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C O R P O R A T I O N

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BY ELECTRONIC FILING

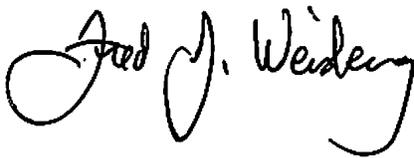
British Columbia Utilities Commission  
6th floor, 900 Howe Street  
Vancouver, BC V6Z 2N3  
Attention: Patrick Wruck  
Commission Secretary and Manager Regulatory Services

Dear Mr. Wruck:

**Re: British Columbia Hydro and Power Authority (BC Hydro)  
Application to Amend Net Metering Service under Rate Schedule 1289 ~ Project No.  
1599004  
Net Metering Ratepayers Group  
Responses to BCUC Information Request No. 1**

We are writing on behalf of our clients the Net Metering Ratepayers Group (NMRG) to file Responses to BCUC Information Request No. 1.

Yours truly,



Fred J. Weisberg  
Weisberg Law Corporation  
Counsel to Net Metering Ratepayers Group

British Columbia Hydro and Power Authority (BC Hydro)  
Application to Amend Rate Schedule (RS) 1289 for  
Net Metering Service  
Project No. 1599004

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**NET METERING RATEPAYERS GROUP  
RESPONSES TO INFORMATION REQUEST NO. 1 FROM  
BRITISH COLUMBIA UTILITIES COMMISSION (BCUC)**

**A. BC HYDRO'S PROMOTIONAL MATERIAL**

**Reference: BC HYDRO ACTIVELY ENTICED CUSTOMERS TO JOIN NET METERING PROGRAM  
Exhibit C23-7, Section 3, p. 5**

On page 5, the Net Metering Ratepayers Group (NMRG) states:

Below are just a few examples of the type of promotions that BC Hydro [British Columbia Hydro and Power Authority] made – and continues to make – regarding the Net Metering Program. None of these promotions mentioned, alluded to or warned of any limitation requiring participating customers to produce only enough energy to offset their own load.

1.1 Please provide the promotional material in its entirety.

**RESPONSE:**

Many of BC Hydro's promotional materials for Net Metering Program are available on BC Hydro's website at <https://www.bchydro.com/work-with-us/selling-clean-energy/net-metering.html>

NMRG provides the web link as a more efficient option to printing every document that appears at that web address and attaching as PDFs, but considers that collection of linked documents to form part of NMRG's evidence.

One of the most important representations is the statement of the rate paid to Net Metering customers, which remains on the BC Hydro website with no qualification or suggestion that BC hydro proposes to drastically reduce the rate:

**"Our net metering program is designed for those who generate electricity for their own use. When you generate more than you need, you sell it to us. When you don't generate enough to meet your needs, you buy it from us.**

**When you sell to us, you get a bill credit towards your future electricity use. If you still have an excess credit at your anniversary date of joining the program, we'll pay you for the electricity at the rate of 9.99 cents per kilowatt hour (kWh). It's that simple.**  
(underlined emphasis added)

Just some of those web linked promotions include:

#### **Kamloops woman installs solar panels to generate her own electricity**

A woman living in Kamloops installed solar panels on her home and in the summer found that she **generated more electricity than she used**. (underlined emphasis added)

<https://www.bchydro.com/news/conservation/2015/kamloops-woman-generates-own-electricity.html>

#### **Solar panels the top choice in selling electricity back to BC Hydro**

Installing solar panels is only one way you can generate your own electricity. And **we'll buy any of that energy you don't use**. (underlined emphasis added)

<https://www.bchydro.com/news/conservation/2015/selling-electricity.html>

#### **Generate electricity, and sell some of it to BC Hydro**

What you should consider in adding solar generation at your home and connecting to the BC Hydro grid. (underlined emphasis added)

<https://www.bchydro.com/news/conservation/2016/sell-electricity-at-your-home.html>

#### **Solar panels 'Eliminate' electricity bills at Dawson Creek office**

It appears there are significant side effects to getting close to solar power. It's a condition we'll call photovoltaic-itis, and it manifests itself in **shrinking electricity bills and the onset of giddiness**. (underlined emphasis added)

[https://www.bchydro.com/news/unplug\\_this\\_blog/2014/dawson-creek-solar-office.html](https://www.bchydro.com/news/unplug_this_blog/2014/dawson-creek-solar-office.html)

#### **YouTube video: Solar power and BC Hydro net metering**

Walk through the process of installing a net metered solar electric system in British Columbia.

