Date Submitted: May 28, 2019

Proceeding name: BCH Net Metering Service Amendment Application

Are you currently registered as an intervener or interested party: No

Name (first and last): Peter & June Marseden

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Province: British Columbia

Email: [redacted]

Phone number: [redacted]

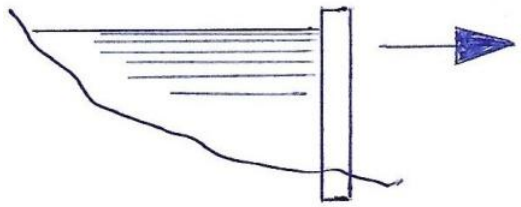
Comment:
Can the BCUC please consider the following comments In support of the present Net Metering program. The present Net Metering program appears to be working well and on its way to having 10,000 customers producing 70 MW of electricity by 2030. In 2016, we downsized to a new energy efficient home with a Heat Pump and Heat Recovery Ventilation system and our annual electricity consumed was 13,300 kwh ($1,550). We have limited roof space and exposure, but in 2017 we met our new homes energy challenge by installing a 10 panel solar system and joining the BC Hydro Net Metering program, our consumption is now 10,000 kwh ($1,110), which is below BC Hydro's average residential user limit of 10,800 kwh per year. The future energy challenge appears to be the Electric Vehicle (EV) which requires 5,000 kwh per year for an average 20,000 km user, EV enthusiasts suggest Canada has enough generating capacity to satisfy the overnight charging of all future EV's. While overnight EV charging could resolve existing residential transformer size concerns and reduce the number and costs of BC Hydro EV charging stations for non EV customers, the increased daily hydro energy demand could affect water supply. We believe the Net Metering Program with Power Smart customer support, could be the way for groups of BC Hydro Residential Customers to Fund – Floating Solar Systems (FSS) installations at existing BC Hydro facilities and could allow more residential customers, particularly those who don't have roof space for solar panels, a way to solve future energy challengers and reduce their electricity bills. For example, the daily solar energy generated by a 40 MW FSS funded by 9,000 BC Hydro customers and installed at the existing 90 MW BC Hydro Stave Falls facility, would allow its hydro energy generation to be reduced during the day, making it available to annually charge 10,000 EV's overnight, without affecting water supply, please see attached, Example – BC Hydro Stave Falls FSS Expansion. A few years ago solar panels cost around $1,000 installed, today FSS are being deployed in many countries for less than $500 per panel. In the UK, Private Energy Suppliers are installing FSS, at existing reservoir pumping stations, on a no capital cost basis, but their index linked Power Purchase Agreements start at 13 cents per kwh, which would increase electricity rates if applied in BC. However if similar BC Hydro Residential Customer Funded FSS were installed at existing BC Hydro facilities on a Net Metering basis it would not affect electricity rates. Unlike hydro projects which take many years to complete, FSS projects can be rolled out in 2 years, if pre-approved plans for BC Hydro FSS expansions at existing facilities were in place, FSS could be deployed to suit actual evolving local energy demands. In 2030 Site C Dam's 5,100 Gwh output will be fully utilized, serving the projected

annual energy needs of 1,000,000 new BC residents (3,300 Gwh) and around 400,000 electric vehicles (2,000 Gwh). BC's post 2030 energy needs suggest a Site D Dam may need to be considered by 2022. Alternately, if multiple FSS were to be deployed before 2030, Site C may not be fully utilized until 2036 and any plans for a Site D Dam could be delayed until 2028. If there are changes to the Net Metering Program, we hope they will also allow for FSS to become part of a future more diversified BC Clean Energy Plan and provide a way for even more BC Hydro residential customers to solve future energy challenges and reduce their electricity bills. Yours sincerely Peter & June Marsden

EXAMPLE - BC HYDRO STAVE FALLS FSS EXPANSION PLAN

Present Hydro Capacity

362 GW hr per year, serves 36,200 residential customers

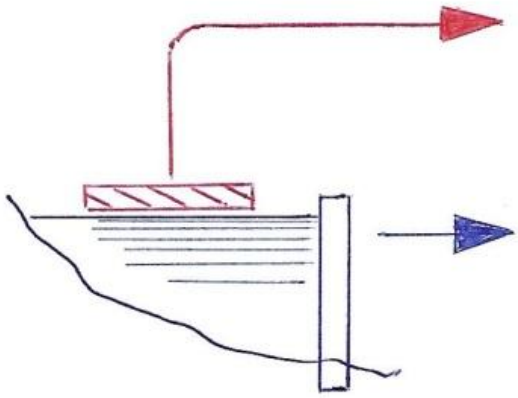


90 MW Hydro capacity
(362 GW hr per year)

BC Hydro annual revenue $36.2 m per year
(Based on 10 cents per kwh)

Future Hydro Capacity with FSS expansion

408 GW hr per year, could serve 36,200 residential customers as well as overnight charging for 9,300 Electric Vehicles, without increasing hydro water needs or affecting BC Hydro annual revenue.



40 MW Solar capacity
(46 GW hr per year to suit)

90 MW Hydro capacity
(362 GW hr per year)

BC Hydro + Solar revenue $40.8 m per year
FSS Customer Solar Credit $ 4.6 m per year

BC Hydro annual revenue $36.2 m per year
(Based on 10 cents per kwh)