



3700 Kempt Road, 1st Floor
Halifax, Nova Scotia
B3K 4X8

April 12th 2021

RE: Law Amendments - Bill No. 97 – Electricity Act (amended)

Dear Committee Members,

Killam Apartment REIT (Killam), based in Halifax, is one of Canada's largest residential landlords, owning, operating, managing and developing a \$3.8 billion portfolio of apartments and manufactured home community properties. Killam Apartment REIT is publicly traded on the TSX under the ticker KMP.UN.

Killam is a leader in Environmental Social and Governance (ESG) practices within the Canadian multi-residential real estate sector. **We annually report our greenhouse gas emissions and have committed to renewable energy and emissions-reduction targets. Our initial goal is a 15% reduction in our total GHG emissions by 2030 and to produce 10% of our electricity from renewable sources by 2025.** With this strong focus on reducing our carbon footprint, we began installing photovoltaic (PV) solar panels in 2020 at several properties in PEI and NS with over 1 MW of solar installed or underway. In 2021 we expect to invest an additional \$2.0 million in PV solar projects which are estimated to produce 1,200 MWh of electricity annually.

We will also be installing electric vehicle charging stations in many of our Nova Scotia buildings in the coming year and we see strong demand for air conditioning in Nova Scotia. The solar panel electricity production is a great way to offset the new air-conditioning load because the demand occurs when it is sunniest. The EV chargers will eventually allow for two way charging so we can store excess electricity produced by the PV solar panels within the electric vehicles and release it when it is required.

We support Bill 97 and the amendments proposed to the Electricity Act. Killam looks forward to participating in the forthcoming consultation for the development of new regulations. We believe significantly increasing the size limit for interconnected PV systems should be a priority and that distribution zone limits should be removed.

Sincerely,

A handwritten signature in black ink, appearing to be 'A Kent', written in a cursive style.

Andrew Kent, Director – Developments

CC. Michael McLean, Senior Vice President – Developments

From: [Peter Polley - Polycorp](#)
To: [LeBlanc-Murray, Nicole M](#); [Office of the Legislative Counsel](#)
Subject: Law Amendments Committee - Electricity Act - statement of provincial interest in solar development vis-a-vis municipal land use restrictions
Date: April 12, 2021 7:53:38 AM
Attachments: [21.04.09. Solar-panels-1024x632.jpg](#)
[21.04.09.Solar field.jpeg](#)

**** EXTERNAL EMAIL / COURRIEL EXTERNE ****

Exercise caution when opening attachments or clicking on links / Faites preuve de prudence si vous ouvrez une pièce jointe ou cliquez sur un lien

I would like to propose the below as an addition to the Electricity Act wording.

Many municipalities' Land Use Bylaws do not allow solar unless it is "ancillary to a use" on the property. For example, we were looking at purchasing a vacant non-descript property in Kings County last year to potentially use as a solar farm / field. The Kings County zoning would not allow solar panels to be installed as a primary use of the property. It will take ten years for municipalities to catch up to the Province on these current proposed changes to the Electricity Act to enable land use legislation to facilitate "non-ancillary" use of land for solar panel farms.

The province should specify that there is an overriding statement of provincial interests in the development of solar as a renewable energy source, and that the interest overrides any municipal land use restrictions. No municipality is going to knowingly block the production of carbon free electricity from solar, but we cannot wait ten years for the individual municipalities to act on this to change land use bylaws. The level of effort and cost required for each municipal unit to embark on such changes would cost millions of dollars in staff time to get to the same point that the Province can authorize unilaterally.

I believe that a somewhat similar "global intervention" position was taken by the Government of Ontario several years ago where they overrode private covenants regarding clothes lines in developments, to encourage energy reduction.

Thank you,

Peter

Peter Polley

Office : (902) 431-9917

Cell : (902) 431-9919

Fax : (902)431-9915

E-mail peter@polycorp.co

web : www.polycorp.ca

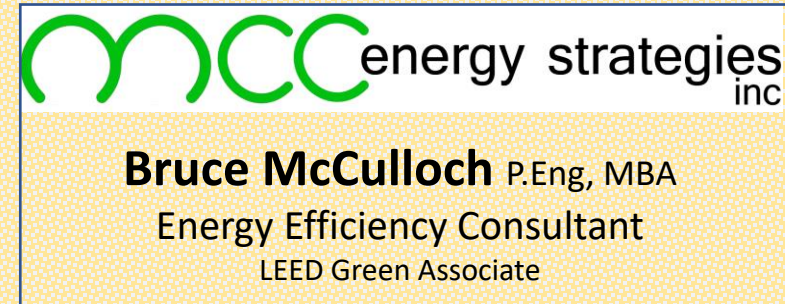
Mailing Address : PO Box 31369, Halifax NS B3K 5Z1

Courier Address : Suite 205, 339 Herring Cove Road, Halifax NS B3R 1V5





Introduction



Congrats on moving forward with this Amendment!

The existing Act has been an impediment for 3 situations for me

- 1) townhouse style condo corporations – Bedford and Chester
- 2) community solar farms in Western NS
- 3) Municipal Water treatment Facility using over 100 kW per day

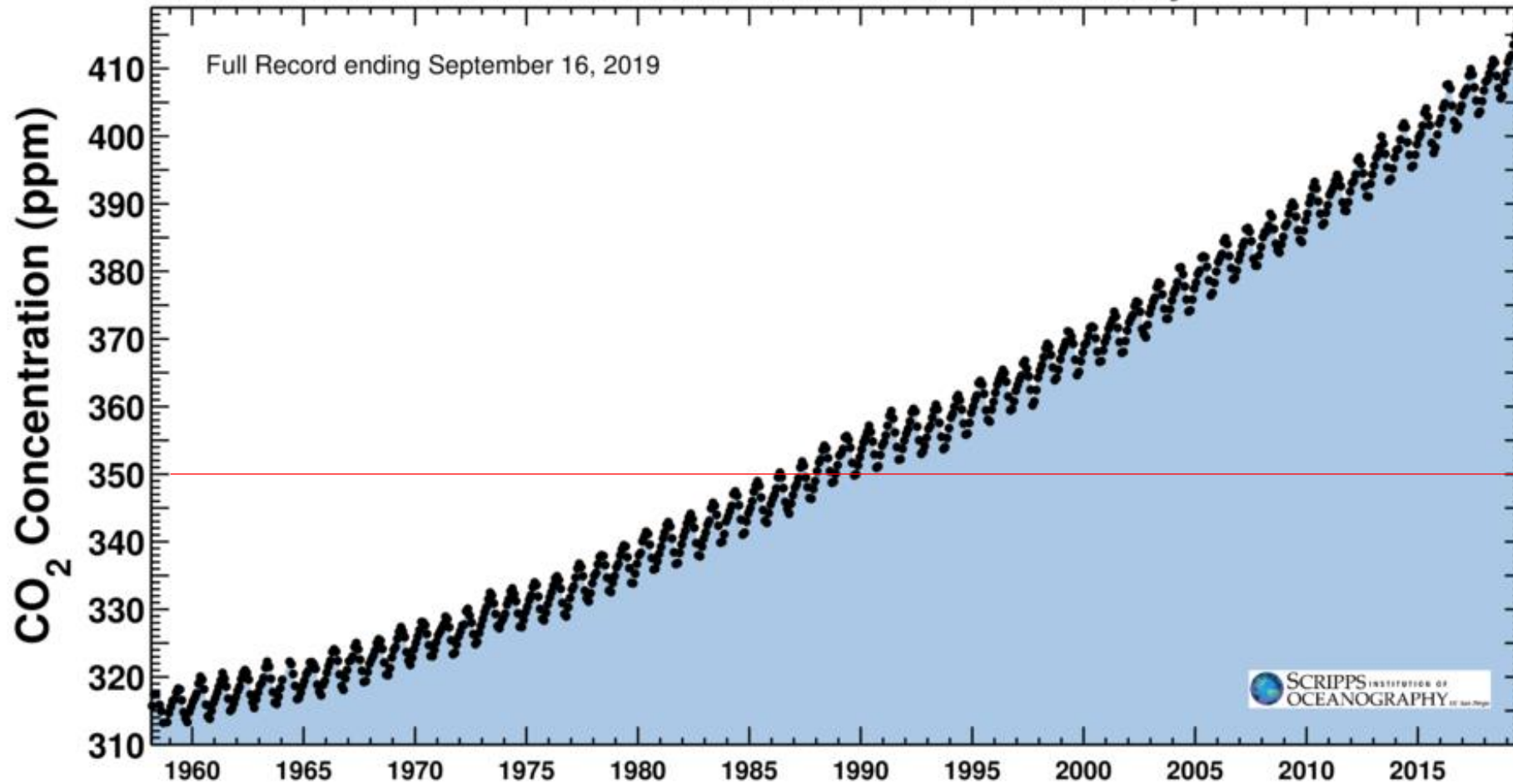
Thank you in advance for allowing me to share some thoughts



Latest CO₂ reading
September 16, 2019

408.12

Carbon dioxide concentration at Mauna Loa Observatory



350 is safe level

Inadequate Messaging from our Media

Last week, Feb 12, 2020

~~Yesterday~~, scientists reported that the concentration of carbon dioxide in the atmosphere has reached an all-time high of 416 parts per million—up from 411 ppm in just one year.

