

BRITISH COLUMBIA UTILITIES COMMISSION
IN THE MATTER OF THE UTILITIES COMMISSION ACT
R.S.B.C. 1996, CHAPTER 473

and

British Columbia Hydro and Power Authority
Fiscal 2022 Revenue Requirements Application

Vancouver, B.C.
March 4th, 2021

WEB-BASED REVIEW SESSION

BEFORE:

D.M. Morton,	Panel Chair/Commission Chair
R.I. Mason,	Commissioner
T.A. Loski,	Commissioner

VOLUME 1

APPEARANCES

Lino Bussoli	Commission Counsel
Matthew Ghikas Chris Bystrom Tariq Ahmed Clara Ferguson	Appearing for British Columbia Hydro and Power Authority (BCHYDRO)
William Andrews Thomas Hackney Matthew Jackson	Appearing for BC Sustainable Energy Association (BCSEA)
Matthew Keen Melissa Davies	Appearing for Association of Major Power Customers of British Columbia (AMPC)
Lindsay Thompson Chris Oakley	Appearing for Residential Customer Intervener Group (RCIG)
Leigha Worth Irina Mis	Appearing for British Columbia Old Age Pensioners' Organization, Active Support Against Poverty, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, Tenants Resource and Advisory Centre and Together Against Poverty (BCOAPO)
Christopher Weafer Patrick Weafer David Craig Janet Rhodes	Appearing for Commercial Energy Consumers Association of British Columbia (CEC)
Jim Quail	Appearing for Movement of United Professionals (MOVEUP)
David Austin James Weimer	Appearing for Clean Energy Association of B.C. (CEABC)
Michael Fox	Kwadacha Nation and Tsay Key Dene Nation and Zone II Ratepayers Group (ZONE II RPG)
Roger Bryenton	Appearing for BC Hydro Ratepayers Group

PARTICIPANTS:

BC HYDRO STAFF:

Chris Sandve
Chris O'Riley
David Wong
Maureen Daschuk
Kirsten Peck
Ryan Layton
Kip Morison
Ajay Kumar
Kees Jansen
Keith Anderson
Stephen Hobson
John Rich

BCUC Staff:

Yolanda Domingo
Tanya Lai
Bruce Bath
Ian Homer
Kathryn Ratelich
Alfred Kiesling
Hillary Cheung
Avery Jones
Gillian Sykes

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VANCOUVER, B.C.

March 4th, 2021

(PROCEEDINGS COMMENCED AT 9:00 A.M.)

1
2
3
4 MR. SANDVE: Okay, great, we are at 9 o'clock, so good
5 morning everyone, we'll get started. And before we
6 start the BC Hydro portion of the session this
7 morning, I'd like to invite Commissioner Morton to
8 begin the session today.

9 Actually, sorry, Yolanda, I think I see
10 that Mr. Morton may not be there yet at the moment.

11 MS. DOMINGO: Yeah, I think if -- I don't see him
12 either, so I know he is dialed in. Just give us three
13 seconds.

14 MR. SANDVE: Okay.

15 MS. DOMINGO: We're ready, Mr. Chair, any time you're
16 ready to start. You are on mute.

17 THE CHAIRPERSON: Ah, my apologies, WebEx is not the
18 tool I use all the time, and I was just getting
19 coffee, my apologies for that.

20 Welcome everyone, it's very good to see you
21 all, and I am just going to be very, very brief here,
22 and then I'm going to turn things over.

23 My name is Dave Morton, I am the chair and
24 CEO of the BCUC, and I'm also the chair of this panel.
25 And with me on the panel are Commissioners Richard
26 Mason and Tom Loski. And so in a few moments, I'm

1 going to ask Yolanda Domingo, our Executive Director
2 of Rates to introduce the staff team, and then BC
3 Hydro will take over the agenda after that.

4 The purpose of this workshop, which is
5 being held as part of the 2022 BC Hydro RRA
6 application proceeding, is to provide all parties the
7 opportunity to hear BC Hydro's presentation, and to
8 ask follow-up questions to either issues arising in
9 the presentation related to this RRA, or to the IRs
10 that have been previously been answered in this
11 proceeding.

12 So, before we begin, I ask that we all
13 restrict our questions to those areas that I just
14 outlined.

15 **Proceeding Time 9:02 a.m. T2**

16 BC Hydro's provided some evidence in this
17 proceeding, along with a request that it be treated
18 confidentially, so therefore we'll be holding an in
19 camera section with only a minimum BCUC staff and BC
20 Hydro immediately following this section. In
21 particular, some of the vegetation management and
22 cyber security material has been filed confidentially
23 and also some of it has been filed publicly.

24 The panel and staff are going to ask –
25 well, staff certainly, I'm not sure if the panel will
26 have questions or not – are going to try to ask some

1 questions in the public realm and to the extent that
2 BC Hydro is unable to answer due to confidentiality
3 then they can seek leave to answer in the in camera
4 session. We will exercise diligence when asking
5 questions on the publicly filed material to ensure
6 that no confidential information is divulged and we
7 also request that interveners would refrain from
8 disclosing any confidential information that they may
9 have when they are asking questions of BC Hydro.

10 So, on that note, I'm now going to turn it
11 over to Yolanda, who will introduce the BCUC team and
12 then BC Hydro will take over after that. Thank you.

13 MS. DOMINGO: Thank you, Mr. Chair, and good
14 morning to everyone. It's my pleasure now to
15 introduce you to the staff team who is working on this
16 proceeding. First are the staff members who will be
17 asking questions to the applicant later in this
18 workshop. Tanya Lai, who is our lead staff; Ian
19 Homer; Kathryn Ratelich; Bruce Bath; Alfred Kiesling.
20 And present today are also other members of the staff
21 team. Hillary Cheung, Avery Jones and Gillian Sykes.

22 I'd like to acknowledge the team at Allwest
23 who are transcribing today's workshop, Mr. Hal
24 Bemister and Mr. Keith Bemister, and of course we also
25 have the assistance of our legal counsel, Mr. Lino
26 Bussoli from Bridgehouse.

1 see some of the WebEx icons. And so in particular on
2 that slide, I'll draw your attention to the mute
3 functions, and would ask that everyone please make
4 sure that if you're not speaking that you have your
5 line muted, so that we can then manage the background
6 noise. Also note that we are not going to be using
7 the chat function for questions. However, if you do
8 need to reach me as the facilitator for any reason,
9 you can feel free to use the chat function to make me
10 aware of something if you need to.

11 On slide 4 of the Exhibit B-8 that was
12 filed yesterday, you will see the agenda. You'll see
13 that we're starting this morning with the presentation
14 and we're targeting to finish that presentation in
15 well under an hour, so that we can allow a much time
16 for questions as possible.

17 Given that the presentation is relatively
18 short and want to allow as much time for intervenor
19 and submission questions as possible, I would ask that
20 you hold any questions that you have on the
21 presentation until your allotted time for questions in
22 the agenda, and that will make sure we can move as
23 quickly as possible.

24 So, with that, what we'll do then is when
25 we've done the presentation, we'll move directly into
26 the question and answer time, starting with BC

1 Sustainable Energy Association, and then proceeding
2 through the order that is provided on slide 13 of
3 Exhibit B-8.

4 And I'll just note that this morning, Mr.
5 Bryenton, who is an intervenor in this proceeding,
6 contacted me and asked for time to ask questions, and
7 so while not shown on that slide, and Mr. Bryenton
8 will be allotted time for questions before we go to
9 BCUC Staff.

10 We'll aim to conclude the public portion of
11 the questions today at 4:30 P.M., at which point
12 everyone will sign off, and there is a separate WebEx
13 that has been made available to the Commission and BC
14 Hydro only for the in camera session that Commissioner
15 Morton mentioned.

16 If you turn to slide 3 of Exhibit B-8,
17 you'll see a list of BC Hydro representatives
18 participating in today's session. And to save time, I
19 will just briefly introduce each of them for the
20 record now. So, first, in our main meeting room
21 today, participating from there we have Chris O'Riley,
22 president and chief executive officer of BC Hydro.
23 David Wong, executive vice president finance,
24 technology, supply chain, and chief financial officer.
25 Maureen Daschuk, senior vice president integrated
26 planning. Kirsten Peck, senior vice president safety

1 and compliance, and chief compliance officer. Ryan
2 Layton, chief accounting officer. Kip Morison, chief
3 information officer. Ajay Kumar, director line asset
4 planning. And Kees Jansen, director compliance.

