATE**

- Nature of split incentive and low savings exhibited offer less direct benefit to Canadian producers, however significant number of provincial/regional incentives 'sweeten the pot' for studio/warehouse owners.
- Studio engagement and upgrades will provide benefit over the longer term, particularly if these target some of the smaller/older studios and warehouses in use, as well as regions that exhibit the highest electricity costs/have more carbon intensive electric grids.
- Building efficiency targets are increasingly becoming of focus for industry. Consider developing national partnerships with The Atmospheric Fund, Efficiency Canada, Sustainable Buildings Canada, Canada Green Building Council and more.



Electric Vehicles

Despite a 14% cost impact, EV rentals still exhibit moderate net savings, and use can result in significant GHG reductions.

In short: Good regional availability based on provincial climate policy and historical EV support. Lack of availability has been experienced in some regions, and concerns exist around potential performance in colder climates. Significant infrastructure needed however EV operational savings will continue to increase with fuel prices.

Needed:

- Work with national vendors to assess and allocate greater industry-focused supply in the rental fleet, particularly across production hubs with existing infrastructure and cleaner host grids (possibly through bulk rental agreements for regional producers).
- Evaluate cost savings based on compiling various production use cases, through gaining transport budget operational performance measures from leading productions using EVs and extrapolating what the BAU cost and emissions would have been.



Electric Vehicles

Moderate incentive availability and growing number of partner organizations. Alignment with federal priorities and ICE phase out by 2035.

Industry Priority: **VERY HIGH**

- Promising and beneficial application with interest from producers across Canada. Nexus of activity currently resides in B.C.
- Activity is well aligned with federal government direction and respective policy targets, including the phase out of internal combustion engine (ICE) sales by 2035.
- Technology is applicable to smaller producers and available through major production hubs at an affordable price point, with potential cost and significant emissions savings resulting when considering projected operational performance.
- Engagement with producers and transport operators will be key to build awareness of benefits and further uptake.



Waste & Circularity

At ~ 26% expense bump, this area exhibits high costs and only minor GHG savings, however complexity in waste tracking and processing confound accurate evaluation.

In short: Regional complexity and variation in waste treatment, permitting, management processes and more challenge progress. Fees for various streams of materials vary vastly from one region to another; availability and accessibility of processing facilities is limited outside of the main urban filming hubs; regulations and policies around waste management also differ from region to region.

Needed:

- Acquiring and compiling costs on a consistent volumetric basis and over the processing life cycle would enable more accurate evaluation of waste processing alternatives.
- Prioritizing the reduction of upstream resource use and repurposing would be of benefit and impact, regardless of analysis.
- Personal Protective Equipment (PPE) recycling is available in all jurisdictions and although may pose an additional cost, should be considered.




Waste & Circularity

Limited incentives, high effort for engagement, yet this has been a consistent focus for producers across Canada.

Industry Priority: **MODERATE**

- Consultation suggests the need for specific and point source engagement with municipalities and waste processors to enable and effect more optimal processing opportunities.
- General complexity of evaluating and compiling cost and GHG outcomes for different regions and waste types reduce expressing the value of this exercise.
- However, ongoing producer acceptance of these expenses and work associated suggest this impact area is of importance and concern. Producer efforts should continue to be supported and enabled where possible, especially if it leads to further engagement.
- Addressing PPE waste may be an area of both opportunity and need; possibly to be considered as a carved out line item in producer COVID budgets.

4. In the longer term...



Experience across Canada varies, but all stakeholders interviewed have experienced a **cost increase and/or other complexity with greening efforts** in these studied areas, such as availability of such options, questions around performance, acquiring stock, feasibility, operating considerations, and other factors. Also out of the study's scope, yet material to budgets, are labour costs associated with sustainability practices.

Overall there is no single solution to driving forward green production regionally or even more broadly across Canada. **Systemic and multi-pronged action will be required** on several fronts and across stakeholders.





Such work could help refine and prioritize impactful activity for Canadian producers through identifying opportunities for support and targets in consideration of regional context, interest and need, as well as national level priorities, such as:

- *Work with national vendors to accelerate the transformation of the rental fleet, furthering broad access for the industry and supporting/promoting credible research into outcomes, operational and emissions performance of newer technology to industry: National.*
- *Incentivize technology development that can apply to remote energy on location: Manitoba.*
- *Work with entities to highlight and address waste processing and circularity challenges: Ontario.*
- *And much more..*





In closing...

The research undertaken has identified the potential benefit, need and opportunity for growing sustainable production activity across Canada. In seeking to build its understanding of the budgetary implications of sustainable production practices in Canada, the CMPA and its partners have set a foundation for next steps to support Canadian producers in preparation for the transition to net-zero.





Thank you.

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