It's impossible to understate how bad this news is. The maximum safe level of carbon dioxide to prevent catastrophic climate change is 350 ppm. In fact, before 1950, carbon dioxide levels never went over 305 ppm in the previous 800,000 years!

But as Greta Thunberg said, "The saddest thing is that this won't be breaking news."

The concentration of atmospheric carbon-dioxide surged past 420 parts per million (PPM) for the first time in recorded history this past weekend, according to a measurement taken by the National Oceanic and Atmospheric Administration (NOAA) at the Mauna Loa Observatory on the Big Island of Hawaii. 5 days ago

<https://www.forbes.com> › sites › davidbressan › 2021/04/07

[Carbon-Dioxide In Earth's Atmosphere Spikes To Record Level](#)



Putting climate considerations into every decision



Various slides from **Eric Freed** presentation at **Build Green Atlantic Conference** – 30 Sep 2019

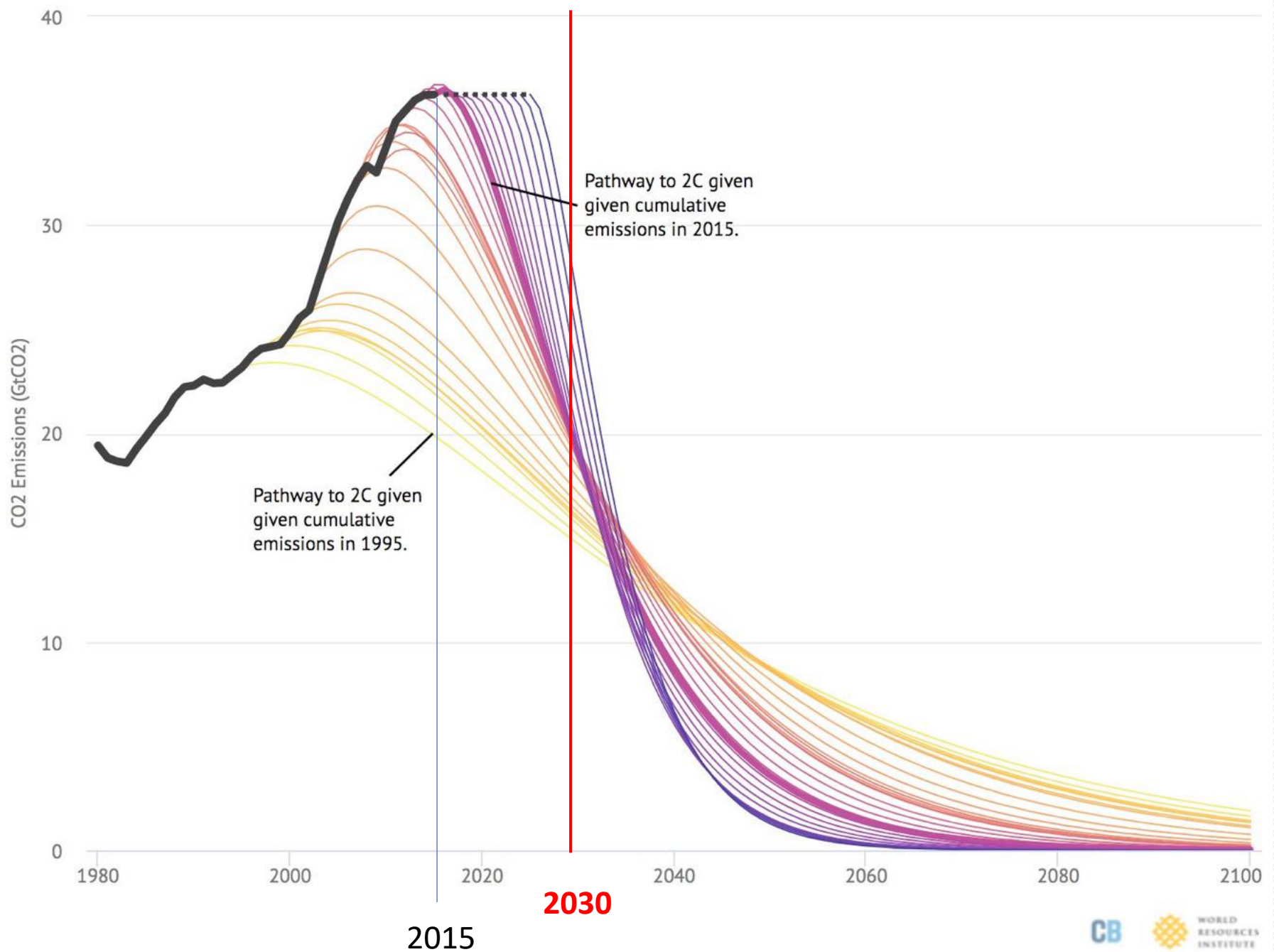
used by permission



there is NO “new normal”



To limit warming to 2C, global emissions must fall more quickly if they peak later



1 1/2°
 All coral reefs die out
 4x number of wildfires
 2x global temperatures
 271 million people with water scarcity
 132 million people exposed to drought

2°
 Ice sheet melting to collapse
 Flooding in world's major cities
 Global GDP cut by 13% or more
 Parts of India uninhabitable
 Half the world's population exposed to deadly heat waves 20 days per year

3°
 Southern Europe in permanent drought
 Years long drought in parts of the world
 6x number of wildfires
 Huge increase in flood damage
 Doubling of warfare and global conflict

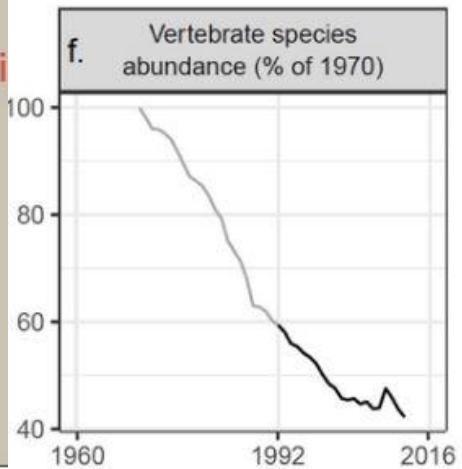
4°
 Impacts would cost \$550 trillion
 8 million cases of dengue fever in Latin America
 Grain yields fall by 50%
 Global economy 20-50% smaller





8°
 Equator uninhabitable
 Oceans swell 200 feet or more
 2/3rds of world's cities flooded
 Not enough land able to produce food

The Uninhabitable Earth
Life After Warming
 David Wallace-Wells

h, David Wallace-Wells


58% Decline in Vertebrates Since 1970



Freeway expansion
Bridge construction
Living at sea level
 Building to code minimum
Installing copper
 Using concrete
Banning graywater
 Demolishing buildings
Parking requirements
Fossil fuel subsidies 
Shopping at Amazon
Buying a car



is
CLIMATE
DENIAL.

A young woman with a long braid, wearing a pink shirt, is speaking at a podium with a microphone. The background is a blue wall with a faint mountain range pattern.

“...and all you can talk about is
MONEY
and fairy tales of
ECONOMIC
growth.”

Address to the United Nations
September 23, 2019

MARK CARNEY named UN Special Envoy on Climate Change

In conversation with *The Sunday Edition's* host Michael Enright, Carney stressed that citizens in countries such as Canada and the United Kingdom have agreed, through their elected parliaments, to meet the target of the 2016 Paris Agreement to limit the increase in global temperatures to 1.5 degrees C. The Intergovernmental Panel on Climate Change has stated that target cannot be met without **reaching net-zero emissions by 2050.**

The UN will be hosting its 26th climate change summit — known as COP26 — in Glasgow this November and **Carney already** is working toward "a position where **climate issues are part of every single professional financial decision**, so decisions by banks, insurance companies, pensions, investors." He says pressure is building across the financial world to prioritize the state of the planet...