5 In a separate meeting from today we have
6 participating from there Keith Anderson, vice
7 president customer service. Stephen Hobson, director
8 conservation and energy management, and John Rich,
9 senior manager load forecasting.

10 Appearing today as counsel on behalf of BC
11 Hydro are Matthew Ghikas, and Chris Bystrom, Tariq
12 Ahmed, and Clara Ferguson.

13 Before we get into the BC Hydro
14 presentation, for the record I would just like to
15 invite representatives from each of the intervenor
16 groups to introduce themselves now for the record,
17 following the order set out on slide 13. So, starting
18 with BCSEA, please go ahead.

19 MR. ANDREWS: Bill Andrews, I counsel for the B.C.
20 Sustainable Energy Association and Sierra Club (Audio
21 drops)

22 MR. SANDVE: Mr. Andrews, on my end, your audio is
23 breaking up.

24 MR. ANDREWS: -- are Tom Hackney and Matt (inaudible).

25 MR. SANDVE: Thank you, Bill, I am not sure if it was
26 just me, but your audio was breaking up a little bit

1 for me.

2 MR. ANDREWS: Again. Bill Andrews, representing B.C.

3 Sustainable (audio drops) my video, is this any

4 better?

5 MR. SANDVE: Sure, maybe we'll go to AMPC next, and

6 Bill we'll try you again at the end to see if your

7 audio is working a bit better. Go ahead AMPC.

8 MR. KEEN: Fingers crossed. It is Matthew Keen,

9 appearing on behalf o the Association of Major Power

10 Customers of B.C. With me today virtually is Melissa

11 Davies of MDNY Consulting.

12 MR. SANDVE: Thank you, Mr. Keen. We can hear you

13 well. Next is RCIA?

14 MS. THOMSON: So hello everyone, my name is Lindsay

15 Thomson and I am here representing the Residential

16 Consumer Intervenor Association. With me on the call

17 is also Chris Oakley. Thank you.

18 MR. SANDVE: Thank you, Ms. Thomson. Next is BCOAPO?

19 MS. MIS: Good morning, my name is Irina Mis, I am here

20 on behalf of BCOAPO, and Leigha Worth will join us

21 shortly as well.

22 MR. SANDVE: Great, thank you, Ms. Mis. Next is CEC.

23 MR. C. WEAFFER: Good morning, it's Chris Weafer

24 representing CEC. With me on the call is Patrick

25 Weafer, David Craig, and Janet Rhodes. Thank you.

26 MR. SANDVE: Great, thank you, Mr. Weafer. Next is

1 MoveUP.

2 MR. QUAIL: Yes, this is Jim Quail, counsel for MoveUP,
3 which is the union that represents the inside work
4 force of BC Hydro.

5 MR. SANDVE: Thank you, Mr. Quail. Next is Clean
6 Energy B.C., CEABC.

7 MR. AUSTIN: Good morning, it is David Austin, A-U-S-T-
8 I-N. I have with me Jim Weimer, and we're
9 representing the Clean Energy Association of B.C.

10 MR. SANDVE: Thank you, Mr. Austin. Next is Zone II
11 Rate Payers Group.

12 MR. FOX: Good morning, it is Michael Fox, with Iris
13 Legal Law Corporation, we are counsel for the Zone II
14 Rate Payers Group.

15 MR. SANDVE: Thank you, Mr. Fox. Next is Mr. Bryenton.
16 Not sure if we have Mr. Bryenton, if we do,
17 Mr. Bryenton, if you want to just state your name for
18 the record. If not, I'll just, just to check, make
19 sure we haven't missed anybody. Have I missed anybody
20 on the call here.

21 **Proceeding Time 9:12 a.m. T4**

22 Okay, Mr. Andrews, do you want to try
23 again? Okay, I'm not hearing Mr. Andrews, so maybe
24 we'll check in with him again after the presentation.

25 What I'd like to do now then is go to BC
26 Hydro's presentation. As I mentioned, there will be

1 slides in Exhibit B-8 that the speakers will be
2 referring to, so if you want to have Exhibit B-8
3 handy. And I'll now ask Chris O'Riley, president and
4 chief executive officer at BC Hydro, to begin today's
5 presentation.

6 **PRESENTATION BY MR. CHRIS O'RILEY**

7 MR. O'RILEY: Thank you, Chris. And I want to welcome
8 everyone and thank you for participating in this
9 process and for your flexibility in accommodating the
10 pandemic and the technology.

11 I want to start my comments today by
12 talking about reliability. And reliability is at the
13 heart of our service obligations to our customers.
14 And at BC Hydro we've traditionally viewed reliability
15 as keeping the lights on. We take great pride in our
16 work to minimize the frequency and duration of outages
17 and this lights on thinking has driven much of our
18 capital program and operational investments. And you
19 see this commitment most visibly in our response to
20 storms and our efforts to restore power to customers
21 following an outage. And you see it on our score card
22 through outage frequency and duration metrics which we
23 track carefully.

24 And of course keeping the lights on is
25 enormously important. I hear directly from customers
26 who experience poor reliability or extended outages

1 and I know it makes life extremely difficult for them.
2 And that's true whether the customer is a business, an
3 institution, or residential customer. And whether
4 it's an urban householder trying to work from home on
5 their personal computer, a rural dweller who's reliant
6 on electricity for their water supply, or a resident
7 of the nonintegrated areas who is dependent on
8 electricity for heat. We absolutely need to maintain
9 our focus on keeping the lights on, but it is no
10 longer enough.

11 As our environment becomes more challenging
12 and frankly hostile, we need to broaden our view of
13 reliability beyond this lights on thinking. We are
14 seeing the effect or more extreme weather here in
15 British Columbia in more severe storms and wider
16 swings in our hydro conditions. And we're seeing it
17 elsewhere in North America, including the horrific
18 situations that have occurred recently with the cold
19 weather in Texas and the forest fires in California.
20 Our industry is coming under a threat by hostile
21 actors, both in the physical and cyber realm and we've
22 had direct experience with that here in British
23 Columbia.

24 We're using the term "resilience" to
25 describe our ability to guard against a more diverse
26 set of threats without letting down our customers or

1 our neighboring systems. And resilience is grounded
2 in risk and hazards. You could describe resilience as
3 being able to take a punch and still move forward with
4 our mission. Compliance with mandatory reliability
5 standards is one important way for utilities to
6 achieve resilience and I acknowledge we are not
7 meeting expectations in this area.

8 Part of our commitment to compliance is
9 recognizing that lights on thinking is necessary but
10 not sufficient and that we must move beyond our
11 traditional concept of reliability towards resilience.
12 Hopefully our commitment to that will be evident to
13 you in these deliberations, notwithstanding the
14 limitations we have due to confidentiality
15 requirements.

16 The central tension in our budgeting
17 process and in any utility revenue requirements
18 application is that between affordability for
19 customers and investment in our system. I think of
20 this as a stewardship role which is taking care of
21 something over time. We pay tremendous attention to
22 getting this balance right and I think in most cases
23 we have done so effectively.

24 During my testimony at the Fiscal 2020/2021
25 revenue requirements hearing, I signaled to you the
26 need to enhance our spending in areas of vegetation

1 management, cyber security, and employee training
2 necessary to meet evolving safety and regulatory
3 requirements. We recognize that our environment was
4 changing and we were beginning to experience
5 challenges in this area. In other words, the balance
6 between affordability and investment needed to be
7 adjusted.

8 **Proceeding Time 9:17 a.m. T5**

9 As you know, we are adding significant
10 resource for fiscal 2022 for vegetation management on
11 our transmission and distribution system. This
12 includes additional expenditures to remove vegetation
13 and investments in LiDAR imaging. LiDAR imaging is
14 intended to create valuable objective information
15 about our vegetation cover and this will inform better
16 decision-making, demonstrate compliance with
17 vegetation standards and enable benefit cost analysis.
18 We do commit to turning the LiDAR data into useful
19 metrics and targets to hold ourselves accountable for
20 the results of our program and to demonstrate its
21 value.

22 We are also making incremental investments
23 in mandatory reliability standards compliance,
24 otherwise known as MRS. As the MRS standards have
25 grown in number and complexity and footprint in our
26 organization, we recognize that our discrete project

1 based approach to compliance is no long appropriate
2 for BC Hydro. We're now building a compliance program
3 around these discrete activities and systems to ensure
4 we achieve more sustainable, consistent, cost-
5 effective compliance outcomes.

