



**ELECTRIC UTILITY COMMISSION**

**MINUTES**

**Wednesday, May 22, 2024, 2:00 p.m.**

**Meeting held electronically and in Committee Room 2  
City Hall**

PRESENT: Mayor Patrick Johnstone  
Councillor Paul Minhas  
Maya Chorobik  
Lino Siracusa (Chair)  
Lisa Spitale

ABSENT: Sally Bhullar-Gill

THOSE PRESENT: L. Behra, M. Miklea, M. Rutishauser, L. Sampliner, G. So, S. Somji

---

**1. CALL TO ORDER AND LAND ACKNOWLEDGEMENT**

Chair Siracusa opened the meeting at 2:00 p.m. and recognized with respect that New Westminister is on the unceded and unsurrendered land of the Halkomelem speaking peoples. He acknowledged that colonialism has made invisible their histories and connections to the land. He recognized that, as a City, we are learning and building relationships with the people whose lands we are on.

**2. ADOPTION OF AGENDA**

MOVED AND SECONDED

**THAT** the Utility Commission adopt the meeting agenda for May 22, 2024.

**CARRIED UNANIMOUSLY**

**3. MOTION TO MOVE INTO CLOSED MEETING**

MOVED AND SECONDED

**THAT** the Utility Commission go into a meeting which is closed to the public in accordance with Section 90 of the *Community Charter*, on the basis that the

subject matter of all agenda items relate to matters listed under Section 90 and where required, Council does consider that the matters could reasonably be expected to harm the interests of the municipality if they were held in public:

90(1)(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee, or agent of the municipality or another person appointed by the municipality;

90(1)(c) labour relations or other employee relations; and

90(1)(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

**CARRIED UNANIMOUSLY**

*The Electric Utility Commission moved into Closed Meeting at 2:05 p.m.*

*The Electric Utility Commission came back into the open session at 3:57 p.m.*

#### **4. DELEGATIONS**

Harry Crosby and Scott Jansen, representing New Westminster Climate Action Hub (NWCAH), presented on a proposal regarding the adoption of a distributed energy system for New Westminster.

This proposal outlines several key features that would enable New Westminster to establish a model building retrofitting program, positioning the city as a leader in the province for adopting similar initiatives:

1. Electrification – It will provide support to homeowners and building owners aiming to retrofit their properties with eco-friendly electrical systems, while implementing measures to accelerate the transition;
2. Generation – It will enhance the electricity supply to the grid;
3. Distribution – It will manage electrical loads during peak periods, thereby reducing strain on the grid.
4. Support for New Westminster Electrical Utility – It will help the utility manage the costs associated with: a) Upgrading the city's electrical grid, and b) Assisting homeowners in retrofitting their properties with environmentally friendly electrical systems.

The NWCAH had previously successfully worked with the owner of a heritage home in the implementation of hydronic heating, creating an opportunity for the City of New Westminster to develop specific instructions and guidelines for applying such improvements to houses and Property Assessed Clean Energy (PACE) loans.

Staff present in the meeting were directed to review the document provided by NWCAH (Attached as Schedule 1 to the Minutes) for potential opportunities.

**5. NEW BUSINESS**

None.

**6. END OF MEETING**

MOVED AND SECONDED

**THAT** the Utility Commission adjourn the meeting of May 22, 2024, at 4:19 p.m.

**CARRIED UNANIMOUSLY**

**7. UPCOMING MEETINGS**

The next scheduled meeting of the Utility Commission is June 18, 2024, at 2:00 p.m.

Certified a true and correct copy of the Minutes of the Closed Utility Commission meeting of the City of New Westminster held on May 22, 2024.

---

Lino Siracusa

CHAIR

---

Marius Miklea

ASSISTANT CORPORATE  
OFFICER

DRAFT

## ADOPTION OF A DISTRIBUTED ENERGY SYSTEM FOR NEW WESTMINSTER

Submitted by NW Climate Action Hub – Contact  
Electronic copies with links can be made available.