"The thing that I'm working on is to make sure **the financial system is thinking every day, every minute of every day, about that issue.** And it's putting money behind those who are solving the problem — or are part of the solution — and it's taking money away from those who aren't moving fast enough," he said. "It's time to get on with it. It's transition, transition, transition."

So – why am I here?

Many Technical Solutions exist, and
engineers, and others are keen, but...

...we need [Political help](#) to allow it to happen.

And many of the issues are behavioural, or economic.



RADICAL

EFFICIENCY!

(Reduce demand!)



RADICAL

SUFFICIENCY!

(Appropriate technology!)



RADICAL

SIMPLICITY!

(Keep it dumb!)

NEW FOCUS



RADICAL

ELECTRIFICATION!

(Stop burning!)



RADICAL

DECARBONIZATION!

(Clear the air!)



RADICAL

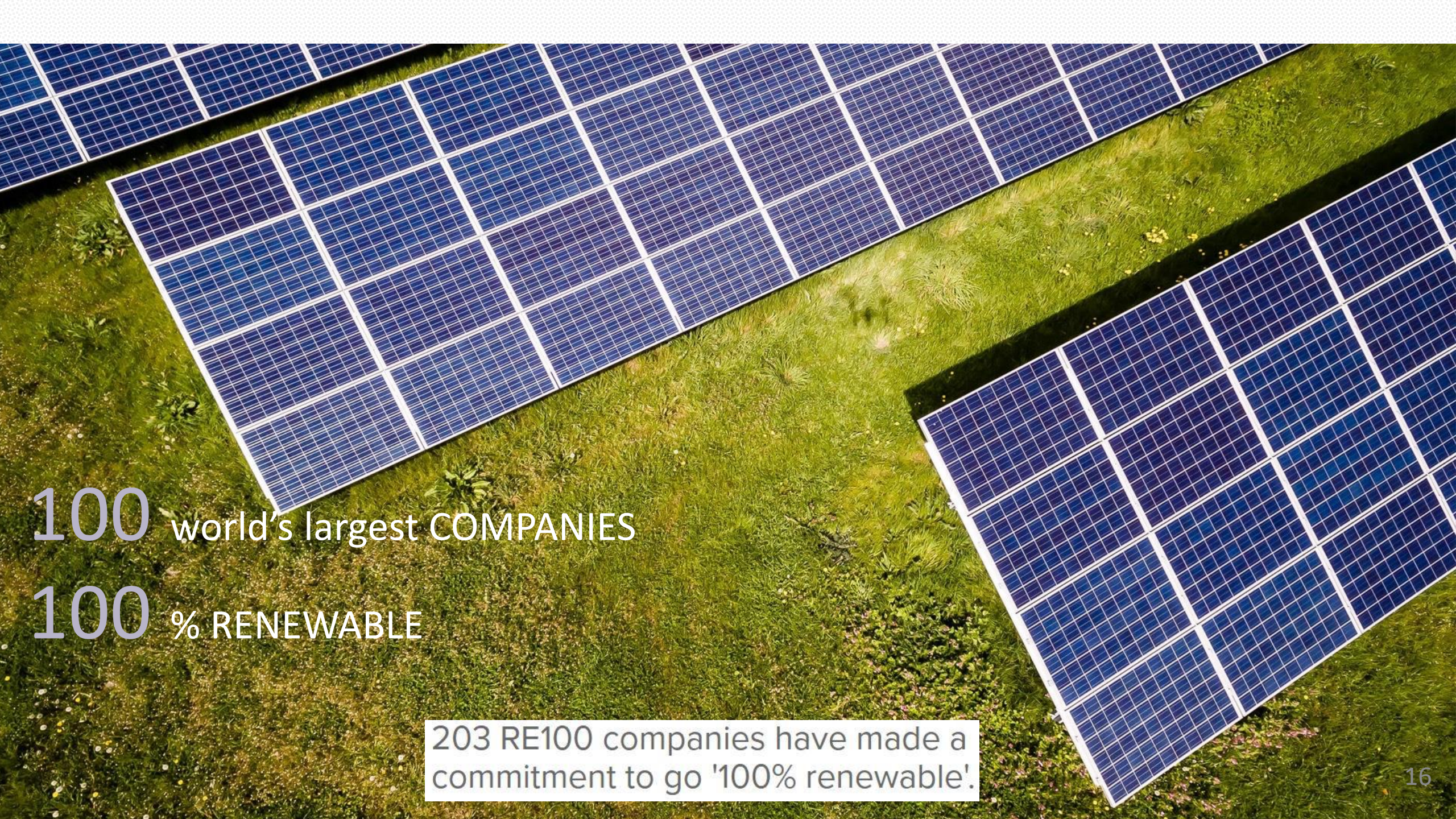
RESTORATION!

(Clean it up!)

RADICAL
COMMUNITY!



**when we work with potential,
problems dissolve.**



100 world's largest COMPANIES

100 % RENEWABLE

203 RE100 companies have made a commitment to go '100% renewable'.

Zero Carbon Building standards are needed

Because;

- Buyers want granite counter tops ahead of energy efficiency
- Developers simply sell buildings, and don't look at Life Cycle Cost
- Note: Developers such as Peter Polley, of Polycorp seek out leading edge building solutions, and go far beyond the minimum building code.
- (But most developers don't do this !!!)

Energy Improvement Sequence for Buildings

- **Elimination of Waste.** Assessment of equipment that should be retired, or procedures that need adjustment.
- **Energy Efficiency Measures.** Once waste has been eliminated, remaining equipment is assessed to determine if a business case can be made for upgrades
- **Energy Conversion - from fossil fuel** based to biomass or more efficient electrical energy-based equipment or building upgrades.
- **Renewable Energy.** After A), B) and C) have been performed, the new load level is used to determine the appropriate amount of renewable energy for the facility.

Example of “the right thing”

In 2007, the Progressive Conservative govt of NS passed **Environmental Goals and Sustainable Prosperity Act (EGSPA)** which

- Recognized the need to shift to the Green Economy,
- cost effectively avoided need for more landfills and expensive tipping fees,
- Encouraged companies from all over to come create innovative recycling technologies as part of the Province’s economic development strategy,
- a cap on carbon emissions was placed on Nova Scotia Power,
- created Conserve Nova Scotia, which later became **Efficiency Nova Scotia**

Efficiency NS is now being emulated across country, & abroad

Summary thoughts: (followed by some specific ideas)

A) climate issues to be part of every single **political, institutional, and personal decision**

B) Nova Scotia an example to Canada, and Canada an example to the world of how to

- work together
- so that **every day, every minute of every day, we think environment**

C) a different attitude required toward **deficits**
environmental vs **fiscal**

"It's time to get on with it. It's transition, *transition*, **transition**."



Amendments to Electricity Act – Great First Step!!

So... specific additional ideas:

- **Moratorium on new building** construction until developers agree to a zero-carbon approach.
 - 12 key developers in HRM, do 70% of the development
- **commuter rail** can come in from Bedford
 - Hardball with CN Rail
- Fines and publicity for **idling motor vehicles**
 - Low hanging fruit, gets the message out
- Eliminate PST rebate on home heating - target extra \$ to low income households
 - political suicide for one party to go it alone
 - opportunity for all parties to work together – radical politics!