6 We understand the long-standing concern
7 among ratepayers about operating costs and
8 affordability. We don't take these steps lightly. I
9 want to acknowledge that with hindsight some of these
10 investments would have been better made one or two
11 years earlier and, in fact, we did reallocate some
12 spending to these areas within our fiscal 2020 and
13 2021 budgets to address these pressures. Going
14 forward it's important that our metrics better
15 indicate when we're seeing changes in risk profile.

16 It's just over a year now since we gathered
17 for the start of the oral hearing at the fiscal 2021
18 RRA. It was the first oral hearing for a BC Hydro
19 revenue requirements in more than a decade and marked
20 a return to relatively unfettered BCUC regulation of
21 BC Hydro's revenue requirements following an extended
22 period of more direct government control. The fiscal
23 2021 RRA, including that oral hearing, created a vast
24 evidentiary record capturing the robust dialogue and
25 extensive discourse to unpack and build understanding
26 of complex processes and it included some pointed

1 feedback to BC Hydro about how we could improve. By
2 all accounts, it was a successful proceeding and
3 hopefully you see the results reflected in this
4 application and our approach.

5 The fiscal '22 revenue requirements
6 application builds on the strong foundation of
7 evidence and understanding established in that prior
8 proceeding with some mark shifts, as I've already
9 indicated. We appreciate the Commission's initiative
10 to advance the timing of our revenue requirements
11 applications such that the proceedings may be
12 concluded closer to the beginning of the test period.
13 And we appreciate the efforts of all parties to
14 accommodate this abbreviated bridging procedure to
15 enable a summer filing for the F23-25 RRA.

16 I also note there are several other
17 relevant proceedings in train or pending and we've
18 tried to point out where certain issues will be
19 addressed. For example, we look forward to presenting
20 our electrification plan and our efforts to support
21 the non-integrated area diesel reduction in the next
22 RRA following the completion of the phase 2 government
23 review. The integrated resource plan proceeding will
24 address opportunities to include customer-based
25 capacity solutions, the benefits of time varying rates
26 and developments with the long-term load forecast.

1 And we're all anticipating a proceeding on BC Hydro's
2 net income where we expect issues on appropriate rate
3 of return to be fully considered.

4 **Proceeding Time 9:22 a.m. T6**

5 We will also be restarting our quarterly
6 and annual reporting on Site C project very soon,
7 given government's announcement last Friday.

8 In public statements over the last few
9 days, the government articulated the reasons for
10 supporting the finishing of the project, despite the
11 challenges we've experienced and the much increased
12 cost.

13 Given that Site C isn't central to this
14 proceeding, at this time I only want to stress that
15 the design is safe and will meet all relevant Canadian
16 Dam Association standards without any compromise.

17 This has been an intense year for all of
18 us, as we have collectively grappled with the COVID-19
19 pandemic. I've been really gratified that BC Hydro
20 has kept up its service obligations since the
21 declaration of the emergency last March. Except for
22 one outbreak before Christmas at our construction
23 services headquarters in Surrey, we've largely avoided
24 transmission of the virus among our workforce. And
25 following an initial decline, our load has recovered
26 somewhat. It is tracking closely to the COVID

1 scenario A, upon which we've based our fiscal '22 RRA
2 budget.

3 There are risks as we go forward, given the
4 slow pace of vaccinations in Canada, and the
5 development of more contagious variants of the virus.
6 And we have updated our operational contingency plans
7 to respond if more strict lockdowns and measures are
8 required in the coming months.

9 Finally, I want to acknowledge that the
10 pandemic has fallen harder on certain segments of
11 society, and among our different classes of customers.
12 The lower income residential customers and households
13 where jobs have been lost, for example. Commercial
14 customers in the retail and hospitality sectors, and
15 some large industrial customers that are facing even
16 more difficult markets.

17 I also recognize that a number of First
18 Nations communities have faced illness, and increased
19 isolation during the pandemic. I was pleased that we
20 were able to support many of our hardest hit customers
21 with some bill relief measures during the initial
22 lockdown period, and I appreciate the Commission's
23 support for those measures.

24 As we hopefully emerge from the pandemic
25 later in 2021, I look forward to BC Hydro being part
26 of our province's recovery efforts to reopen our

1 society and rebuild our economy.

2 Thank you very much again for your
3 participation today, and I want to turn over to my
4 colleague, David Wong.

5 **PRESENTATION BY MR. DAVID WONG**

6 MR. WONG: Thanks, Chris. And good morning everyone.
7 I am David Wong, executive vice president of finance,
8 technology and supply chain, and CFO. I am also the
9 executive sponsor of this application.

10 Today I just want to walk us briefly
11 through three areas. First, what are we asking for in
12 the application; second, our approach to the
13 application to net income, given our cost of capital
14 application is not filed yet; and third, an overview
15 of our operating cost increase, which Maureen,
16 Kirsten, and Kip will speak to more about later.

17 So, if you turn to slide 5, this is a
18 summary of what we are asking for. We're asking for a
19 rate increase of 1.16 percent effective April 1st,
20 2021. This will also be the net bill impact as our
21 proposal results in a deferral account rate rider of 0
22 percent.

23 As highlighted by Chris O'Riley, we believe
24 we have appropriately balanced affordability and
25 investment, keeping our rates below inflation, while
26 funding some important reliability investments in our

1 compliance program, related to mandatory reliability
2 standards, vegetation management, cyber security, and
3 employee training, aligned to the areas the Commission
4 saw as critical in the F2020 RRA decision.

5 We are proposing, consistent with what we
6 said in the last application, to return to the
7 deferral account rate rider mechanism to recover or
8 refund to repairs, balances in the cost of energy
9 variance accounts.

10 As this is a one-year GAAP application,
11 beyond that our requests are limited. We are asking
12 to set the open access tariff trends -- open access
13 transmission rates, we put forward a demand-side
14 management expenditure of 82.2 million dollars,
15 consistent with our current moderation strategy as in
16 previous years.

17 **Proceeding Time 9:26 a.m. T7**

18 We're asking for three changes to existing
19 regulatory accounts. One new regulatory account, the
20 electric vehicle costs regulatory account; and to
21 close one regulatory account, the Rock Bay Remediation
22 Regulatory Account. Finally, we request around
23 amortization of our infrastructure rate class and
24 depreciation rates related to equipment at the Burrard
25 plant.

26 If you turn to slide 6 now we'll talk a

1 little bit about of cost of capital. In this
2 application -- this application is based on a net
3 income of \$712 million consistent with the last
4 published service plan for BC Hydro. Direction 8 only
5 stipulated net income up to Fiscal 2021. However, the
6 government in the comprehensive reviews, Phase 1,
7 indicated that they may provide policy guidance with
8 regard to BC Hydro's net income going forward.
9 Government is still considering any policy guidance
10 that it may wish to provide. We expect to file this
11 cost of capital application informed by government
12 policy guidance towards the end of this calendar year.

13 As noted in our cover letter to the IR
14 responses on February 23rd, we propose a regulatory
15 account to capture the difference between this and the
16 amount ultimately determined by the BCUC so that rates
17 can be finalized for Fiscal '22. This account would
18 capture any differences between the net income caused
19 by changes to any return percentage, capital
20 structure, or rate base. I want to note that under
21 IFRS regulatory accounting rules, in this situation we
22 would only record the deferral if the ultimate
23 difference is to the benefit of the ratepayer.

24 So in other words, if the BCUC accepts our
25 proposal of having a regulatory account and using \$712
26 million for setting rates for Fiscal '22, but later in

1 the cost in capital proceeding decides that the net
2 income should be a different amount and say less
3 amount, this difference between the 712 million and
4 the lower amount would be picked up in the deferral
5 account and returned to ratepayers in the future. We
6 expect that we would propose over the next test
7 period. However, if the BCUC decides that the net
8 income amount for Fiscal '22 is something greater than
9 712 million, the difference cannot be picked up in the
10 deferral account under IFRS accounting rules. But the
11 key principle here is that ratepayers will be kept
12 whole and ultimately only pay for what is approved.

13 Finally, I'd like to turn to slide 7 where
14 we talk about our operating costs. We've categorized
15 our cost increases in the application to three
16 buckets, as you see in this slide. You'll note most
17 of the costs increases fall into two categories:
18 reliability investments and uncontrollable costs. The
19 reliability investments are focused on three areas:
20 achieving compliance with mandatory reliability
21 standards, increasing funding for vegetation
22 management, and increasing funding for cybersecurity.
23 We recognize this increase is significant, but it's
24 needed as highlighted by Chris and you will hear more
25 from Maureen, Kirsten and Kip.