S.22(1)Personal and Confidential

S.22(1)Personal and Confidential

### EXECUTIVE SUMMARY

#### Proposal

This proposal has a number of main features which would allow New Westminster to develop a model building retrofitting program to lead the rest of the province in adopting similar programs:

- 1) **Electrification** - It will support homeowners and building owners who want to retrofit homes and buildings with environmentally friendly electrical services, putting in place measures to speed the transition
- 2) **Generation** – It will increase the supply of electricity to the grid
- 3) **Distribution** – it will distribute the load during peak periods, taking pressure off the electrical grid
- 4) It will assist the New Westminster Electrical Utility to manage costs of:
  - a) Upgrading the electrical grid in New Westminster
  - b) Homeowners seeking to retrofit homes and buildings with environmentally friendly electrical services

#### Options

Components may be implemented simultaneously or separately.

Alternate approaches are possible in different combinations:

- 1) A full distributed energy program could be established
- 2) The Electrical Utility and Energy Save New Westminster could take steps to remove technical barriers to homeowners and building owners to participating in the electrification program
- 3) The Electrical Utility and City could take steps to assist removing financial barriers

There are ways of implementing the proposals that reduce greenhouse gases equitably.

---

**TABLE OF CONTENTS**

A.	Needs/Threats/solutions	2
B.	Goal	3
C.	Objectives	4
	Concept	
	Stage 1	
	Stage 2	
D.	Barriers	4
E.	Background	5
F.	Technical Barriers – System Requirements and Operations	5
	Equipment Requirements	
	Operations	
	Available Technology	
	Approvals	
G.	Benefits	7
H.	Financial Models	8
	PACE Loans	
	Incentives and Subsidies	
	Funding	
I.	Social Justice Issues and the Climate Crisis	9
J.	Legal Model	10
	Securing the Loan	
	Securing the Assets	
K.	Success Stories	10
L.	Our Ask	10
M.	To Do – Work Plan	10
N.	Evaluation – Measures of Success	11
O.	Additional Reference Material	11
P.	Mandates	11
	Energy Save New West	
	New Westminster Utilities	
	Community Energy and Emissions Plan 2050	

---

**A - NEEDS /THREATS/SOLUTIONS**
**Existential Threat**

The increase in the quantity of greenhouse gases in the atmosphere is leading to global warming and climate change. The impact of global warming can be observed and felt in the following forms:

- 1) Heat waves - with the impact on health
- 2) Drought – with the impact on food availability and electrical generation
- 3) Warming oceans - with the impact on heat waves, drought and food availability
- 4) Rising sea levels – with the impact of flooding low lying lands
- 5) Wildfires and the release of methane in the arctic which is accelerating the release of greenhouse gases

Greenhouse gases are increasing in the atmosphere largely as a result of the production and use of

fossil fuels (gas oil and coal). The full impact of global warming on ecological systems and human life is not known, but climate models indicate that Earth is reaching a tipping point beyond which the impact will be catastrophic.

### Solutions

The Climate Solutions Council is appointed by and reports to the Minister of the Environment for the province of British Columbia under section 4.2 of the Climate Accountability Act. In its 2023 report filed in January, 2024 the council made a number of recommendations for reducing greenhouse gasses in the atmosphere including <sup>1</sup>:

- 1) Electrification
- 2) Affordability - providing support to households.

The 2023 report states that Buildings (residential and commercial) made up 7.5 million tonnes of emissions in 2021 (12.1% of the total) <sup>2</sup>

### Affordability and Social Justice

The question of how to manage affordability needs to be addressed by New Westminster City Council (See PACE Loans – below in section H)

### **B - GOAL** – What we want to do

transition from fossil fuel to use of electrical energy to reduce our carbon footprint, while keeping costs down

The overall goal of the province of British Columbia is to reduce greenhouse gases to 40% of the 2007 level by 2030 <sup>3</sup>. Apparently, we have only achieved 6% by 2021 (14 years) and will need to achieve the remaining 34% in 9 years.

The provincial goal for 2050 is 80% reduction.

The Goals of this proposal are to move from gas to electricity in buildings in order to face the existential threat – the climate crisis.