BILL NO. 97

(as introduced)



3rd Session, 63rd General Assembly
Nova Scotia
70 Elizabeth II, 2021

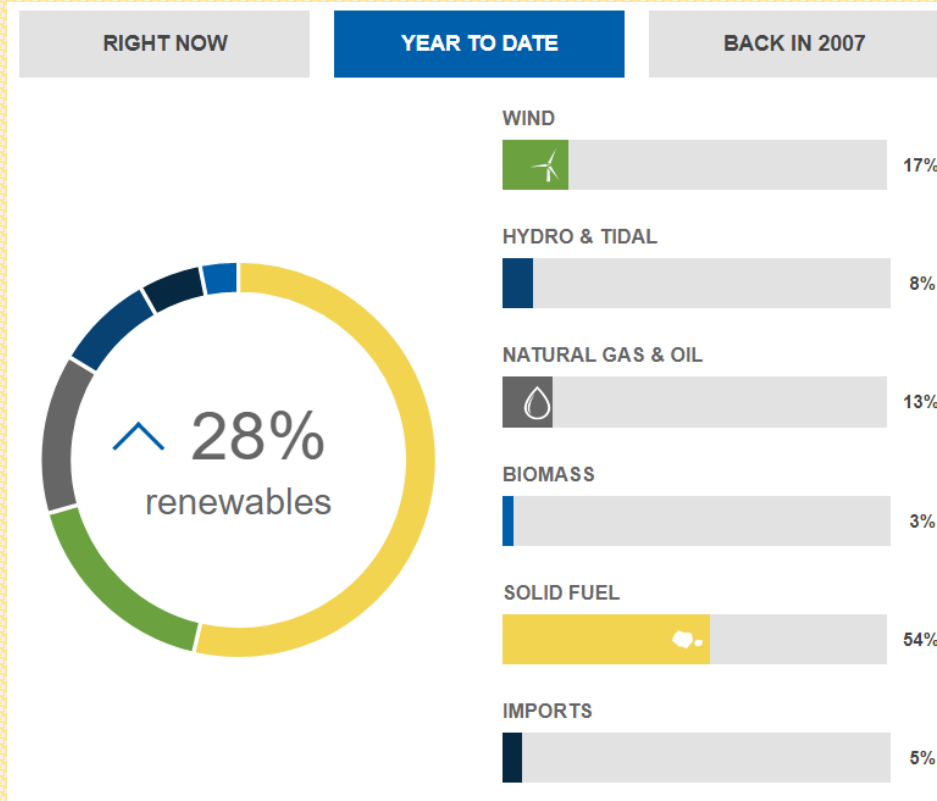
Government Bill

**Electricity Act
(amended)**

The Honourable Chuck Porter
Minister of Energy and Mines

Biggest single issue – energy emissions

- Tough targets for NS Power to reduce Carbon emissions
 - 2019-Jun-09 NSP announces that they are at 30% renewables, but....



From NS Power Home page on April 12, 2021

Note: No solar

**NS has better solar potential than Germany
(& Germany gets 7% of their energy from Solar)**

Despite significant solar uptake recently, NS gets less than 1% of it's energy from solar

US solar industry powers ahead as investors back batteries

Fund managers and energy-hungry tech companies bankroll 'solar-plus-storage' projects





Policy: Climate to be 1st part of every **decision**

NEW FOCUS

<p>RADICAL EFFICIENCY! (Reduce demand!)</p>	<p>RADICAL SUFFICIENCY! (Appropriate technology!)</p>	<p>RADICAL SIMPLICITY! (Keep it dumb!)</p>
<p>RADICAL ELECTRIFICATION! (Stop burning!)</p>	<p>RADICAL DECARBONIZATION! (Clear the air!)</p>	<p>RADICAL RESTORATION! (Clean it up!)</p>
<p>RADICAL COMMUNITY!</p>		

“the economy is a wholly-owned subsidiary of the environment” – *Herman Daly, former Senior Economist to the World Bank*

SOLAR POWER FOR APARTMENT BUILDING



P O L Y C O R P









P O L Y C O R P



THE VILLAS AT
MONT BLANC



THE RESIDENCES AT
MONT BLANC



Spice

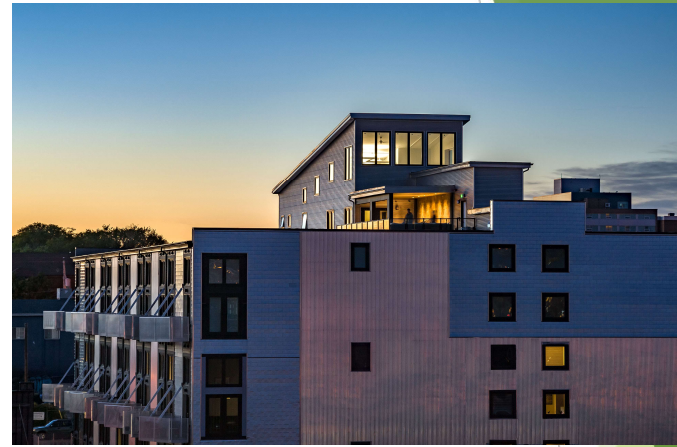
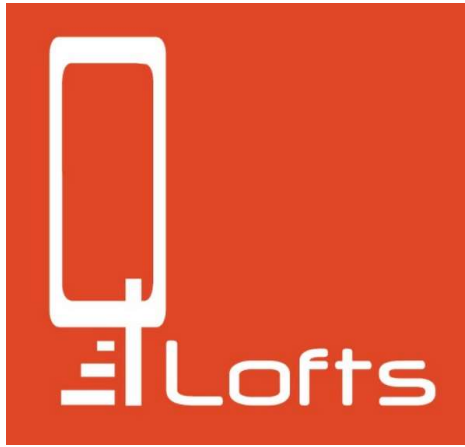