26 Second category is the uncontrollable

1 costs. The primary increase here is due to higher
2 current service pension costs, which is an impact from
3 the falling discount or interest rates. So when
4 discount rates fall, pension costs increase. The
5 discount rate we use is determined by our external
6 actuary, it is market valued. We haven't changed our
7 pension offer to our employees or retirees, and this
8 valuation methodology is consistent to what we've used
9 in the past. This category also includes a general
10 wage increase to our union employees, in our MoveUP
11 and IBEW union as mandated by our labour agreements,
12 and increases to insurance premiums and regulatory
13 costs. I do want to note that we have frozen
14 executive and management and professional salaries for
15 Fiscal '22 in recognition of the economic impacts of
16 the pandemic.

17 Thank you, and now I'm going to turn it
18 over to Maureen Daschuk who is going to talk about
19 vegetation management.

20 **PRESENTATION BY MS. MAUREEN DASCHUK:**

21 MS. DASCHUK: Good morning, I'm Maureen Daschuk, senior
22 vice president of integrated planning. I lead the
23 business group that's responsible for planning the
24 power system. That includes developing plans for
25 capital investment and the maintenance of our power
26 system, including the vegetation management program.

Proceeding Time 9:31 a.m. T8

1
2 As you know, we are proposing a \$25 million
3 increase in funding for vegetation management in this
4 application. And I want to speak to you about that
5 today. There are three areas that I want to
6 highlight. First a review of our historical spend,
7 and the associated vegetation management practices we
8 use. Second, a discussion of our efforts in the past
9 two years associated with the F20 and F21 revenue
10 requirements application, and the actions that we have
11 taken to address risks. And then third, an overview
12 of the Fiscal '22 budget, and how that fits in with
13 our longer term plans for vegetation management.

14 So, let's start with the historical review.
15 I'll ask you to turn to slide number 8, and you'll see
16 that it shows a graph, and the graph has our actual
17 spending in vegetation management for both
18 transmission and distribution over by fiscal year.

19 The values have been adjusted to F -- to
20 calendar 2020 real dollars, using a consumer price
21 index, to allow us to make more direct comparisons of
22 spending levels over time.

23 I want you to pay attention to a couple of
24 areas. The first one I'll ask you to look at is the
25 period from 2003 to 2009. During that time,
26 vegetation spending increased from \$37.4 million to

1 \$68.4 million. This is a compound annual growth rate
2 of 10 percent, and in these years, extensive clearing
3 was done. The high number of hazard trees were
4 removed. This was driven by our response to the
5 Mountain Pine Beetle outbreak and significant storms
6 that impacted the health of vegetation.

7 Second, you'll notice that the spending
8 leveled out in the years following this activity. So
9 if you look at the period from Fiscal 10 to Fiscal 19,
10 you'll see that the average spend was about \$51.8
11 million per year.

12 In these years, with the benefit of that
13 extensive clearing that took place previously, we
14 shifted to more selective or targeted clearing.

15 There area couple of points I want to make
16 about that approach. First, we've always used a
17 combination of area clearing and targeted removals,
18 also known as "hot spotting," to address vegetation.
19 And that mixes -- it does vary over time based on the
20 type of vegetation that's there and the proximity to
21 the power lines.

22 Second, there are different ways that we
23 could approach this mix, and both approaches are
24 valid, sustainable and can be effective. The first
25 approach is to do a period of intensive clearing,
26 followed by this more selected targeted clearing. The

1 second approach is to maintain a relatively consistent
2 level of activity over a longer period of time. Our
3 historical approach has been this intensive clearing
4 followed by the more selective clearing.

5 We're going to be considering whether this
6 is the best approach going forward, and that will be
7 addressed in the new vegetation management strategy
8 that will be part of the F23 revenue requirements
9 application.

10 Now, I'd like you to look at F20 and F21.
11 I want to draw your attention to the increased
12 spending that took place particularly on the
13 transmission system over that two-year period. Just
14 as a reminder, this graph shows the actual spend, not
15 the amount that was budgeted.

16 In the last couple of years, as we've seen
17 the need to shift our mix back to more extensive
18 clearing, we made the decision to exceed our budgeted
19 amounts for transmission vegetation. So, for example,
20 in Fiscal '20 we had a budget of 18.7 million, and we
21 actually spent 22.3, and in F21 we had a budget of
22 18.7, and we are planning on forecasting to spend 27.5
23 by the end of the year. This represents an increase
24 of \$12.4 million over what was outlined in the revenue
25 requirements application, or 33 percent increase.

26 That incremental funding came from short-

1 term redirection of funds, and also it was made
2 available as some of our stations' maintenance work
3 couldn't be done under the COVID work protocols. In
4 other words, we didn't wait for the funding approval
5 increase to respond, and we've already been ramping up
6 our abilities to address the vegetation growth.

7 **Proceeding Time 9:36 a.m. T9**

8 The last item I want to draw your attention
9 to is the fiscal budget for -- the budget for fiscal
10 '22 that we're asking for in this application. And we
11 realize that we do need to adopt or modify our
12 approach to vegetation management, addressing the
13 growth on the system. As Mr. O'Riley mentioned, we're
14 going to be addressing and making investments in the
15 use of LiDAR, which is light imaging detection and
16 ranging, and it's a technology that will give us a
17 more dynamic view of the system. And that will also
18 give us leading indicators and better measures so that
19 we can respond to changes in vegetation on our system.

20 We've had a number of questions in the
21 information request about why couldn't we do more,
22 spend more money for vegetation next year, and I do
23 want to make a couple of points about that. First,
24 the proposed budget is what we believe is the maximum
25 amount that we feel that we can effectively manage in
26 a single year. Rapid growth in resourcing is limited

1 by the number of qualified contractors in the market
2 and also our own ability to do the studies and to
3 engage in the appropriate consultation needed to do
4 this work.

5 Second, we are confident that the budget
6 that we've asked for will allow us to de-risk the
7 system and address the immediate needs for vegetation
8 infringement.

9 We've also been asked a number of questions
10 about whether we not we expect future expenditures to
11 be at the same level going forward and I will say that
12 we are still in the process of developing our
13 vegetation management strategy that will outline those
14 requirements. That said, we do expect that we will
15 need to maintain a similar level of funding in the F22
16 RRA for at least the next few years as we address the
17 accumulation of vegetation and the increased costs,
18 increased regulation, the growth of our system,
19 changes in wildfires, climate change and also the need
20 for higher consultation will all impact our program
21 costs. While it may be possible for us to reduce
22 below the current fiscal '22 levels at some point in
23 the future, given the various cost pressures that I've
24 mentioned, it's unlikely that we'll ever go back to
25 the \$50 million per year.

26 A long-term level of funding which is

1 sufficient to prevent that accumulation of vegetation
2 will be informed by activities such as the LiDAR
3 system wide study that we're undertaking. We'll
4 review the program priorities and cost pressures in
5 future years and you will see that in the next revenue
6 requirements application.

7 And, with that, I'm going to turn it over
8 to Kirsten Peck.

9 **PRESENTATION BY MS. KIRSTEN PECK:**

10 MS. PECK: Great, thank you, Maureen. Good morning
11 everybody. I'm Kirsten Peck, the vice president of
12 safety and BC Hydro's chief compliance officer. I
13 lead the business group responsible for developing and
14 assuring our safety programs and in my compliance role
15 I am accountable for BC Hydro meeting its mandatory
16 reliability standards or MRS commitments.

17 Section 5.6 of the application describes
18 the history of MRS in North America, so I won't repeat
19 all of that. But MRS is new to many of you, so I
20 think it is worth spending a bit of time providing
21 some context to what MRS is and what it means for BC
22 Hydro.

23 By way of reminder, the North America
24 Electric Reliability Corporation, or NERC, sits at the
25 top of the MRS framework. It's NERC's mission to
26 assure the effective and efficient reduction of risks

1 to the relatability and security of the electricity
2 grid and to operationalize that mission NERC develops
3 and evolves the mandatory reliability standards and
4 they apply to all North American entities.