- 1) Electrify new homes and buildings
- 2) Retrofit old homes and buildings

Rationale: Buildings are the source of approximately 45% of New Westminster’s GHG pollution and the city has significant jurisdiction over buildings

New Westminster residents are seeking to do a number of things with their building electrical systems that support the city’s greenhouse gas reduction targets: install

- 1) heat pumps
- 2) solar panels
- 3) ZEV charging plugs
- 4) Battery Backup Systems for use during peak periods and power failures

We seek to accelerate retrofitting of heat pumps to accelerate reduction in use of fossil fuels

- per year, through Energy Save New West (ESNW), about 50 “topped up” heat pump installations were completed in New West; While this rate is improving, it will not get us to net zero emissions from buildings by 2050
- New West just increased top up rebates from \$350 to \$2000 for heat pumps and \$500 for electrical panel upgrade
- ESNW is no longer promoting gas furnaces

Under the proposal, the city and possibly property owners will reduce costs for operating the utility and may reduce energy costs to consumers

1 Connectivity: Climate Policy in 2024 and Beyond, pages 6 for electrification and page 18 regarding affordability <https://www2.gov.bc.ca/gov/content/environment/climate-change/planning-and-action/advisory-council>

2 same at page 17

3 Climate Change Accountability Act, s2 [https://www.bclaws.gov.bc.ca/civix/document/id/lc/statreg/07042\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/lc/statreg/07042_01)

**C - OBJECTIVES** – How could we transition from fossil fuel to electrical consumption in buildings to reduce our carbon footprint and costs?

**Support from the New Westminster Utility Commission and Energy Save New West**

A program could lower installation costs and make installations easier by clearing the way by

- 1) Providing information on the steps required to do an installation
- 2) Identifying the standards and requirements for an installation
- 3) Providing for pre-approval of equipment
- 4) Providing installation design ideas
- 5) Identifying and matching equipment suppliers and installers to consumers

**Concept – Prosumer**

A homeowner can be both a producer and consumer (prosumer) of electricity. The prosumer can

- 1) replace fossil fueled home heating, cooking and hot water systems with electrically powered systems
- 2) can contribute to the electrical system by generation of electricity
- 3) store power, by participating in a distributed energy system (electrical)
- 4) contribute to the distribution of electricity with the use of electrical storage systems, to reduce peak demand

**Stage 1 Support from the Electrical Commission**

A distributed energy program will:

- 1) Use currently available technology
- 2) Enhance the electrical system
  - a) Accommodate an Electrical Distributed Energy Resources (DER) system program
  - b) Assist homeowners and building owners to install a functional integrated electrical system that will
    - i) Reduce consumption of fossil fuels by switching to solar generation and consume electrical energy rather than fossil fuels for building space and water heating
    - ii) Maximize the use of the current capacity of the grid
- 3) Obtain approval for use of technology as needed from CSA (Canadian Standards Association)
- 4) Assist with the financing of retrofits in existing buildings and homes
- 5) Advertise the Program - the city, electrical utility and its citizens (including the Hub) will develop and share a handbook on the meter collar “Connect DER” and other electricity-related products and distribute information on how to do home and building conversion

**Stage 2 Support from the Province and City - –tep Code / Building Code**

Support for the program can be provided by the city with changes to bylaws if the province allowed it – building code – so that when homes and buildings are renovated or when repairs are done to heating systems, heat pumps and other electrification measures occur.

**D - BARRIERS**

When consumers want to electrify their homes, they face a number of barriers

- 1) Lack of information about the negative impact on our climate from burning fossil fuels to heat buildings
- 2) Lack of information about what is involved in retrofitting
  - a) Equipment needed
  - b) Permitting process
  - c) Affordability
- 3) Lack of information about who to hire to do the work
- 4) Cost of electrical panel upgrades and equipment purchases
- 5) Total capital cost to the city

**E - BACKGROUND**



The pace of electrification is slow (see Item 1 in GOAL above)

What is a Distributed Electrical System (DER)

In energy science, DER stands for Distributed Energy Resource. The acronym may be applied in

- 1) Electrical systems
- 2) Heat distribution systems (used to distribute surplus latent heat generated as a byproduct of industrial processes)
- 3) Systems used to collect and distribute (recycle) gas byproducts produced by sewage and waste

A DER electrical system we propose develops the capacity to generate and store electricity for distribution and provides access to the grid to allow consumption of externally generated electricity as needed. How?

