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Proceeding name: BCUC Regulation of Electric Vehicle Charging Service Inquiry

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

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Comment:
To: BCUC enquiry: regulation of electric vehicles charging service My name is Daniela Gadotti, I live in rural Kootenays. I am affected by the BCUC regulation of electric vehicle charging stations because I have been driving an electric vehicle since May 2017, a Chevrolet Bolt, and I have experienced the limits and disarray of the infrastructure. In this letter I cover: cost for charging lack of predictability in charging protocol lack of maintenance of chargers difficult payment and lack of services at chargers. Cost of charging: by KWh or by time? Some DCFC stations charge by kWh, we are familiar with that because that is how we pay our power bills at home. However some chargers bill by time. This is relevant because EVs charge very fast on an empty battery, but slow way down as charge reaches saturation. So that it might take only one minute to load the first KWh, but 5 minutes to load the last KWh. If you are paying by time that last KWh will be 5x as expensive. Around Christams 2017, I charged several times in Revelstoke at the Greenlots DCFC oustide the visitor center. I was billed 35c/kWh, no matter how long it took to load that charge. So that on December 23 I loaded the bulk of my charge (40.65 KWh) in 90 minutes, at which point I was at 83% saturation and was disconnected. Wanting to achieve 100% saturation I started a second session. This time it took almost an hour (57 min) to charge a mere 9.93KWh. Still, I paid the same 35c/KWh. This second session topped off my range by only 32Km. In the frigid temperatures around Christmas and on studded winter tires, I was only making 3.2 Km/Kwh (the range per KWh depends on many factors, including how cold it is, how warm you want the cabin, what tires you have, what speed you drive at, if you are going uphill or downhill). The Flo DCFC in Castlegar, on the other hand, charges not by KWh, but rather by time, 18$/hour. So those last 32Km of range that I bought in Revelstoke for $3.48, but took almost an hour to load load? they would have cost me a whopping $15.90 in Castlegar! At those prices, charge is more expensive than gasoline, I might as well drive a Hummer! My last internal combustion engine car, a frugally sipping Toyota Echo, went about 600Km on a tank of gas that cost about $44. So call it 7.3c/Km for gasoline in the Toyota Echo. The Castlegar fast charger would cost me nearly 7 times what I'd pay for gas for the Toyota, 49.7c/Km at the slow end, which is exorbitant. Sure, in the early part of the charging curve, when unit charge/time is more efficient, it is "only" twice as expensive as gas! I find this embarrassing. Because I registered as an EV "ambassador". That is: I am expected to offer

testimony to the joys of EV ownership, one of which is how inexpensive they are to drive, This is supposed to make up, in time, for the higher initial cost of the vehicle. But not at those scalping prices for charging! The only reason I can see charging by time rather than by unit energy, is if, for some miracle, there was a long queue of fast charging vehicles waiting to charge, say a queue of Tesla Xs. Then I can see that a slower charging car like my Bolt would slow down the queue and cost them money if they could sell more charge in the same unit time to a Tesla X. Alas, we are a long way away from that scenario here in BC. Charging to 100%, thereby using the slow part of the curve, is a necessity, due to how far in between chargers are. Also remember there is no redundancy: it's not like gas cars have it, with competing gas stations across the street from each other. If a charger is out of order, the next one may be out of my reach. Therefore it is prudent to get as much charge saturation as you can get while you know you are at a working charger, slowed down rate and all. But I do not wish to get scalped in the process. Lack of services Scalping at DCFC is particularly painful in view of the fact that they do not offer any services. Unlike gas stations, there are no air compressors to touch up your tire pressure; no squeegees to wash your windshield, no restrooms. With the longer times for charging it is assumed you'll help yourself to nearby businesses, and indeed part of the charm of driving EVs is precisely the opportunity to explore the neighbourhood and nearby eateries for an hour or so. The point is, there are no added costs to the bare bones DCFC I have seen so far, even less reason to overcharge like the Castlegar station does. Unpredictable protocol Some DCFC disconnect after 30 minutes, some at 80% charge, some will let you go to 100% charge. Some say one thing yet do another. Some do one thing one day and a different thing the following day. The Revelstoke charger disconnected me at 83% charge on December 23rd, but went to 100% two days later. Seems like a small point, but when it takes over 2 h to recharge I'd like to be able to manage my time, not hover around ineffectively. Maintenance I would argue that having a charger that is not maintained is worse than not having one at all. The non functional charger will show up on apps and trick folks into driving there. The stage 2 charger in Rossland was down for months, for example. There should be some kind of requirement for chargers that occupy public spaces to be operational and be maintained within a reasonable time frame. Remember there is no redundancy right now. I have been there before, count on a charger only to find it out of service. Paying for charges Right now. every network has its own access card/ payment plan/app. It is as if you needed a different credit card to buy gas at Petrocanada, Husky, Esso, Chevron, or Shell. And it's as if you could buy on 10l of gas at a time at Petrocanada, half a tank at Husky and a full tank at Shell. Sure they all like to secure your business with a loyalty card, but it is not like you cannot buy gas unless they have your address on file. With chargers, however, that is exactly how it is, you need the card or app already on your phone, with credit already added, for each and every brand of charger. If you are hoping to use your credit card on an impromptu charge session with a new provider, you'll be on the phone with them for up to half hour. Wait for someone to answer, spell your name, address, credit card, expiry date and so on, just like any on-the-phone purchase. Assuming they answer the phone that is. If your phone time is expensive away from home, that is another cost. Closing remarks I did not buy an EV solely to save money. The 40,000 people evacuated from the Chilcotin and Cariboos the summer of 2017 were reason enough. It was the third year in a row that Western Canada had seen mass evacuations and loss of property to forest fires. Who could forget the images from Fort Mac Murray in 2016? and the Rock Creek fire the year before that? the connection to global warming is compelling. I bought an EV although it was significantly more expensive than a similar ICE vehicle would have been (yes, even AFTER incentives!) because I owed it to my conscience. But I need infrastructure to work with me. I cannot be at the mercy of a provider that counts that I won't have a choice in a radius of 100Km. Please do not assume the Market will be the great equalizer. The financial crisis of 2007/2008 ought to have shown something about unregulated markets left to themselves. The individual locations of the DCFC are so far away from each other, they act as a local monopoly. If you don't like the price in Castlegar you may not have enough charge to get to the next place. There is no redundancy. If we are counting on EVs to help BC reduce its carbon footprint, reduce city pollution and reduce our dependency on ocean-fouling bitumen coming into Burnaby from the tar sands, then there has to be some kind of oversight on this seemingly wild West charging infrastructure.