RAVENSCRAIG

at FLEMING PARK





WOODMAN'S
GROVE
RESIDENCES





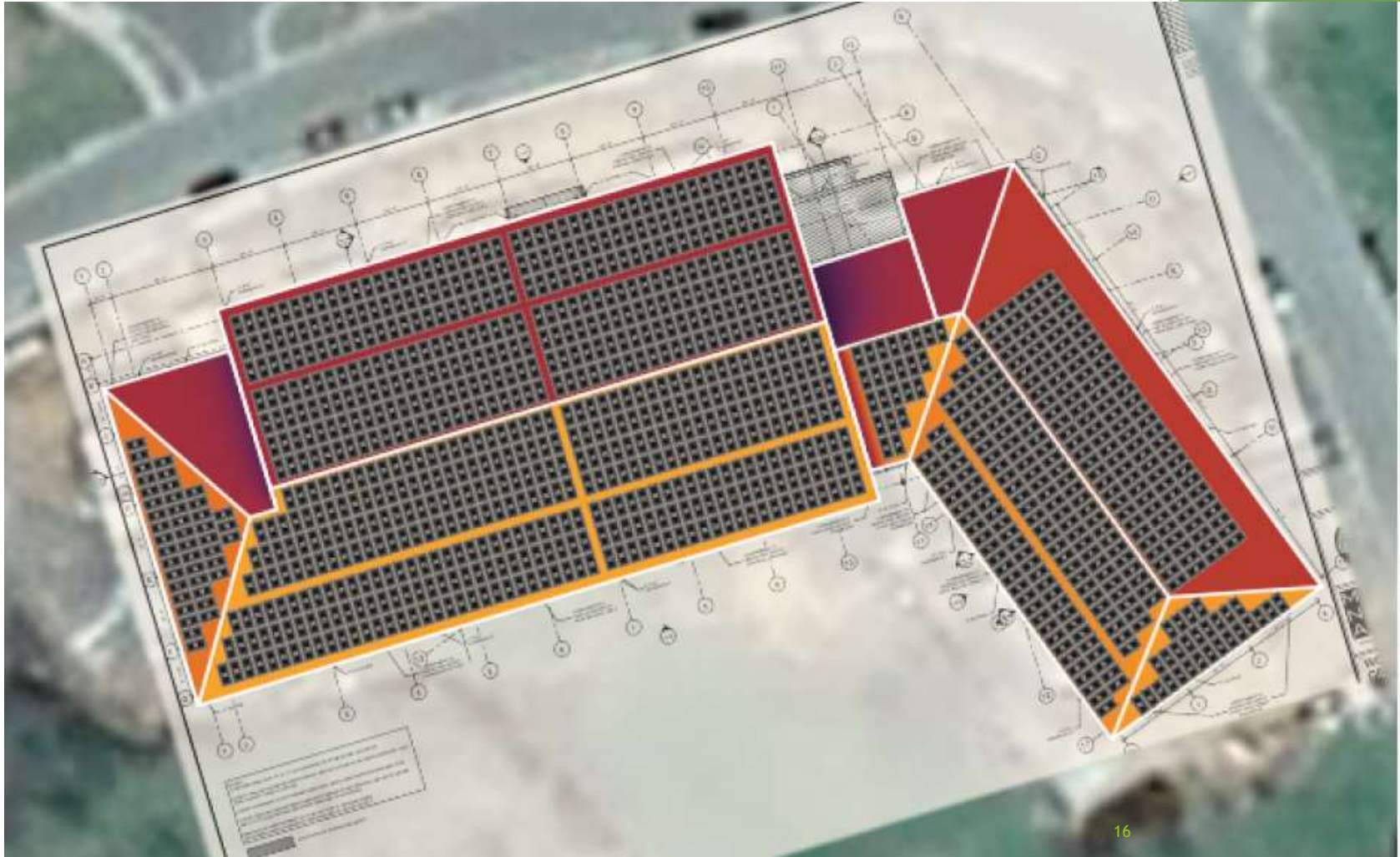


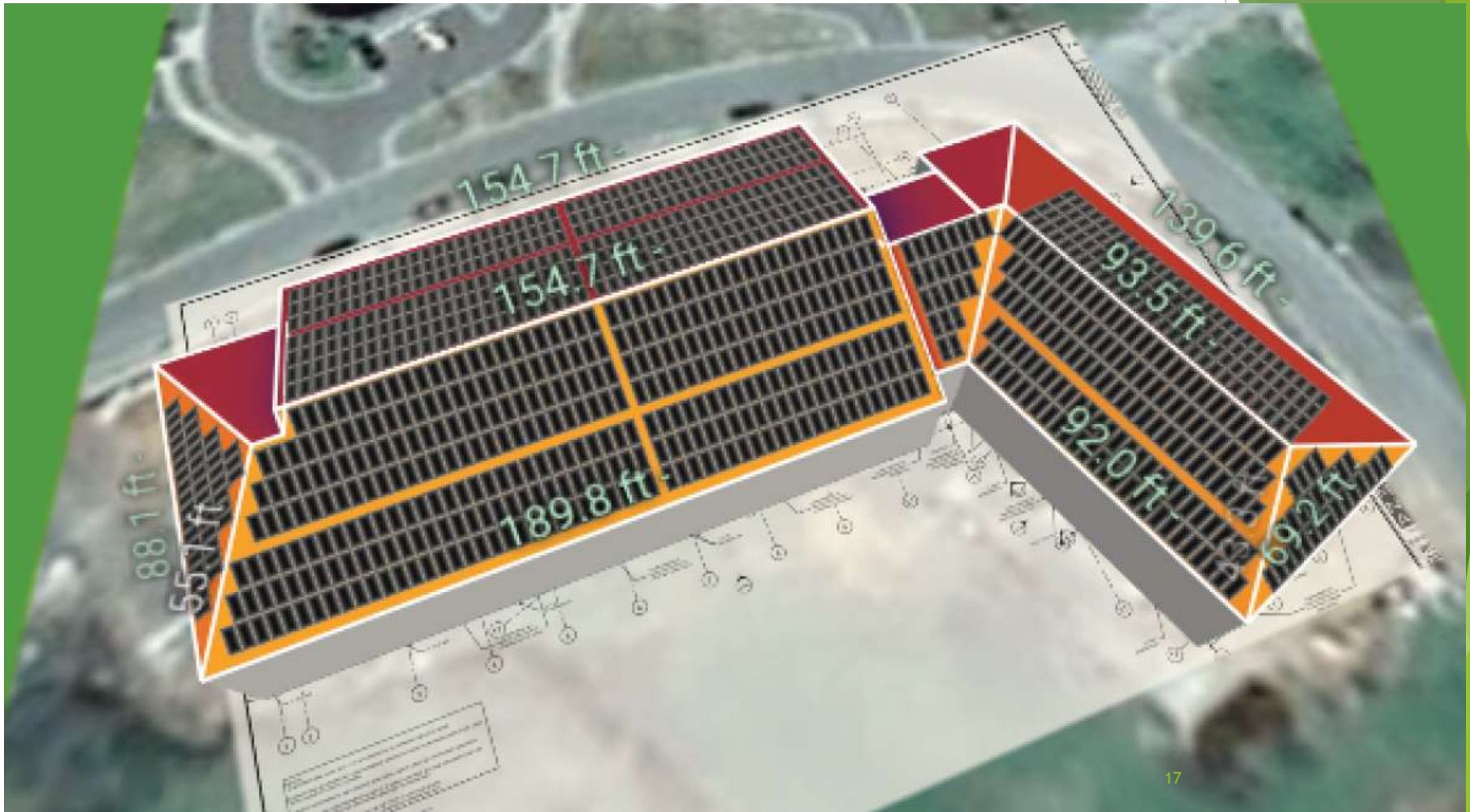


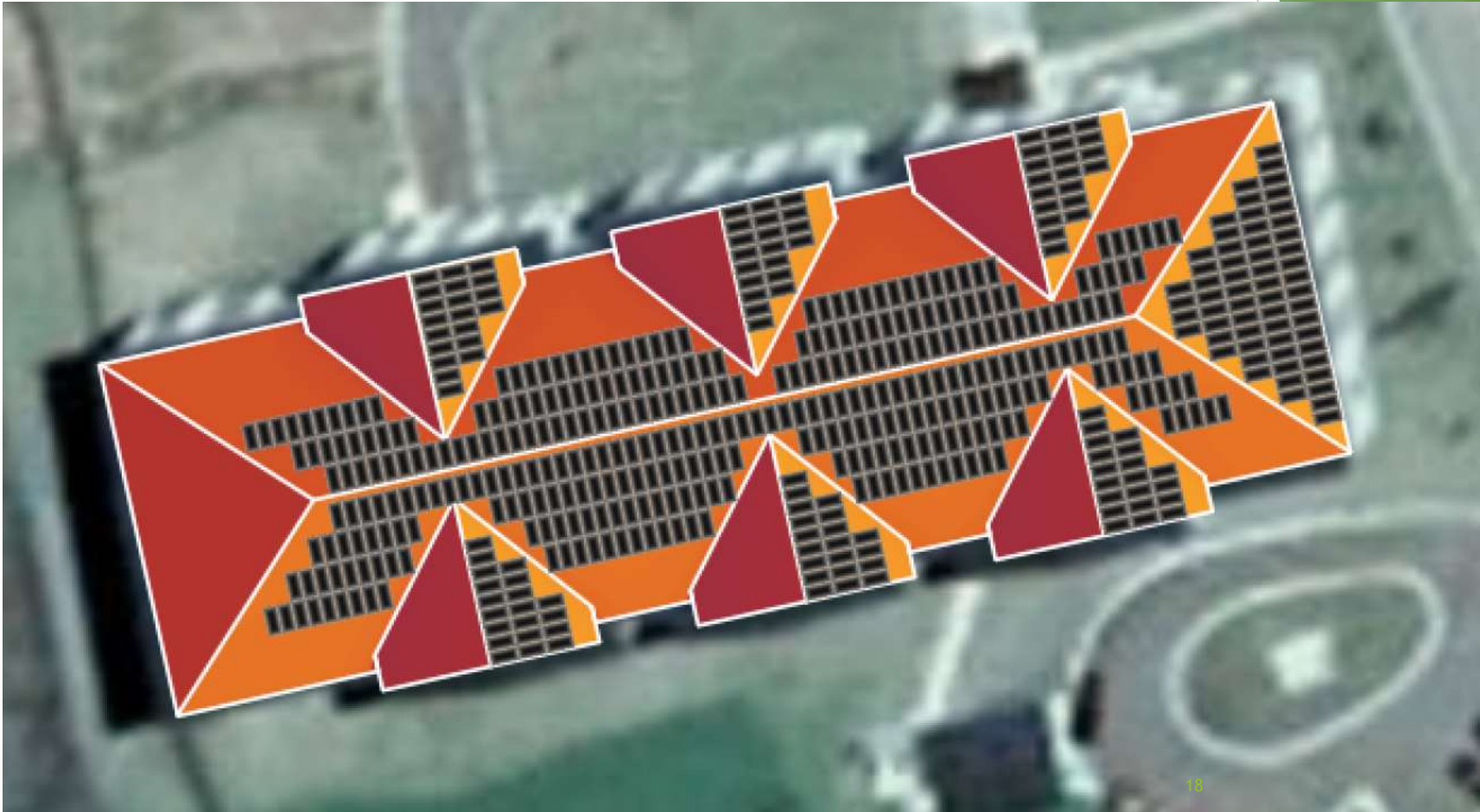


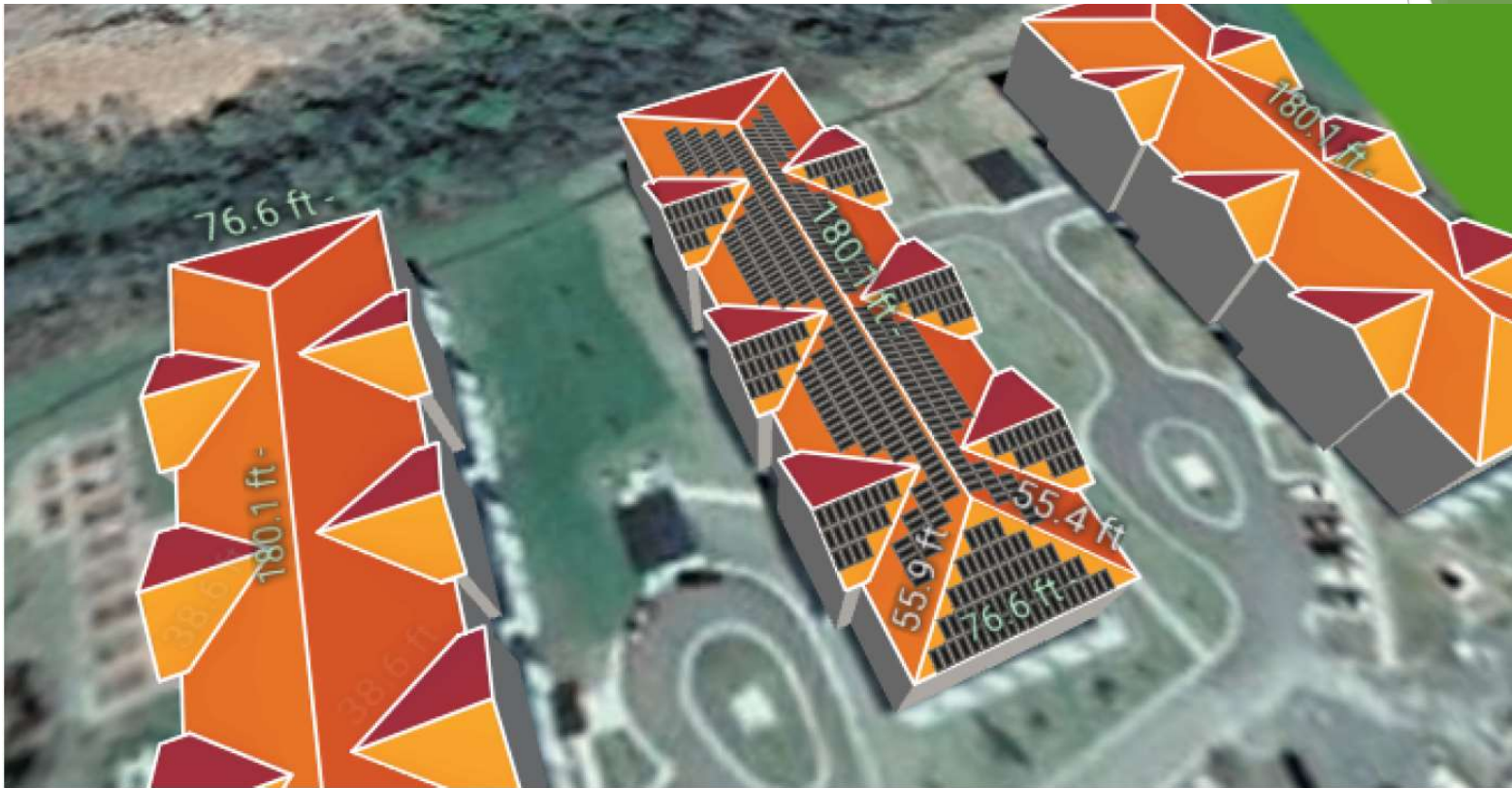