- 1) Solar panels generate electricity
- 2) Batteries store electricity for use and distribution in peak periods
- 3) Distribution is controlled by the utility

Equipment can be owned by the utility and located in a home or building (the utility may lease space)

What is the City Facing

The city is facing increasing cost of services caused by the need to build additional substations to feed services to consumers.

Additional background – the Advanced Metering Infrastructure Program

The City of New Westminster is installing “Advanced Metering Infrastructure” (AMI) The purpose of the program is to provide greater insight into homeowner’s energy usage and to help homeowners reduce energy waste and save money (providing customers with new ways to conserve energy) Electric meters will transmit energy consumption information at more frequent intervals via a secure, wireless network back to the electric utility.

When power outage occurs, AMIs provide information about the location and lead to faster response and restoration

The AMI program allows modernization of the grid to support EV charging, solar panels and other electrification technologies

## **F - TECHNICAL BARRIERS - -YSTEM REQUIREMENTS/OPERATIONS**

### **Equipment Requirements**

- 1) Elements of a DER that are incorporated into a home or building
  - a) Batteries
  - b) Solar panels
- 2) New equipment often required to electrify heating, and transportation
  - a) EV Chargers
  - b) Heat Pumps
- 3) Technical improvements available to reduce cost
  - a) Electric collars and electrical upgrades
- 4) Additional equipment needed
  - a) Switching equipment
  - b) AC-DC conversion (inverters)

### **Operations – Function**

DER system development can be used to level peaks in electrical demand

- 1) Battery backup: A home battery backup program to support the grid. The battery allows the homeowner to come off the grid during peak periods of electrical demand to reduce demand on the grid (What is the incentive for a homeowner to do this when NW has such a stable grid? The program allows the utility to ensure a stable grid even with 100% load growth.)

Batteries are recharged outside of peak periods of electrical demand from solar panels or

from the grid.

Home battery usually is mounted on a wall or possibly in a garage.

- 2) Solar panels – generate electricity
- 3) Switching and conversion equipment allows electricity to be generated
- 4) Heat pumps and E.V. chargers provide owner with electric heat, cooling and transportation

### Available Technology

Suppliers of components for the DER

- 1) Connect DER Meter Collar – The adapter will be offered through Siemens.  
<https://connectder.com/siemens-and-connectder-partner-to-offer-plug-in-home-ev-charging-solution/>  
<https://connectder.com/>
- 2) Home Batteries  
<https://www.momentenergy.com/>
- 3) Electrical Generation
  - i) solar panels on homes
- 4) ZEV Services  
<https://www.bsaelectronics.com/collections/dryer-buddy-plus-auto>
- 5) Other equipment is readily available
  - a) Switching Equipment
  - b) Inverter for AC-DC conversion

### Scaling Up

Batteries can be used for multifamily dwellings – Local supplier – Moment Energy

<https://www.momentenergy.com/>

### Use of Car Batteries

Car batteries might be used as power source, but mainly in the future. Use for supporting the grid degrades car batteries.

BC Hydro has looked into this but determined there is not enough upside to the car owner. They are considering having BC Hydro own or manage the batteries

A bidirectional charger is required and probably requires an electrical panel upgrade.

Only some EVs have a battery that can connect and provide electricity to a home. These include the Chevy Volt, Ford F-150 Lightning truck. Makers of the Hyundai Ioniq 5, Lucid Air, Kia EV6, VW's ID.4, Mitsubishi Outlander, and Chevy Silverado EV has announced they will offer home electricity services in the next year or so.)

### Approvals

Rather than obtaining approval for use of equipment on a case by case basis, it is preferable that the manufacturer or utility obtain approval.

All installed equipment must have CSA approval?

- 1) Heat Pumps
- 2) Solar Panels
- 3) Batteries
- 4) Electrical panel components and other systems components, including Connect DER meter collar

CSA Approval can be applied for if not already available

<https://www.csagroup.org/store/product/CSA%20C22.3%20NO.%209:20/>

Equipment in use has generally obtained approval for use from Underwriters Laboratories Limited UL Listing in the United States.