5 In the United States the Federal Energy
6 Regulatory Commission, or FERC, adopts the standards
7 as they're developed or as they evolve. But in
8 British Columbia it's a little bit different. Here
9 the BCUC adopts and administers those same standards
10 for all B.C. entities, including BC Hydro and
11 FortisBC, for example. In turn, the BCUC relies upon
12 the Western Electricity Coordination Council, or the
13 WECC, relies upon their expertise to provide subject
14 matter expertise regarding the administration of the
15 MRS standards. So our RRA application mostly speaks
16 about the WECC and the BCUC as these are the two
17 entities that we regularly deal with as we implement
18 our MRS program.

19 So there's two concepts that are important
20 to set the context regarding the MRS standards. And
21 the first is that the standards are mandatory, as
22 their name implies. The standards have been mandatory
23 since 2010 and prior to that they were voluntary and
24 BC Hydro adopted them in their voluntary form as well.

25 The second point I want to make is that the
26 standards are very much a living framework. I'd like

1 to spend a bit of time talking about that last point
2 and I tried to conceptualize that point on slide 9 of
3 your package.

4 **Proceeding Time 9:41 a.m. T10**

5 The concept of moving from reliability to
6 resilience that Mr. O'Riley spoke of in his opening
7 presentation, is very applicable to my comment about
8 MRS being a living framework. There are many changes
9 that are occurring all around us that challenge our
10 ability to make our grid resilient, and we can't
11 modify those challenges, such as climate change, or
12 bad actors in the physical or the cyber world, and the
13 increasing presence of non-dispatchable and
14 distributed generation.

15 This means that all entities in North
16 America need to work together to harden their systems
17 against these threats, so that our electrical systems
18 are available when most needed. The MRS standards do
19 just that, but they evolve as impacts of all of this
20 change around us becomes more sophisticated and
21 complex to manage.

22 So, for context, annually there are
23 approximately 20 new or revised standards that are
24 issued. Those standards have become increasingly more
25 complex in nature since 2010 when they first became
26 mandatory for us. They are now very expansive,

1 requiring much better coordination between business
2 units within BC Hydro and a systemic approach needs to
3 be taken to make sure we're compliant with the
4 standards, while at the same time evolving to adapt to
5 the next standards, or new versions of those standards
6 as they're introduced.

7 By way of example, in 2013 one of our key
8 MRS standards families only governed 11 of our
9 facilities, which included four generating stations
10 and two control centres. Today, that same standard
11 family governs our reliability-based activities at 53
12 of our facilities. And in October 2023 there will be
13 a total of 186 facilities covered under that same
14 family of standards.

15 So, this means that upwards of a few
16 thousand of our employees and many hundreds of
17 contractors now need to comply with all 457
18 requirements that currently apply to our assets,
19 facilities, documentation and to our short- and long-
20 term system operations planning processes.

21 A program that is similar in complexity and
22 breadth to the MRS program is our safety program. The
23 *Workers Compensation Act* regulations are far reaching,
24 they are complex, and it takes everyone at BC Hydro to
25 make us successful in terms of our safety performance
26 and our compliance.

1 Similarly to our safety program, we are
2 planning to invest in a centralized approach to
3 managing MRS, in which we apply one governance
4 framework to all the standards. We rely upon
5 consistent yet simple processes, we enhance our
6 workflow systems to facilitate more automated evidence
7 gathering, and assure our programs so that we can more
8 effectively and efficiently sustain compliance.

9 The 21.7 million and 21 and a half full-
10 time equivalents resources that we're requesting as
11 part of this application, will help us achieve
12 compliance with some of the MRS standards through
13 those improved processes, documentation systems and
14 training.

15 We'll evolve our current MRS program, as
16 Mr. O'Riley mentioned in his presentation, so that we
17 can more efficiently and ably adapt to the new
18 standards, or new versions that will undoubtedly come.
19 We're building up from the foundation that we already
20 have, adding in an envelope around that foundation to
21 make our systems more resilient.

22 While we are working to be transparent,
23 discussing the details of an MRS program can
24 unwittingly increase the risk to the bulk electric
25 system. That part of our system that operates at 100
26 kilovolts and above.

1 MRS discussions about confidential topics
2 can increase the reliability risks for both ourselves
3 and those immediately surrounding us, such as our
4 neighbouring utilities and our customers.

5 For this reason, we can't share a lot of
6 detail about the specific plans to evolve our MRS
7 program and get back into compliance, nor can we
8 discuss our specific non-compliances or mitigation
9 measures.

10 This is a normal practice related to MRS,
11 it's not unique to BC Hydro. So we'll have to keep
12 most of the answers to MRS questions at a high level
13 as a result. But rest assured, the BCUC has asked a
14 number of MRS questions in the confidential IRs, and
15 the topic will also be discussed at the in camera
16 session that we mentioned later this afternoon.

17 **Proceeding Time 9:46 a.m. T11**

18 We'll have more work to do in Fiscal '23
19 and we will address the remaining work to complete and
20 sustain our MRS system in the next revenue
21 requirements application.

22 Thank you. I'd like to pass the
23 presentation over to Kip Morison.

24 **PRESENTATION BY MR. KIP MORISON:**

25 MR. MORISON: Thank you, Kirsten, and good morning
26 everyone. I'm Kip Morison, I'm the chief information

1 officer with BC Hydro. I lead the technology team at
2 BC Hydro and I'm accountable for cyber security. This
3 morning I wanted to talk briefly on three points. The
4 first one, the digital landscape we need to protect
5 and how we go about doing that. The second, why it's
6 important that we make additional investments in cyber
7 security at BC Hydro. And third, what we're asking
8 for in the application.

9 So let me start by talking about BC Hydro's
10 digital landscape and our method of protecting it.
11 This landscape is very large and complex. It's
12 depicted in slide 10 of your presentation. This
13 landscape spans the full range of information
14 technologies or IT and operation technologies or OT
15 across the organization. This is from the use of
16 laptops by office workers to our major data centres,
17 to our operating assets, control centres, and even our
18 field workers.

19 It's a very challenging environment we need
20 to protect comprised of computing and storage
21 equipment, networks, software, end point devices such
22 as phones and laptops, and a huge variety of data. We
23 do have a strong cyber security team and we've been
24 successful at managing cyber security risk at BC
25 Hydro. We've had no major incidents that have
26 impacted our company. Our team is showing good

1 capability to respond and manage threats using our
2 cyber security incident response plan that's been
3 developed over many years.

4 Overall, our cyber security program is
5 based on the industry standard framework of the
6 National Institute of Standards and Technology or
7 NIST. This five step approach, which is shown in
8 slide 11, we use this to identify gaps and to build
9 our capabilities. It provides guidance on how to
10 identify and protect critical assets; how to detect,
11 respond, and recover from threats and incidents. We
12 also engage with numerous cyber security agencies
13 including the Canadian Centre for Cyber Security,
14 Electricity Information Sharing and Analysis Center,
15 and groups within the Canadian Electricity
16 Association. This engagement includes guidance on our
17 capabilities and it also provides us with information
18 on threats in incidents.

19 So why is it important that BC Hydro invest
20 more in cyber security? Well, first there's more to
21 protect. The footprint and complexity of our
22 environment that we need to protect is expanding. To
23 respond to business needs we're continually adding new
24 applications, infrastructure and mobile devices.
25 These all need to be protected. Second, cyber threats
26 are growing in volume and sophistication. Every day

1 we're learning about nation state attacks and
2 ransomware incidents. These are impacting Canadian
3 businesses and some very close to home here in B.C.

4 Phishing is a growing concern as attackers
5 use more sophisticated approaches to deploy malware
6 and today this is probably one of the most common
7 methods of cyber attack. This supply chain risk has
8 also now emerged as a top concern with vulnerabilities
9 or malware being deployed in software product updates.
10 These growing threats will increase the risk to BC
11 Hydro. So we need to respond to the growing and
12 evolving cyber security risks, from self-assessments,
13 audits and actual incidents we've identified specific
14 areas in which we need to further build our
15 capabilities. Some of these areas include
16 vulnerability management, enterprise-wide 24 by 7
17 monitoring, supply chain risk management, and incident
18 recovery.