Canada













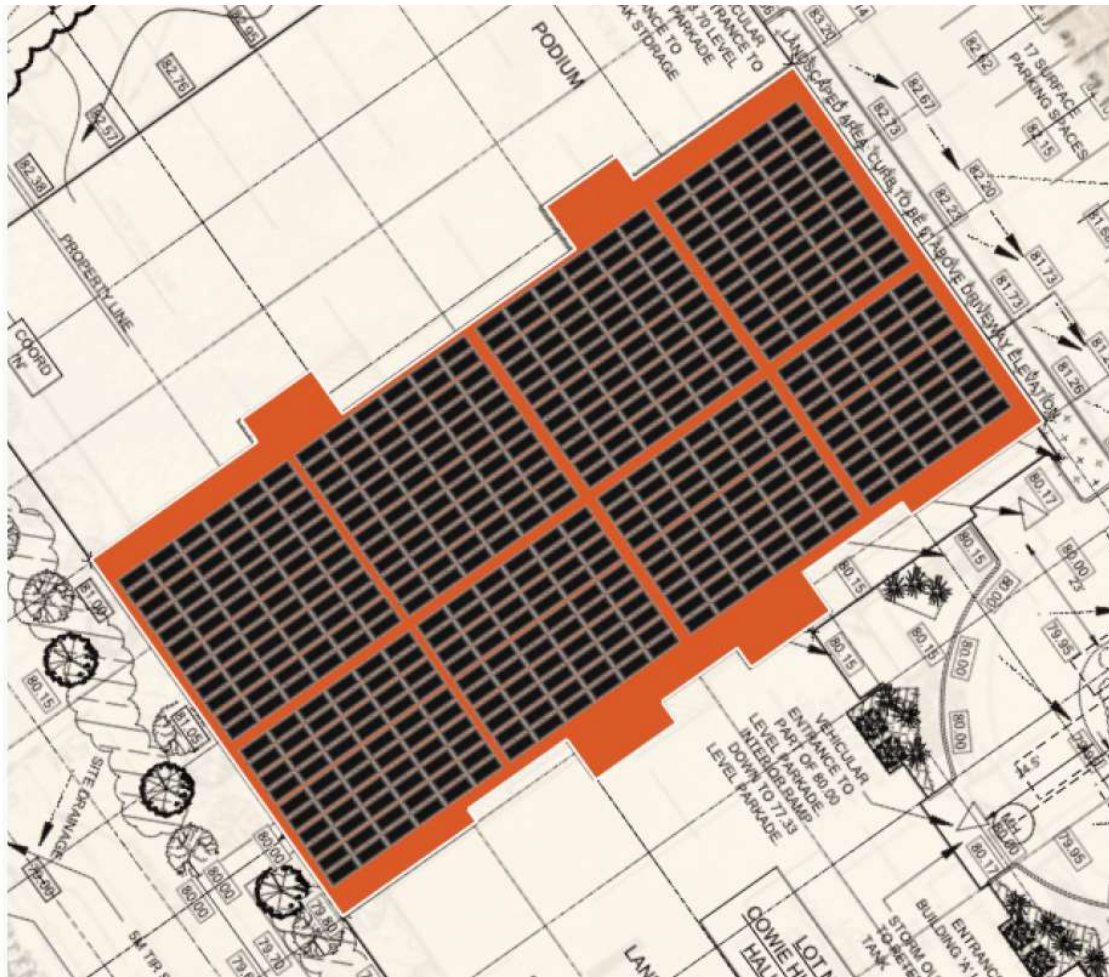


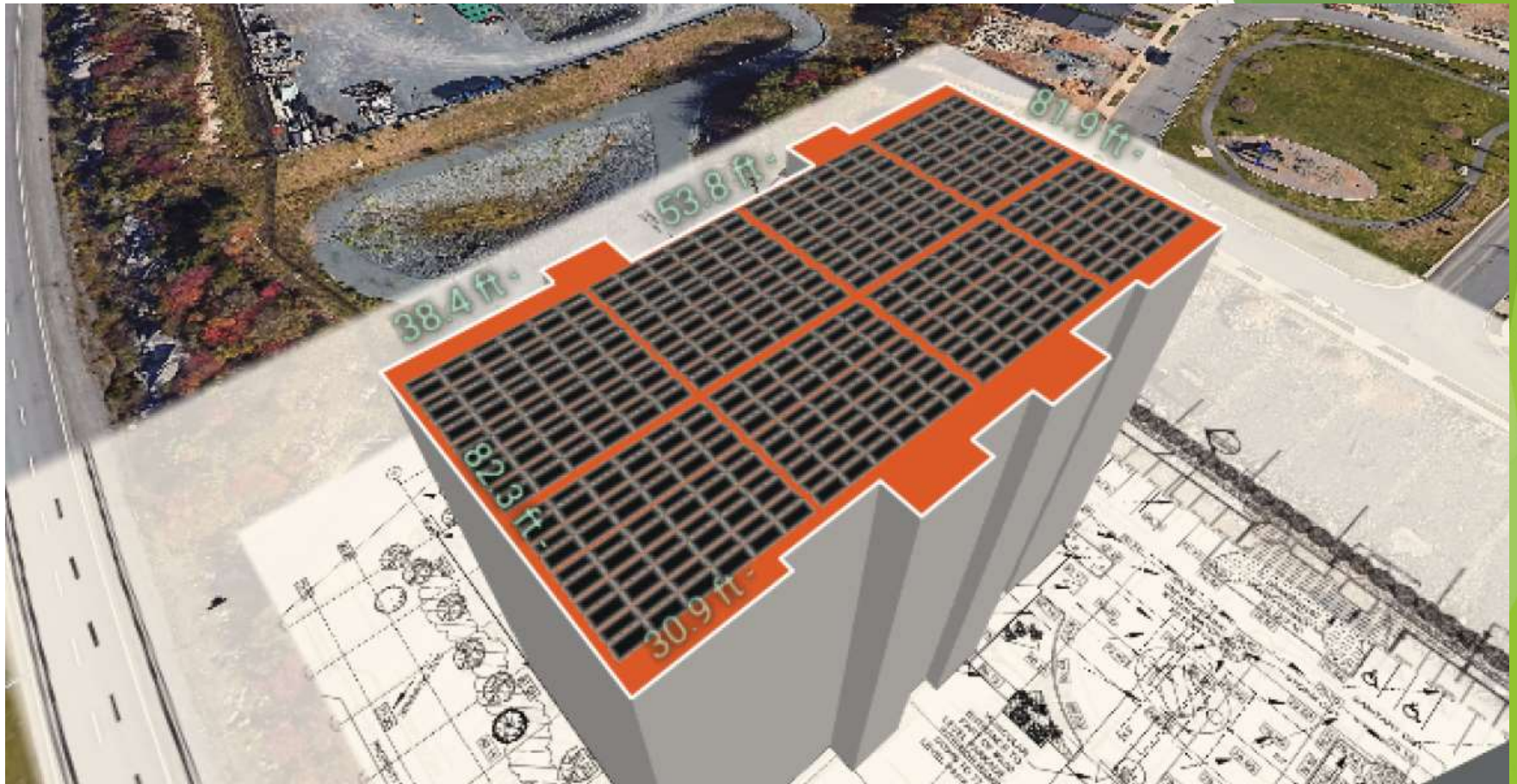
Aria
AT LONG LAKE

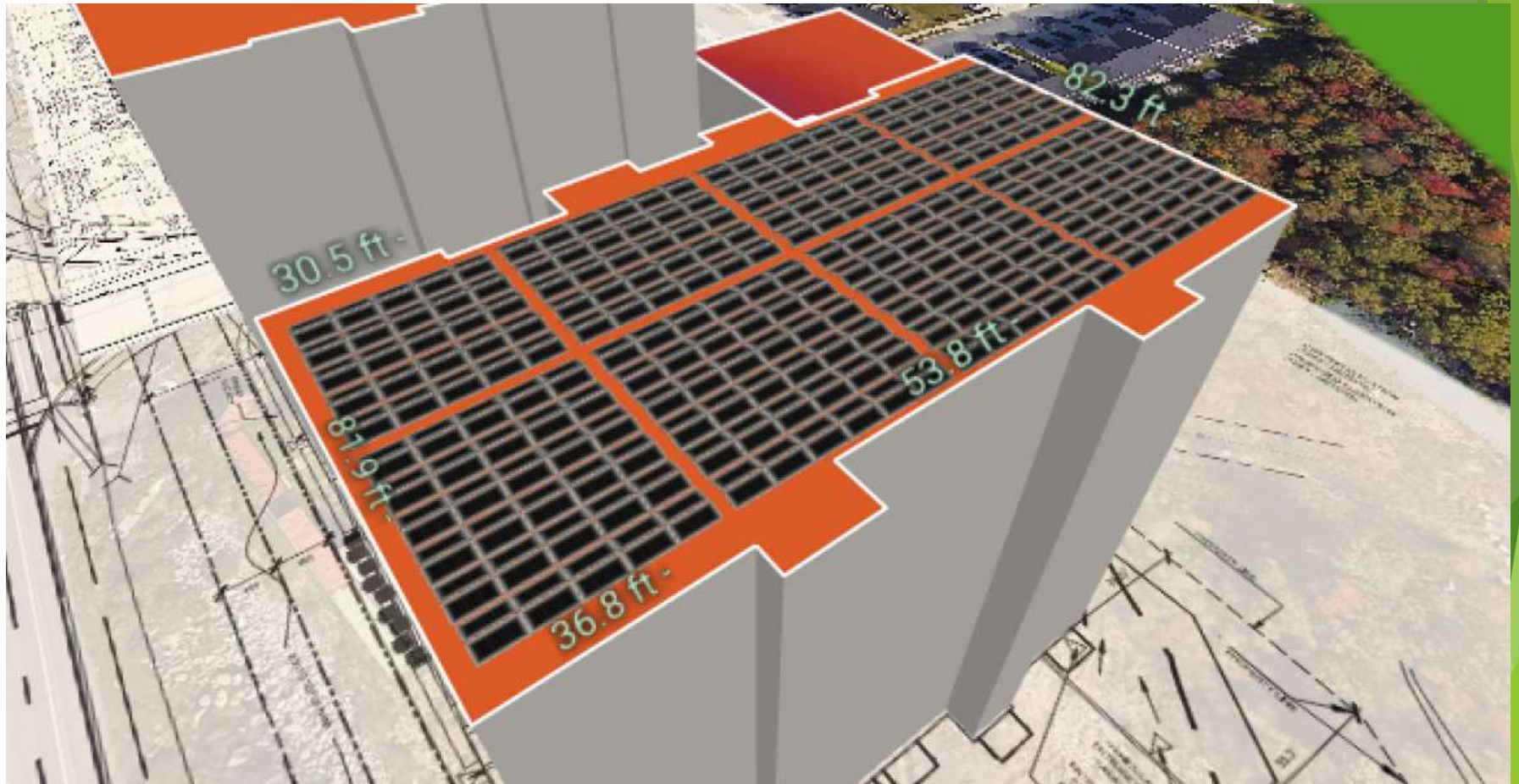
The logo features the word "Aria" in a dark green, elegant script font. A single, light green leaf is positioned above the letter "i". Below "Aria" is a thin horizontal line, followed by the words "AT LONG LAKE" in a dark green, all-caps, sans-serif font. A second thin horizontal line is positioned below "AT LONG LAKE".