## G - BENEFITS

### Environmental Impact

Clean energy - ransitioning to a DER with heat pumps and E.V. charging will reduce

carbon emissions because heat pumps replace gas furnaces. EVs replace gas-powered cars, less fossil fuel is burned.

### **Cost Management – To the City and Utility**

**Because the city has its own electrical utility, New Westminster is uniquely positioned to implement this program. This is an opportunity for our city to lead in our province, providing a model that may speed up province-wide adoption of a similar program.**

The DER will reduce and can totally avoid the cost of upgrading the grid.

### **Advantages of development and implementation of the program to property owners**

A DER program will increase in the value of buildings due to reliability, even if the utility, not the homeowner owns the solar panels.

### **Improved service benefits, energy security**

The battery system provides power to the homeowner during power failures.

### **Electrical Generation**

Solar panels provide increased electrical generation, Solar Panels provide clean electrical energy

[Solar panel advances will see millions abandon electrical grid, scientists predict | The Independent](#)

### **Cost Reduction And Control - –ost Reduction Solutions**

Energy Save and the Electrical Utility working together could quickly develop and implement the DER program in ways that would reduce costs for the individual property owner seeking to participate in the program.

Electrical panel upgrades can be required for Electric Vehicle (EV) charging stations

<https://secondlifestorage.com/index.php?threads/game-changing-home-ev-charger.11846/>

Electrical panel upgrades can be a major expense. Meter Socket Adaptors enable people to do the following without the need to upgrade electrical panels. It will allow

- 1) install EV chargers
- 2) install heat pumps

The adapter will save an estimated 60 to 80 percent of the EV charger installation cost by avoiding the need for electric panel upgrades, allowing for a simple, 15-minute EV charger installation. This eliminates the need for complex and prohibitively expensive installation costs.

The socket adaptor allows the connecting of equipment directly through a socket installed between the meter and the electric panel, bypassing a home's electric service panel (intercepting power after it passes the meter and before it reaches the electric panel). Without the socket adaptors many home panels would need upgrades to allow the installation of a typical Level 2 charger, typically a 7-11kW device requiring 40-60 Amps on a 240V line. This is a major roadblock for EV adoption, especially for low-and moderate-income homeowners.

Switches may allow electrical services to be switched between heat pumps and air conditioners, an alternate way of avoiding electrical panel upgrades.

<https://www.bsaelectronics.com/collections/dryer-buddy-plus-auto>

## **H - FINANCIAL MODEL**

### **Climate**

The model must encourage the move from fossil fuels to electrification

### **Capital Cost and Revenue Generation for the City and Utility**

The utility continues to receive revenue:

- 1) by net supply of electricity
- 2) A property owner (strata unit owner, building owner or homeowner) may borrow from the utility and repay installation costs

### **Incentives for the City**

A Distributed Energy System allows a utility to manage the flow of electricity more efficiently. It can defer capital costs for the utility, saving money for NW Electric / BC Hydro by reducing infrastructure costs to distributor, by leveling out the peaks and valleys, negating the need for some of the new substations and transformers and reducing wiring costs.

A Distributed Energy System reduces transmission losses. Generation and storage of electricity where it is consumed avoids the five to ten percent of generation losses that come with running power down a long line.” (New Yorker article)

### **Property Owners**

Capital Cost and Revenue Generation for the property owner – *Option 1* Equipment Owned by Utility

The property owner could rent their roof to the utility (for solar panels) and rents space for battery storage, receiving income earning approximately \$55/month. Owners may receive payment for supplying equipment space, possible rental of locations for solar panels, storage batteries.

Capital Cost and Revenue Generation for the property owner – *Option 2* Equipment Owned by Homeowner

A property owner may receive revenue by resale of electricity generated from solar panels and supply of electricity from battery system.

The owner can offset the cost of the upgrade against the energy saving. For example,

### **Investment - Possible Incentives for owners (all owners)**

The system may be attractive as an investment plan for property owners, providing for self-owned electrical generation and supply of alternate revenue generated from leasing equipment or space to the city’s utility

### **PACE Loans**

PACE means Property Assessed Clean Energy. A PACE program allows a homeowner to borrow the money for electrification using

- 1) Heat pumps
- 2) Solar panels
- 3) EV chargers
- 4) Battery backup systems
- 5) Meter collars

The loan works as follows. The homeowner has the electrical upgrade completed. The local government or utility pays the cost of the installation. The homeowner repays the cost of the installation monthly on the city’s electric utility bill. When the use of electrical energy is found to be cheaper than the use of hydrocarbons, payments are set to match the savings in energy cost.