19 So we see that our digital landscape is
20 expanding and we need to invest in order to manage
21 these risks for more of the more sophisticated
22 attacks, but what is it exactly that we're asking for
23 in the application? Well, for F2022 BC Hydro is
24 planning on investing an additional \$3 million which
25 includes expanding our existing cyber security team by
26 four full-time employees. These additions will bring

1 And by supporting our customer to switch, we can
2 increase our load, which helps takes pressure off of
3 rates while we're in an energy surplus. While most
4 charging takes place at home, public fast charging
5 stations are important to the electrical vehicle
6 adoption. They address concerns around range anxiety
7 and are essential for customers who don't otherwise
8 have access to home or workplace charging. BC Hydro
9 currently has 94 charging stations operating at 71
10 sites across the province with plans to increase these
11 by expanding the number of stations at existing sites
12 and adding new ones. And earlier this week we filed
13 an application to set a rate for our EV fast charging
14 service.

15 Electric vehicles are only one component of
16 a broader electrification efforts. We've also been
17 working to connect new customers, attract new types of
18 industry and are continuing to design new rates and
19 invest in low carbon electrification programs that
20 help promote fuel switching. The province and federal
21 governments are key partners in this area. The
22 province recently put new industry electrification
23 rates in place and announced the creation of a new
24 CleanBC facilities electrification fund that will
25 provide support to customers to reduce the costs of
26 connecting to the grid. In addition, we are working

1 to secure federal funding for infrastructure to both
2 support and expand the system to allow new
3 electrification.

4 To bring all this together, we are working
5 an overall electrification plan which will be part of
6 the next revenue requirement application. It will
7 cover our existing electrification efforts from across
8 the company as well as our plans for additional
9 actions to help drive an increased electrification.
10 We will be hosting engagement workshops over the next
11 couple of months to ensure customers and interveners
12 have input into the type of electrification
13 opportunities and barriers that exist and actions BC
14 Hydro can take to help overcome those barriers.

15 I look forward to hearing your ideas in
16 these coming sessions and to any discussion and
17 questions you have today. And, with that, I'll turn
18 it back over to Chris Sandve.

19 MR. SANDVE: Thanks, Keith. We'll now proceed into the
20 question and answer portion of the agenda. And I just
21 wanted to make three quick points before we get
22 started. The first, if you could just remember both
23 those asking questions and the representatives from BC
24 Hydro here today to state your name for the record
25 before answering so that those doing the transcripts
26 know who's speaking.

1 Second, I'll just note that due to physical
2 distancing measures we have representatives from BC
3 Hydro in two different rooms today and, as you may
4 notice on the screen there, we in the main room have
5 representatives both seated around the table as well
6 as away from the table so that everyone's spaced out
7 appropriately.

8 And so all that to say that after you have
9 started your question and answer portion it would be
10 great if you could just give us a very brief agenda of
11 the topics you are planning to cover and that will
12 allow us to make sure that we get the appropriate
13 witnesses into place around the table in the main room
14 and also that the witnesses in the second meeting room
15 know whether they need to be prepared to answer any of
16 your questions. I'll also note that when we do that
17 if you could just give us a couple moments to get
18 ready as we'll have to sanitize the boardroom table
19 for any witnesses that are swapping in and out.

20 The last point I want to make is that we've
21 only set aside today for the review session and so
22 we'd like to ask for everyone's cooperation in making
23 sure that we stick to the agenda. What I will plan to
24 do is as you're getting within two or three minutes of
25 the end of your question and answer time I will just
26 jump in to let you know where you're at and you to

1 wrap up your questions.

2 **Proceeding Time 9:54 a.m. T13**

3 And we'll be taking breaks about every hour and a half
4 or so, and I'll be keeping us on track for that.

5 So -- oh, I see Commissioner Morton has a
6 point. Go ahead, Commissioner Morton.

7 THE CHAIRPERSON: Yeah, thanks Chris. Throughout this
8 I've had on and off -- my video is turned off, and my
9 mic has turned off, but I've had on and off problems
10 hearing people. The speech has been fuzzy from time
11 to time, and just a few minutes ago, everybody, the
12 whole thing locked up and then came back. Your last
13 remarks were not clear.

14 I just wondered if that's just me. If it
15 is, during the next break I'll try and see what I can
16 do about my technology, but I just wondered if that is
17 a generally felt problem. And if it is, then I just
18 wanted you to be aware of it.

19 MR. QUAIL: I hate to break this to you, Mr.
20 Chairperson, but I've been hearing okay at least, so
21 it may be you.

22 THE CHAIRPERSON: Okay.

23 THE HEARING OFFICER: This is Keith, with the record,
24 so I'll just check in here. Our audio has been fine
25 on our side. We have not lost any audio. If we do,
26 we will definitely leave a quick note for Chris.

1 THE CHAIRPERSON: Okay, I will switch computers or
2 something over here, thanks.

3 THE HEARING OFFICER: Thank you.

4 THE CHAIRPERSON: Go ahead, please.

5 MR. SANDVE: Thank you, Commission Morton. Okay, so
6 with that, I think we are ready to go into the
7 question and answer portion. Mr. Andrews, with BCSEA,
8 are you ready to go?

9 MR. ANDREWS: Well first, let me see if you can hear
10 me.

11 MR. SANDVE: We can.

12 **QUESTIONS BY MR. ANDREWS:**

13 MR. ANDREWS: Q: Thank you. I think I will leave my
14 video off in the hopes of getting better audio.

15 My first question -- for the topics that
16 we'll cover are a high-level questions for Mr.
17 O'Riley, traditional DSM, low carbon electrification
18 and vegetation management.

19 So my high level question for Mr. O'Riley
20 is, what do you say to the people who say that a 1.16
21 percent increase in Fiscal 2022 is just not affordable
22 for me as a customer?

23 MR. O'RILEY: A: Thank you, Mr. Andrews. I mean, we
24 are very conscious, as I said, about the importance of
25 keeping our rates affordable, and we really look at
26 that over time. There is some times in a revenue

1 requirements period, there is limited flexibility to
2 manage a budget within a particular year, but over
3 time we have more flexibility, and that's why the arc
4 of costs and spending and investment are so important.

5 So we have coming out of the phase 1
6 government review, we made a strong commitment to try
7 and keep rate increases below inflation. We've been
8 quite successful at that, so far. I note that the
9 Fiscal '20 and Fiscal '21 rate changes pretty much
10 offset one another. So, if you look at a three-year
11 of F20, '21, and '22, the current one, we are at about
12 1.3 percent over three years, which I think is a
13 relatively modest rate increase. And we are looking
14 through the 20s, through 2030, of rate increases below
15 inflation. So, and that's an important benchmark for
16 us, in addition to the benchmarks around, around
17 staying in the first quartile for all three customer
18 classes.

19 So, you know, we think -- we're conscious
20 of the affordability affects here, we are also
21 conscious of the investment needs, and we think the
22 1.16 strikes a balance there.

23 **Proceeding Time 9:59 a.m. T14**

24 MR. ANDREWS: Q: Thank you. My next question concerns
25 the comprehensive review of BC Hydro by the government
26 in the phase 2 portion of that. Mr. O'Riley, you

1 indicated that the electrification plan and the diesel
2 reduction component for the non-integrated areas will
3 be addressed in the next revenue requirement
4 application following receipt of the phase 2 report.

5 Can you tell us whether BC Hydro is in
6 active discussions with the government about the
7 content of phase 2? It's been almost a year since the
8 draft phase 2 report came out and we're sitting on
9 pins and needles, as it were, for a lot of policy
10 topics that are supposed to receive government
11 direction in that report.

12 MR. GHIKAS: Mr. Chairman, I'm just going to -- it's
13 Matt Ghikas talking, I'm just going to interject here.
14 The communications, if there are any, between BC Hydro
15 and the government for the purposes of setting policy
16 are subject to Cabinet confidence. It's a privilege
17 that's held by government and not by BC Hydro, and BC
18 Hydro's not in a position to waive that privilege.
19 And so, in my submission, BC Hydro is not in a
20 position to answer the question.

21 MR. ANDREWS: Thank you, I'll leave it at that.

22 Q: Turning then to a traditional demand side
23 management, the -- in the application and the IR, the
24 first round of IRs, BC Hydro --

25 MR. HOBSON: A: Mr. Andrews?

26 MR. ANDREWS: Q: Yes?

1 MR. HOBSON: A: My audio had just cut out, so I think
2 that you had just started to ask a question but I
3 couldn't hear it. So if I could ask you to start over
4 on that?

5 MR. ANDREWS: Q: Thank you, I appreciate that. All
6 right, so in terms of the size of the envelope for the
7 traditional DSM spending, the avoided costs that BC
8 Hydro is using, net levelized cost based on market
9 prices is \$33 and the portfolio net levelized utility
10 cost is \$19. First of all, did you hear me and is
11 that an accurate summary?