<https://www.youtube.com/watch?v=CJwJI-PdVRw>

#### **BC Hydro Net Metering Program Webinar Presentation November 20, 2014, (NO LONGER AVAILABLE ON BC HYDRO WEBSITE)**

<https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/independent-power-producers-calls-for-power/initiatives-in-development/201401120-nm-webinar.pdf>

NMRG notes that BC Hydro has full knowledge of, resources to search for, and direct access to its own “promotional material in its entirety”. NMRG doesn't have sufficient resources to conduct an exhaustive search of the entirety of BC Hydro's promotional material regarding Net

**Metering. Nor does NMRG have direct access to BC Hydro’s entire collection of Net Metering promotional material, particularly to printed material not available on the internet, or promotional material that has been removed from or revised on BC Hydro’s website. NMRG submits that the examples provided in NMRG’s Written Evidence, and noted above in this Response, are more than sufficient to establish the material representations made by BC Hydro to entice prospective Net Metering customers to join the Program and make the required investments. Those representations include average project cost, rate paid for excess net metering generation, the BC Hydro residential rates that may be avoided by net metering, the anticipated payback period for net metering projects, and the expected useful life of net metering projects.**

## **B. POTENTIAL IMPACT ON NET METERING CUSTOMERS**

**Reference: BC HYDRO PROMISES EXISTING NET METERING CUSTOMERS WON’T BE AFFECTED BY PROPOSED AMENDMENTS – BUT EXPECTS OTHERWISE  
Exhibit C23-7, Section 6, pp. 8-11**

In Paragraph 30 of Exhibit C23-7, the NMRG discusses the impact of the “Rate Rider” on participating customer’s payback calculations and a NMRG member’s experience regarding receiving the credit for the “Rate Rider.”

2.1 Please clarify if the “Rate Rider” above refers to BC Hydro’s Rate Schedule (RS) 1901 Deferral Account Rate Rider or explain otherwise.

### **RESPONSE:**

**The Rate Rider referred to NMRG’s Written Evidence is simply described in the NMRG member’s annual account as “Rate Rider at 5%” and described by BC Hydro as “A rate rider is applied to the total of all charges, before taxes. Amounts received from the rate rider are used to recover additional and unpredictable energy costs. For example, low water inflows and higher-than-forecast market prices.” NMRG presumes that BC Hydro is referring to Rate Schedule (RS) 1901 Deferral Account Rate Rider and expects BC Hydro will state otherwise in its Rebuttal Evidence if that is not correct.**

**NMRG’s point is that Net Metering micro-hydro customers are just as susceptible to low water inflows as BC Hydro is, so it would seem reasonable for Net Metering to be paid or credited for the Rate Rider amount which BC Hydro adds and collects when it resells NM energy to its Residential customers.**

On pages 10 and 11, the NMRG states:

BC Hydro’s express expectations of impacts are stated in a misleading way, so one can’t reasonably accept BC Hydro’s characterization without asking about participating

customers who fall outside “most customers” and individual rather than “overall” financial impacts... The proposed amendments are expected (by BC Hydro) to have a significant or detrimental impact on some customers in the Program with a significant detrimental financial impact on some individual participating customers.

2.2 If available, please provide an estimation of the financial impact of BC Hydro’s proposed program changes to the individual participating customers referenced above. Please provide supporting calculations and assumption, if necessary.