Programs may be managed by the local government or an electrical utility. There may be other options available.

Pace programs exist in other provinces.

Some cities/municipalities in British Columbia have developed PACE programs

- 1) Saanich <https://www.saanich.ca/EN/main/community/sustainable-saanich/climate-change/programs-rebates/heat-pump-financing.html>  
[https://www.google.ca/url?sa=t&source=web&rct=j&opi=89978449&url=https://saanich.ca.granicus.com/Viewer.php%3Fview\\_id%3D1%26clip\\_id%3D241%26meta\\_id%3D13403&ved=2ahUKEwilx8WcgMiFAxVOBDQIHxKUCjwQFnoECBYQAQ&usq=AOvVaw1bV\\_2aWT1XnX0PEWXkaBox](https://www.google.ca/url?sa=t&source=web&rct=j&opi=89978449&url=https://saanich.ca.granicus.com/Viewer.php%3Fview_id%3D1%26clip_id%3D241%26meta_id%3D13403&ved=2ahUKEwilx8WcgMiFAxVOBDQIHxKUCjwQFnoECBYQAQ&usq=AOvVaw1bV_2aWT1XnX0PEWXkaBox)
- 2) Nelson <https://www.nelson.ca/825/On-Bill-Financing-Program>  
<https://greenmunicipalfund.ca/resources/video-nelson-scales-local-program-support-home-energy-upgrades>

### **Incentives / Subsidies**

The homeowner may also be entitled to receive other incentives (subsidies or rebates) to

reduce the loan amount

### **Funding**

The program could be funded using the city's Climate Action Reserve Fund and/or the Federation of Canadian Municipalities. There would be no net cost to the fund if the city loaned money and recovered the loan advances through electrical billing

## **I - SOCIAL JUSTICE ISSUES AND THE CLIMATE CRISIS**

A percentage of PACE loans could be reserved for low-income residents, as it was in the Saanich PACE program.

Technology for use in multi-family and high-rise buildings may not be as advanced and available as it is for homes, and smaller buildings. Moving forward with the transition from hydrocarbons to electrical energy should not and can not be delayed until the technology is available for larger units. We need to adopt the technology currently available. If the technology for multi-family buildings is available, the city could reserve a percentage of the PACE loans expressly for this purpose.

What are the financial benefits of the program?

- 1) Savings - Possible Incentives for property owners – to be calculated.
- 2) Energy costs may be lower as the cost of hydrocarbons increases, and as owners switch from fossil fuel to electrical energy.
- 3) The property owner may realize savings in Carbon tax.
- 4) The property owner may reduce costs and generate revenue through the supply of energy. Owners can provide power to the grid or provide power for their own use.
- 5) Optionally property owners can draw power from their batteries and/or supply power to the grid during peak periods and pay for power from the grid during low-cost periods. If power is priced higher during peak periods, this would earn revenue for a property owner
- 6) Benefits can be distributed to strata owners if strata's are transitioned.
- 7) Lower costs to building owners can mean lower costs to renters.

What adjustments may be needed to balance the benefits for all members of the community.

- 1) A DER system may reduce cost to consumers, by providing lowers energy rates.
- 2) Loans to homeowners can bear interest, to ensure there is no cost to the City.
- 3) The City may wish to provide incentives for low income people.
- 4) Federal and other incentives will continue in place for all.
- 5) Costs to city of transitioning homes, - none except if increased incentives or interest free loans are are provided. Staffing costs could be paid from the Federation of Canadian Municipalities

## **J - LEGAL MODEL**

Feasibility of Legal Models needs review from the City Legal Department

### **Securing Loans**

In New Westminster

- 1) the loan can be paid through the electrical bill
- 2) the loan could be sold with the property or could come due when property owners sell property with a notice on tax statements (building owners may find the selling of the loan with the property advantageous since it allows them to recoup their investment)
- 3) The loan can be secured by adding arrears of payment or default amounts to taxes - In this way repayment of the loan actually takes priority over all mortgages.
- 4) Purchasers would receive notice at time of purchase