12 MR. HOBSON: A: It's Steve Hobson. And, yes, I heard
13 you and it's an accurate summary. The \$33, I'll just
14 point out, is a benchmark of market price for the
15 energy component of the avoided cost.

16 MR. ANDREWS: Q: So is it fair to say that going
17 forward BC Hydro has room to expand its traditional
18 DSM portfolio while still reducing the revenue
19 requirement?

20 MR. HOBSON: A: I would say it's fair that there's room
21 to have an expanded portfolio and still stay within
22 the \$33. I think we're on record in talking about
23 some of the other tradeoffs with that and I would
24 point you to the next integrated resource plan is
25 where we would next take a look at the level of DSM.

26 **Proceeding Time 10:03 a.m. T15**

1 MR. ANDREWS: Q: Thank you. In Exhibit B-5, PDF page
2 374, I'm not sure you have to go there but that's the
3 reference, on the subject of the split incentive and
4 rental area, there is a statement that BC Hydro is
5 developing a deep retrofit feasibility study in Fiscal
6 2022. Can you tell us what that is looking at, and
7 what the current status of it is?

8 MR. HOBSON: A: It's early stages, and we are in
9 discussions with some consultant organizations about
10 how to proceed with the study. Deep retrofits, and I
11 think we talked about this a little bit in the last
12 application, that they are complicated, they get into
13 building envelope, we have heard through the last
14 application the interests around that, and we're
15 proposing in F22 that we would be doing some study
16 work to better understand the opportunities in that
17 area.

18 MR. ANDREWS: Q: I'm going to turn then to -- well, as
19 a transition, the residential rate design, the
20 residential inclining block RIB rate, I take it is not
21 being characterized as a conservation rate at this
22 point, and my question I guess is, what is the current
23 thinking about when Hydro will address the residential
24 inclining block rate, obviously not in this
25 proceeding, but when will that be moving forward?

26 MR. HOBSON: A Yeah, I think that is a broader question

1 for rate design.

2 MR. O'RILEY: A: Yeah, why don't I try that, Mr.
3 Andrews. It is Chris O'Riley. We very shortly are
4 due a report to the Commission on the status of our
5 rate design effort. I think that's due, I think it is
6 due next week in March, and I note that the rate
7 principles for the residential inclining block do
8 expire in a year, March. So at the end of March 2022.
9 So, we recognize that the timeline of that, and we
10 anticipate in the intervening time a period of public
11 and customer intervener group consultation on the
12 topic, and really getting some input around some key
13 concepts about where we could go forward. But we
14 don't today have a more firm plan than that.

15 MR. ANDREWS: Q: And just to confirm, that Hydro is
16 anticipating consultation with the public and
17 stakeholders, and presumably other interested parties?

18 MR. O'RILEY: A: Yes, Mr. Andrews.

19 MR. ANDREWS: Q: Turning to low carbon electrification,
20 and the EV charging station network in particular,
21 first of all, will BC Hydro commit to making the
22 stations and sites accessible to people with physical
23 disabilities that are driving EVs?

24 MR. ANDERSON: A: Yeah, it's Keith Anderson. Yes, that
25 is -- thanks, Mr. Andrews. That's a great question,
26 and absolutely, we've recently done, you know, another

1 round of customer engagement looking at how we can
2 improve our fast charging facilities, and that's one
3 of the areas that has come up, is in some cases the
4 sites and stations that we have today aren't as
5 readily available for those with disabilities as we
6 would like them to be. And so certainly in our new
7 station design, that's the expectation, we're adding
8 that lens to that new station design layout, and
9 looking at opportunities to change the existing
10 stations where that's applicable.

11 **Proceeding Time 10:08 a.m. 16**

12 MR. ANDREWS: Q: It was mentioned earlier that BC Hydro
13 has filed its application to the Utilities Commission
14 for approval of rates for the public EV stations. Is
15 that on the Hydro website or can that be made
16 available to stakeholders or to those who participated
17 in the EV charging rates workshop?

18 MR. ANDERSON: A: Yeah, it should be made available. I
19 imagine it's already available on the Commission
20 website, but I don't know for sure. I don't know,
21 Chris, if you know, Chris Sandve, if you know where
22 that would be located?

23 MR. SANDVE: Sure, I'm sure we can provide that to you,
24 Mr. Andrews, and we'll find that and provide it.

25 **Information Request**

26 MR. ANDREWS: Q: Thank you. I'd like to get a bit

1 more clarity at a high level about the whole umbrella
2 of low carbon electrification activities, spending and
3 plans. And I know that it's been said that there will
4 be a plan in the next revenue requirement application,
5 so I'm not trying to go into what would be in that
6 plan. But I wonder if someone can explain what the
7 components are that fit under that umbrella? I'm
8 thinking of things like the EV charging, which I
9 gather is not included in the low carbon
10 electrification program. We've got previous old low
11 carbon electrification projects, we've got new
12 activity, we've got the large projects under the GGRR
13 for transmission, capital investment. Can somebody
14 provide kind of a high-level overview of what is
15 included in Hydro's low carbon electrification, either
16 sort of actual or potential in the future?

17 MR. ANDERSON: A: Yeah. Mr. Andrews, it's Keith
18 Anderson, so I'll take that to start. So maybe to set
19 the context at the start, when we talk about our
20 overall electrification plan and the plan that we're
21 looking to file as part of the 2023 revenue
22 requirement application, it's broader than low carbon
23 electrification.

24 So electrification plan really takes into
25 account all of the efforts that we have to connect new
26 customers as well as attract new customers and

1 industry to B.C. And then also includes the low
2 carbon electrification element, which is the fuel
3 switching component. So that's maybe the starting
4 context.

5 And then as we speak to the electrification
6 plan what you'll see in the upcoming engagement
7 sessions and then ultimately what's file is that we
8 think of it in kind of three sectors. So, industry,
9 transportation and then buildings is how we're setting
10 that out. And today there's already activities across
11 each of those sectors. So we already have efforts
12 around electrification in industry and transportation
13 and buildings. And the idea with the electrification
14 plan and what we'd heard previously is there just
15 wasn't an easy way to see that.

16 So the electrification plan is meant to, as
17 a first point, pull all of those different activities
18 that we're already doing together into one place so
19 that everybody can readily see that. And then
20 building from there what we're looking to do is say,
21 what else can we do? What more can we do to try and
22 increase electrification? Recognizing that that
23 benefits BC Hydro from increased load and helps keep
24 rates down, as well as benefits through the fuels
25 switching element, the greenhouse gas reduction moving
26 towards government's CleanBC targets.

1 Hydro in the last revenue requirement application said
2 that demand side management now includes both
3 traditional DSM conservation and efficiency and low
4 carbon electrification.

5 MR. HOBSON: A: It's Steve Hobson. Maybe I'll take
6 that one or part of it anyway. So you're right, when
7 we've described our low carbon electrification
8 programs we have described them in the context of our
9 demand side management programs and it's probably an
10 outcome of them being very similar in the sense that
11 we're still effecting customers' demands in the types
12 of initiatives and activities that we were pursuing
13 with what you would find as low carbon electrification
14 programs in Appendix N, would fit the same types of
15 actions and activities that you would find within our
16 demand side management programs.

17 As an industry definition it would also fit
18 within that definition in that it's basically changing
19 how customers utilize electricity. So whether they
20 increase it, decrease it or shift the timing of it.
21 And that's the notion from where we fit it in from
22 that perspective.

23 MR. ANDREWS: Q: So does demand side management for
24 Hydro now include, in addition to traditional DSM, the
25 entire suite of electrification being broader than
26 fuel switching alone?

1 MR. HOBSON: A: I'm not sure necessarily. I think
2 that's part of what we'll outline when you see the
3 next electrification plan. So as we go forward with
4 the electrification plan and we bring that forward in
5 the next application, I think that would be the
6 appropriate time to have that conversation.

7 MR. ANDREWS: Q: Okay. Mr. Anderson, can you tell us
8 briefly what are the current activities or spending on
9 electrification in the current fiscal year that's the
10 subject of this application?

11 MR. ANDERSON: A: Yeah, so I can give you some of the
12 activities, and then the low carbon electrification
13 activities are outlined in the application, but I'll
14 give you some of the other activities that we are
15 working on across each of those different, you know,
16 sectors that I described.