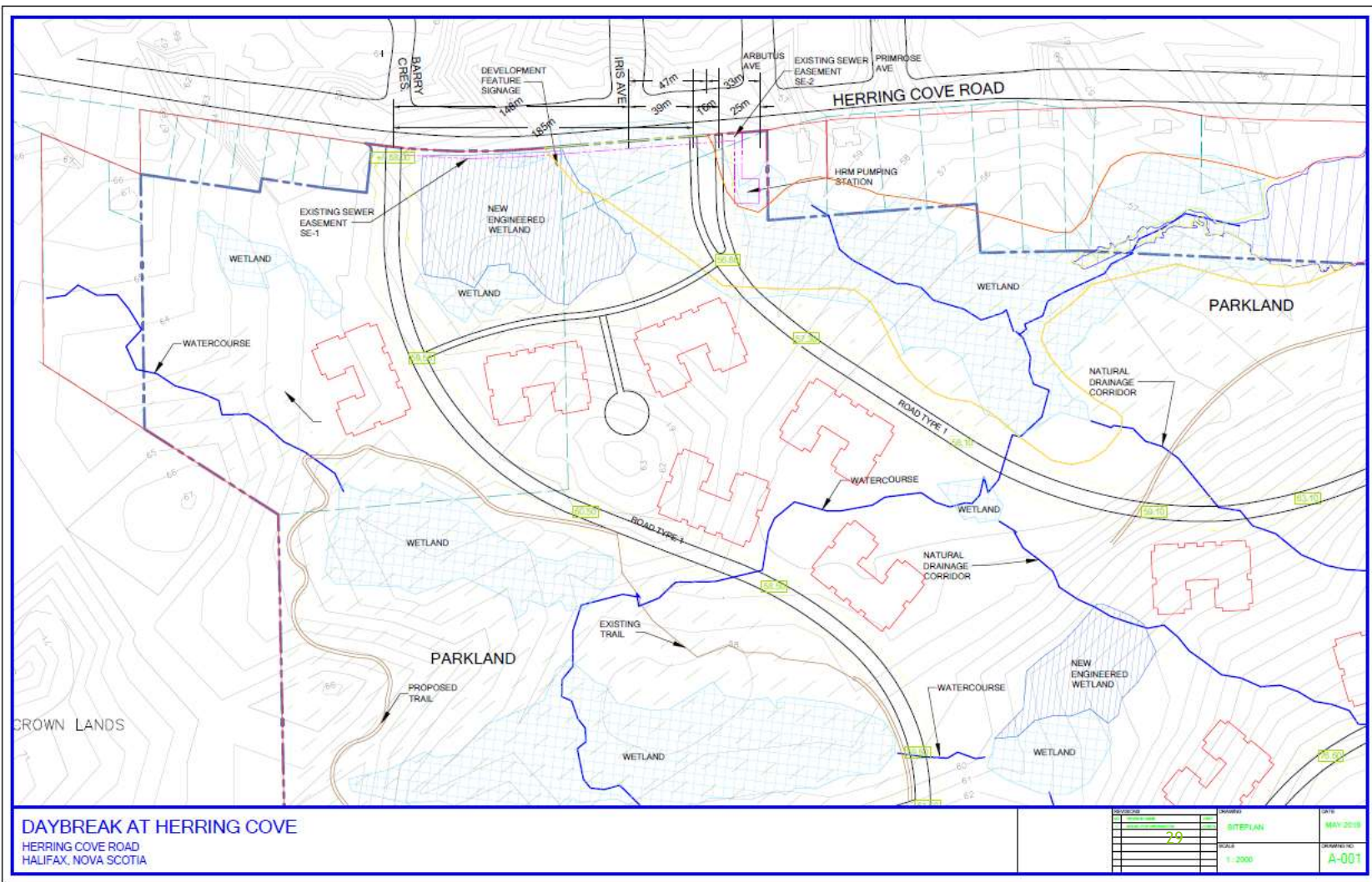








DAYBREAK
at Herring Cove



DAYBREAK AT HERRING COVE
 HERRING COVE ROAD
 HALIFAX, NOVA SCOTIA

NO.	DESCRIPTION	DATE
29	SITEPLAN	MAY 2018
	SCALE	AS SHOWN
	PROJECT NO.	A-001



Canadian Renewable Energy Association comments on *An Act to Amend Chapter 25 of the Acts of 2004, the Electricity Act* – Presentation to the Law Amendments Committee

Thank you for the opportunity to present on behalf of the Canadian Renewable Energy Association (CanREA). The Canadian Renewable Energy Association is the voice for wind energy, solar energy and energy storage solutions that will power Canada's energy future. We work to create the conditions for a modern energy system through stakeholder advocacy and public engagement. CanREA strongly supports these amendments to Chapter 25 of the *Electricity Act*. (20040 I would like to offer some specific comments on each of the major provisions of this legislation on behalf of our Association and our member companies.

1. Enabling the Governor in Council to make regulations respecting any aspect of the program

At present, Nova Scotia is relatively unique among Canadian provinces in that the specific terms and conditions of the Net Metering framework are each defined in legislation, as opposed to regulation.

There is precedent for allowing the Governor in Council to make regulations respecting any aspect of the Province's net metering program, as would result from the proposed amendment to Clause 1 of the *Electricity Act*. This amendment would introduce to Nova Scotia the same legal framework that currently governs Net Metering in Alberta¹, New Brunswick², and Ontario³.

In British Columbia, Saskatchewan, Manitoba, Quebec, Newfoundland & Labrador, and the territories, retail rates for customers who generate their own renewable electricity are offered by the provincial or territorial crown utilities pursuant to government policy directives, with oversight from the relevant provincial/territorial regulatory authorities. Prince Edward Island is the only other jurisdiction in Canada that defines specific Net Metering terms and conditions in legislation⁴.

¹ [Alberta Regulation 27/2008 under the Electric Utilities Act](#)

² [New Brunswick Regulation 2015-60 under the Electricity Act \(O.C. 2015-263\)](#)

³ [O. Reg. 541/05: NET METERING, under the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Sched. B.](#)

⁴ [Renewable Energy Act \(Prince Edward Island\)](#)

April 12, 2021

2. Removing certain requirements with respect to a program that permits customers to generate renewable low-impact electricity for the customers' own use

Prior to the *Nova Scotia Electricity Plan Implementation Act* (2015), the maximum nameplate capacity for net metering in Nova Scotia had stood at 1,000 kW (1 MW); The *Act* reduced this limit to 100 kW. For context, a “big box” grocery store would have enough roof space for perhaps ten times as much solar PV as is allowed under the current limit (e.g. 1,000 kW), and an apartment building or condominium development would have roof space for 200 kW or more.

The current cap is highly constraining for multi-unit residential developments, particularly those targeting “Net Zero” (so energy efficient, the home only uses as much energy as it can produce from on-site renewable energy)⁵. A number of leading energy-efficient homebuilders are based in Nova Scotia, and their customers are increasingly demanding these high-performance homes as they seek to reduce their carbon footprints. Enabling these types of sustainable residential developments to move forward with larger rooftop solar installations will help to drive significant investment in the homebuilding sector.

The current cap also has a significant impact on the commercial, industrial and institutional sectors, essentially rendering on-site solar generation uneconomic for these larger consumers.

In Ontario, there is no generator capacity limit for net metering customers specified in the regulation, provided that the generation equipment is “primarily” for the customer's own use.

In Alberta, there is a 5 MW (5,000 kW) capacity limit on generation equipment, with the stipulation that maximum generator output cannot exceed total annual energy consumption at the customer's site or aggregated sites.

Lifting the 100 kW net metering cap would enable many more farmers, manufacturers, large retail stores and other critically important job-creators to more effectively manage both their energy costs and carbon emissions for decades to come, while helping to create hundreds of good-paying jobs for solar installers across Nova Scotia.

⁵ Government of Canada Net Zero Future Building Standards: <https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-homes/buying-energy-efficient-new-home/netzero-future-building-standards/20581>

3. Allowing for the development of programs that will permit a customer, a group of customers or a third party to generate renewable low-impact electricity for a customer's or group of customers' own use.

The “Virtual Net Metering” (VNM) model enables a group of electricity customers to generate their own renewable electricity at an off-site location is well-established. While this type of arrangement is well-established in the US, it does not currently exist in Canada. This amendment would enable Nova Scotia to lead the country in establishing a first-of-its-kind, truly inclusive and equitable net metering framework.

The advantage of VNM is that it offers customers of all types and sizes a way to lower their electricity bill without any upfront costs or having to install a solar system on their home, building or property. For example, it would enable a low-income family that rents an apartment or a small business owner who may lack a suitable roof for solar to “own” or “subscribe” into a solar VNM project located nearby, such as on a larger building rooftop somewhere else in their neighbourhood. The consumers see the benefit on their electricity bill, and the solar generating system can be installed where it makes the most sense both for the grid operator and the local community.

We recommend that the Committee move forward with approving the Bill as proposed so that stakeholder consultation can move forward on lifting the Net Metering cap and developing a made-in-Nova Scotia Virtual Net Metering policy.

Contact:

Nicholas Gall
Director, Distributed Energy Resources
Canadian Renewable Energy Association (CanREA)
ngall@renewablesassociation.ca

April 12, 2021



**Natural
Forces**
SOLAR

Presentation to Law Ammendments Committee

April 12, 2021

Roby Douglas, P.Eng.

Vice President, Natural Forces Solar





Who we are

- Natural Forces Solar is a wholly owned subsidiary of Natural Forces
- Private Engineering, Procurement & Construction Management company based in Halifax, NS
- Began developing projects in 2017 and began installing solar systems in 2018
- Installed solar systems for First Nations, Not-for-Profits, Schools, and Municipalities
- We also help secure power purchase agreements, funding, and financing for our clients



Our work to date

- Over 15 residential solar net metering projects
- 1 remote microgrid in Northern NL
- Over 1 MW of solar installations for community groups via **Solar Electricity for Community Buildings.**

Our clients include:

- 9 NS Mi'kmaq First Nations Communities
- Hope for Wildlife
- Halifax Water
- Rockingham United Church
- Sacred Heart School of Halifax





Increasing the Net Metering Cap

- There is a huge demand for projects above 100 kW
- Local companies like Natural Forces Solar will be able to grow through designing, executing, & operating these projects
- Citing solar generation at the point of load (i.e. at the building) reduces transmission & distribution costs, which are shared by all ratepayers
- For larger 100 kW installations (i.e. IKEA-size), solar energy is currently being curtailed, wasting valuable green energy



Virtual Net Metering

- Virtual Net Metering will allow more Nova Scotians to participate in the clean economy
- A subscriber-based program could make green energy affordable for renters, lower income individuals, and people who do not have appropriate roofs for solar systems
- An uptick in these projects will drive growth across the local renewable energy industry
- Natural Forces has a long history of CEDIF-style renewable energy projects, which allow Nova Scotians to invest directly into the projects



Natural
Forces
SOLAR

Questions?