### **Securing the Assets – Batteries and Solar Panels**

### Ownership by the City

One model has the utility owning solar panels and paying rent to the homeowner (example: \$55/month). The homeowner buys the battery via a city loan (example: \$55/month). In this way, the homeowner nets no cost or income monthly. This might require the city to give notice of ownership of fixtures (batteries and solar panels) by registering interests in equipment in the Land Titles Office. This approach might be administratively complex but has been done by Green Mountain Power in Vermont (see section K below).

### Ownership by the Strata, Building owner or Homeowner

In another model, equipment is owned by the homeowner and power is sold to and purchased from the city.

## **K - SUCCESS STORIES**

### 1) Green Mountain Power BYOD

<https://greenmountainpower.com/>

[The Next Power Plant Is on the Roof and in the Basement | The New Yorker](#)

### 2) Electricity Canada

<https://www.electricity.ca/knowledge-centre/the-grid/regulatory/economic-regulatory-system/>

## **L - OUR ASK**

- 1) Approval in principle to exploration of the project
- 2) Continuing discussions on feasibility and implementation of the program

## **M - TO DO – WORK PLAN**

- 1) Review the proposal and identify areas which need refinement.
- 2) Review other successful projects to determine what setup can be adopted.
- 3) Explore and determine costs and structure for funding the program.
- 4) Develop material to promote the program.

## **N - EVALUATION – MEASURES OF SUCCESS**

Ways to measure the success of a DER installation program. The program will be effective if it:

- 1) develops an effective and efficient Distributed Energy (Electricity) program,
- 2) if the rate of electrification and heat pump installation increases,
- 3) if capital costs for the city's utility are deferred

## **O - ADDITIONAL REFERENCE MATERIAL**

<https://natural-resources.canada.ca/energy/energy-offices-and-labs/canmetenergy/canmetenergy-varenes/distributed-energy-resource-assessment-and-technology-development/24239>

## **P - MANDATES**

### Energy Save New West:

The New Westminster Energy Save program is mandated to:

- 1) “Deliver community members and businesses the tools they need to take control of their energy bills and carbon footprint”
- 2) “Providing customer service and assisting community members and business owners in identifying energy improvements. This may take the approach of a “One-Stop-Shop” or concierge service model.”

New Westminster Utility (Based on latest available strategic plan 2018-2022 and the Utility Commission Bylaw 2018 – Bylaw 8029,2018)

- 1) addressing

- a) growing population
  - b) changing customer expectations
  - c) climate and environmental concerns
  - d) innovative and technological advances
- 2) establish a green initiatives plan
  - 3) develop a formal process to evaluate innovative projects.

This submission is simply a further development of the New Westminster Community Energy and Emissions Plan 2050 (page 41 reproduced below)

[https://www.newwestcity.ca/database/files/library/CEEP\\_2050.pdf](https://www.newwestcity.ca/database/files/library/CEEP_2050.pdf)

BUILDING SECTOR ACTIONS	GHG REDUCTION	BENEFITS	RESOURCES	TIMELINE
<b>EXISTING BUILDINGS</b>				
<p>1. Increase the supports and programs for energy retrofits for existing residential, institutional, commercial, and industrial buildings, including by:</p> <ul style="list-style-type: none"> <li>a. prioritizing the unique retrofit needs of existing multi-unit residential buildings, especially rental buildings;</li> <li>b. focusing on the least efficient building stock (pre-1980);</li> <li>c. adapting retrofit strategies to work with heritage and character buildings;</li> <li>d. collecting and analyzing energy and spatial data of existing buildings to identify priority building archetypes and optimal strategies to support energy retrofits;</li> <li>e. exploring innovative financing mechanisms and tools to support retrofits (e.g. on-bill financing, green revolving load funds, or Property Assessed Clean Energy Financing (PACE)); and</li> <li>f. exploring one-stop-shop models of retrofit management.</li> </ul>	High	Equity Health Resilience	\$\$	Short-term