**RESPONSE:**

**“Most customers” in the Net Metering program have solar generation facilities. The different size, capital investment, typical excess generation and payback period for most solar projects relative to typical micro-hydro projects makes it grossly unfair to lump the two technologies together for purposes of calculating “overall” financial impacts.**

**For example, assuming a capital investment of \$800,000 to \$1million for a 100 kWh micro-hydro plant compared to perhaps \$17,000 for a typical solar NM installation, one can see that the investment is in the range of 45 to 60 times higher for the micro-hydro project. One can also clearly see that if NM generation is capped at the level of a micro-hydro generating customer’s own use and the Rate paid by BC Hydro for NM production is reduced, full payback of the initial investment, carrying costs, and operations and maintenance costs of a micro-hydro project simply can’t be achieved in a person’s lifetime. Even clearer is the certainty that under capped generation (i.e. maximum of 110% of own load) and reduced NM rates, achieving any return on that significant investment will become impossible within a reasonable period.**

**One of the NMRG members is planning and developing but has not yet constructed a micro-hydro NM project. In their case, after they see the outcome of this proceeding they expect to decide whether they will choose to participate. If they choose to do so, and are allowed to participate in the Net Metering Program, under the new regime proposed by BC Hydro they would not be able to produce more than 110% of their own load and even then would only be reimbursed at a reduced rate. NMRG expects that if BC Hydro’s Application for proposed Net Metering changes is approved, a 100 kWh micro-hydro system could never be financially viable. The return of capital at the greatly reduced NM rate would be unlikely to possibly recover the outlay costs within a reasonable period, if ever.**

**NMRG believes that Net Metering projects should be encouraged and motivated to produce as much clean energy as possible (within the 100 kW capacity limit) and sell it to BC Hydro for distribution on its system. The current 9.9 cents price paid or credited by BC Hydro to its NM customers is already lower than the price that BC Hydro charges its Residential customers for that power.**

**If BC Hydro’s proposed changes are approved, and new NM projects are limited to generating only 110% of their own load, the benefits of micro-hydro generation providing a valuable source of clean, local, reliable energy will be squandered. It will mean that if a micro-hydro NM customer doesn’t have a sufficiently high enough load of their own to consume nearly all of their own generation they will be financially stymied in optimizing the project up to the 100 kW capacity limit. That outcome – forcing an NM micro-hydro customer to increase their own load or forego their project – makes no sense and runs directly counter to the express energy policy objectives of BC. Non-participating customers receive multiple benefits if micro-hydro projects are optimized and clean locally generated energy is brought onto the grid.**

### **C. PROGRAM BENEFITS**

**Reference: ENVIRONMENTAL AND OTHER BENEFITS OF NET METERING Exhibit C23-7, Section 15.2, p. 25**

On page 25, the NMRG submits for consideration a link to the report *SHINGING [sic] REWARDS: The Value of Rooftop Solar Power for Consumers and Society* and states that it “provides a review of 16 recent analyses indicating that individuals and businesses that decide to ‘go solar’ generally deliver greater benefits to the grid and society than they receive through net metering.”

Following the link provided in the footnote on page 25 [*Link provided for convenience: [https://www.seia.org/sites/default/files/resources/EA\\_shiningrewards\\_Summer2015.pdf](https://www.seia.org/sites/default/files/resources/EA_shiningrewards_Summer2015.pdf)* ], the executive summary of the report states “a review of 11 recent analyses shows that individuals and businesses that decide to “go solar” generally deliver greater benefits to the grid and society than they receive through net metering.”

British Columbia Utilities Commission staff note other figures provided in Section 15.2 on page 25 do not align with the numbers in the linked report.

3.1 Please confirm if the linked report is correctly referenced.

#### **RESPONSE:**

**Not confirmed. With apologies the link provided in NMRG’s Written Evidence was incorrect.**

3.1.1 If confirmed, please explain any differences between the linked report and section 15.2 of C23-7. Specifically, please address any differences between the number of jurisdictions reviewed, the value of rooftop solar, and the value of line-losses.

#### **RESPONSE:**

**Not applicable.**

3.1.2 If not confirmed, please provide a link or copy of the correct report.

#### **RESPONSE:**

**The correct reference is:**

<https://environmentamerica.org/sites/environment/files/reports/AME%20ShiningRewards%20Rpt%20Oct16%201.1.pdf>

3.2 Please explain how the analysis of the 16 (or 11) jurisdictions relates to British Columbia, considering such factors as the BC energy landscape, policy objectives, and regulatory environment.

**RESPONSE:**

*Shining Rewards The Value of Rooftop Solar Power for Consumers and Society 2016 Edition*<sup>1</sup> at page 18 of the document at the link above references 16 analyses in states across the country ([USA]. offers the most complete and comprehensive set of studies, reference material and data compiled from Electrical Supply Utilities, Government bodies, Utility Commissions and Universities. NMRG believes the document is very valuable in the context of this Net Metering proceeding.

The amount of sun dictated by the location of a solar plant is not relevant to a determination of available sunlight as the cost of installation falls entirely on the Net Metering customer, not on BC Hydro. In that cost context, geography is irrelevant. Accordingly, studies done in USA are equally applicable for Net Metering purposes in BC.

The current 2019 *Clean Energy Act* at

[http://www.bclaws.ca/EPLibraries/bclaws\\_new/document/ID/freeside/00\\_10022\\_01#section6](http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_10022_01#section6)

states, in part:

**“The following comprise British Columbia's energy objectives:**

**(a) to achieve electricity self-sufficiency;**

**(d) to use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources;**

**(g) to reduce BC greenhouse gas emissions**

**(i) by 2012 and for each subsequent calendar year to at least 6% less than the level of those emissions in 2007,**

**(ii) by 2016 and for each subsequent calendar year to at least 18% less than the level of those emissions in 2007,**

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<sup>1</sup><https://environmentamerica.org/sites/environment/files/reports/AME%20ShiningRewards%20Rpt%20Oct16%201.1.pdf>

- (iii) by 2020 and for each subsequent calendar year to at least 33% less than the level of those emissions in 2007,
  - (iv) by 2050 and for each subsequent calendar year to at least 80% less than the level of those emissions in 2007, and
  - (v) by such other amounts as determined under the Climate Change Accountability Act;
- (h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia;
- (n) to be a net exporter of electricity from clean or renewable resources with the intention of benefiting all British Columbians and reducing greenhouse gas emissions in regions in which British Columbia trades electricity while protecting the interests of persons who receive or may receive service in British Columbia;

Given the above legislative energy objectives for BC, and recognizing that power imported to BC is generated mostly from fossil fuels in Alberta and USA, the *Shining Rewards* report provides a number of important insights including:

“Solar energy creates many benefits for the electricity grid”<sup>2</sup> and

“The benefits solar homeowners provide to the grid, and to society generally, are often worth more than the benefits they receive through net metering.”<sup>3</sup>

NMRG understands that 97% of BC’s internal power generation is clean energy. However, in 2018 BC imported a significant percentage of consumed electricity from mainly fossil fuel generated electricity from USA and Alberta. The health and environmental benefits of encouraging more reliance on clean energy generated within BC benefits are an important consideration relative to fossil fuel generation. Despite the fossil fuel generators being outside of BC, the resulting pollution put into the atmosphere is not limited to locations outside of BC. The polluted atmosphere recognizes no political borders. Clean air is a global issue and it follows that the more renewable energy plants there are installed, such as micro-hydro, solar and wind, the less fossil fuel generation will be required. Any bias toward importing energy from most generation outside of BC in preference to clean energy from Net Metering facilities in BC actively promotes the use of fossil fuels and results in higher emissions.

Although BC Hydro does not include micro-hydro net metering generation in its assessments and planning, such facilities nevertheless provide year round renewable power while avoiding or reducing the need for BC Hydro to incur incremental costs for its own new generation projects.

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<sup>2</sup> *Shining Rewards The Value of Rooftop Solar Power for Consumers and Society 2016 Edition*, p. 1  
<https://environmentamerica.org/sites/environment/files/reports/AME%20ShiningRewards%20Rpt%20Oct16%201.1.pdf>

<sup>3</sup> *Ibid*, p. 2.

**Other benefits of the clean energy, including energy produced by the great majority of Net Metering projects in BC, are discussed in *CleanBC Our Nature. Our Power. Our Future*. Found at [https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC\\_Full\\_Report\\_Updated\\_Mar\\_2019.pdf](https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC_Full_Report_Updated_Mar_2019.pdf) that states at PDF 7:**

**“Our strategy reduces GHG emissions by shifting away from fossil fuels and towards clean and renewable energy.”**

***CleanBC* also states on PDF 12:**

**“ELECTRIFICATION: BY THE NUMBERS We need to use more clean B.C. energy to meet our climate targets. This means reducing fossil-fuel consumption, increasing new biofuel consumption, and shifting to using more clean B.C. electricity. Specifically, by 2030, the policies in this strategy will require an additional 4,000 gigawatt-hours of electricity over and above currently projected demand growth to electrify key segments of our economy. This is equivalent to increasing BC Hydro’s current system-wide capacity by about 8 per cent, or about the demand of the City of Vancouver. We can meet this increased electricity use with existing and planned projects that harness B.C.’s vast wealth of clean, renewable power. Meeting our targets beyond 2030 will require substantial additional volumes of new clean electricity to further electrify transportation, industry, and buildings. In 2019, BC Hydro will undertake a transformational review that addresses changing energy markets, new utility models and emerging technologies to deliver on *CleanBC*’s longer-term electrification goals.”**

***CleanBC* at PDF 14 sets out milestones related to Renewing Our Commitment to Climate Action including:**

**“2010: The B.C. Clean Energy Act requires at least 93 per cent of our electricity to be generated from clean or renewable sources (BC Hydro has since achieved 98 per cent); all B.C. public-sector organizations achieve carbon neutrality.”**

**And**

**“2018: B.C.’s price on carbon is increased for the first time since 2012 to \$35 per tonne, and set to increase by \$5 per tonne per year until it reaches \$50 per tonne in 2021; new revenues from B.C.’s carbon tax are dedicated to supporting measures that drive down GHG emissions and make life more affordable for British Columbians; new climate targets are legislated under the Climate Change Accountability Act; the Climate Solutions and Clean Growth Advisory Council is established to provide strategy advice on climate action and clean economic growth; the Province works with people to**

**develop CleanBC, a long term strategy to meet our climate targets while building a stronger, more sustainable economy.”**

The clearly articulated achievements and objectives of BC clean energy policy beg the question why BC Hydro would propose changes to the Net Metering Program that, if approved, will limit, discourage or prevent clean energy generation from Net Metering while preferring to maintain or increase reliance on importing electricity generated by burning fossil fuels and apparently not paying carbon taxes on the resulting emissions. It appears that carbon tax impacts have not been reflected in BC Hydro’s calculations of the cost of power imports into BC. If such impacts have been accounted for, it is not at all apparent how that was done.

*CleanBC* also specifically references net metering at PDF 58:

**“Utilities. BC Hydro and FortisBC have a long history of partnering with people and communities to help conserve energy and switch to cleaner options. For example, FortisBC offers rebates on high-efficiency appliances, equipment and more. Meanwhile, BC Hydro has 900 customers on its net metering program, which allows them to generate their own electricity and sell what they don’t use back to BC Hydro. As we move forward with CleanBC, utilities will continue to support, encourage and enable the transition to clean energy as we ensure their policies align with the Province’s electrification goals and emission reduction targets.”** (underlined emphasis added)

Notwithstanding *CleanBC*’s unequivocal recognition of the Net Metering Program as a policy aligned with BC’s electrification goals and emission reduction targets, NMRG is concerned by BC Hydro reversal in backing away from or actively discouraging new net metering projects and small clean energy projects generally. More detail of that disturbing trend is found in the December 17, 2019 article *“Why ‘Mom and Pop’ green energy producers can’t sell their clean power in B.C. anymore”* by award-winning author and journalist Sarah Cox.<sup>4</sup> NMRG commends this article, and others in the same investigative series by Ms. Cox, for the BCUC’s consideration.

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<sup>4</sup> <https://thearwhal.ca/why-mom-and-pop-green-energy-producers-cant-sell-their-clean-power-in-b-c-any-more/>