17 So on the industry side the first point
18 starts with just our continued activity to try and
19 connect customers. And, you know, that's -- that
20 activity is set out through Tariff Supplement 6 in
21 terms of how a new, you know, industrial customer
22 would connect and through the electric tariff in how a
23 distribution customer would connect. But there's lots
24 of effort that goes into both of those. In particular
25 some of our industrial customers, the process to
26 connect is complex or can be complex, and so our

1 initial actions with them our just making sure that
2 they have a clear understanding of the technical
3 requirements and the timelines that it might take for
4 us to connect, and then mapping that against their
5 timelines for an investment decision, and then
6 ultimately an in service date. And where they don't
7 align, then we look to go back and say what can we do
8 to streamline our processes or to overlap certain
9 amounts of work, so that ultimately we can give them
10 the information they need when they're making that
11 investment decision, or to meet their in-service date.

12 **Proceeding Time 10:17 a.m. T18**

13 So, that's the base part of a connection
14 activity. From there we then know that some of the
15 barriers on industrial side that they face is the cost
16 of the connection, and then in some cases, the
17 operating cost. In particular, where they have
18 choices. So think of something like an upstream gas
19 connection where they could use gas instead of
20 electricity.

21 So, our activities over the last number of
22 years there, on the capital cost side, are trying to
23 find ways to minimize those costs. And I mentioned in
24 my introductory remarks, the new facilities
25 electrification fund, that we've been able to work
26 with the province on, and its actually federal funded

1 dollars that individual connection requests can be --
2 can apply for, and can help offset the costs of a
3 particular customer's connection. So that's an
4 important mechanism.

5 The other piece that we do with customers
6 is that there are other applications they can make, in
7 certain -- depending on the end use for provincial
8 funding, and so we help work through that with them.
9 All in, and again, in the goal of trying to minimize
10 the connection costs.

11 I also mentioned in my introductory remarks
12 of course the industrial electrification rates that
13 government has put forward, and that we worked with
14 government on, and again, depending on the end use and
15 whether it is eligible, that can be a significant
16 savings and opportunity to help, you know, attract
17 that customer to connect. So those are some
18 activities on the industrial side.

19 I also mentioned in my introductory remarks
20 the federal funding. Of course, we've -- I think in
21 the application we've set out our Peace River
22 Electricity Supply Project, and the federal funding
23 that we've attracted for that. There is additional
24 funding that we are working with the province to see
25 if we can get from the federal government to help
26 again build out our system.

1 On switching from industrial into
2 transportation, we recently filed a fleet
3 electrification rates that -- fleet electrification
4 rates, have to remember if that's the right title,
5 that help initial transportation, in particular
6 looking at bus and other commercial fleets, as they
7 look to transition from fossil fuel into electric.

8 We're also, we've been working
9 significantly with the transit agencies, as well as
10 B.C. Ferries on their publicly announced transition
11 plans to help shepherd again their conversion from
12 other fuels into electricity.

13 On the building side, we continue to work
14 with a number of individual customers, and I can't
15 disclose who those customers are, but I can say that
16 we've had significant effort underway with hospitals,
17 as well as district energy systems, and there again,
18 it is a combination of looking to understand what
19 their barriers are, seeing if there is other funding
20 sources that are available that we can help guide them
21 to apply for, so that they can minimize their costs
22 and make those connections easier. And then look at,
23 you know, if that's not enough, if there is other
24 barriers still in place, what might we be able to do,
25 looking at different rate structures or different
26 programs.

1 MR. O'RILEY: A: Mr. Andrews, it is Chris O'Riley,
2 could you just say again which budget? Was that the
3 demand-side management budget?

4 MR. ANDREWS: Q: The vegetation management budget, and
5 the use of herbicides.

6 MR. O'RILEY: A: Oh, vegetation.

7 MR. ANDREWS: Q: The reference is Exhibit B-5, and
8 pages 421, PDF page 421.

9 MR. KUMAR: A: Mr. Andrews, it's Ajay Kumar here. As
10 far as our F22 budget is concerned, we are expecting
11 to use about \$2.5 million on herbicide use of our
12 overall \$75 million plan, which is aligned with what
13 the proportion we've been using historically on our
14 system. So we do not expect an increase --

15 MR. ANDREWS: Q: All right then that -- thank you, that
16 answers my question, given the limited nature of this
17 season.

18 MR. KUMAR: A: Thank you.

19 MR. ANDREWS: So those are my questions for the panel,
20 and the various participants from BC Hydro. Thank you
21 very much for bearing with the technical problems that
22 I've been having, and thank you for your responses to
23 the information requests.

24 MR. SANDVE: Thank you, Mr. Andrews. I'm going to
25 suggest that we take a 15 minute break at this stage.
26 So it's 10:25 A.M. We will come back at 10:40 A.M.

1 **(PROCEEDINGS ADJOURNED AT 10:25 A.M.)**

2 **(PROCEEDINGS RESUMED AT 10:40 A.M.)**

T20/21

3 MR. SANDVE: Okay, great, we're back. Thanks everyone.
4 Before we go to AMPC's question and answers, just a
5 couple points I wanted to make and see if they're
6 helpful. First, if anyone is having audio trouble
7 there is a feature on Webex and it is identified on
8 slide 2 of the slides that we sent around, where you
9 can change your audio source. And one of the options
10 that you'll get there, if you go there, is the option
11 to call in on a phone line and get your audio
12 connected in by a phone line. So if you are finding
13 your having audio trouble, you may want to give that
14 try and see if that helps.

15 The other point I wanted to make is that if
16 you are referencing exhibits, we do have exhibit
17 binders in both rooms with the witnesses. So if you
18 reference the exhibit number as well as the specific
19 IR number or chapter number that you're referencing,
20 that's what is most useful for us in terms of finding
21 your reference. We don't have, in most case, the PDF
22 readily accessible, so PDF page X is a bit more
23 difficult for us to find, but if you tell us exhibit
24 number and IR number, that's great.

25 So, with those two points, I will turn it
26 over to Mr. Keen with the Association of Major Power

1 Consumers, Mr. Keen.

2 **QUESTIONS BY MR. KEEN:**

3 MR. KEEN: Q: Good morning, panel. It's nice to see
4 some familiar and friendly faces even if virtually.

5 So as a brief agenda, as Mr. Sandve
6 requested, I've got some questions about MRS, electric
7 vehicles, cost of capital, pension costs, hedging and
8 the load forecast. Relatively brief questions in each
9 of those areas, so hopefully that doesn't cause the
10 need to move around the room too much.

11 But why don't I start with the EV costs. I
12 think this is for Mr. Anderson. Mr. Anderson, you
13 mentioned that a rate application has been filed this
14 week with the Commission for the EV rates. Can you
15 tell us, do you expect that rates to recover the costs
16 of the infrastructure investments?

17 MR. ANDERSON: A: Yeah, I can tell you at a high level
18 and then I would, you know, suggest detailed questions
19 on that are probably best left to that proceeding.
20 But at a high level the rate that we've put forward
21 would not recover all of the costs of that
22 infrastructure, but it really depends on the
23 utilization and that's one of the things you'll see in
24 the application and when we go through it is, you
25 know, this is still a new market and understanding how
26 many people will use the charging stations. Obviously

1 we know how many have used it in the last year or two,
2 but understanding what that will look like once we
3 introduce a rate is still something that we don't
4 know.

5 MR. KEEN: Q: All right, thank you for that. I've just
6 turned off the video to fix a technical issue but I'll
7 keep on going with audio only.

8 Moving over to MRS, and I think this is
9 likely for Ms. Peck. Ms. Peck, at the outset of your
10 comments this morning you mentioned, rest assured
11 questions have been posed by BCUC staff and that it's
12 normal practice to have MRS issues dealt with
13 confidentially. Can you tell us what you're thinking
14 of in terms of other experiences when you say, "it's
15 normal practice to have these things done
16 confidentially in hearings"? Are there other
17 jurisdictions that you were considering?

18 MS. PECK: A: No. Sorry, Mr. Keen, what I meant was
19 MRS issues, particularly those associated with
20 critical infrastructure protection standards tend to
21 be confidential, so they're not typically discussed in
22 any forum. I didn't mean to imply just in a rates
23 hearing.

24 MR. KEEN: Q: Right. But you're not aware of any
25 regulatory body or electricity regulatory body in
26 Canada or the U.S. that's had blanket confidentiality

1 over the consideration of MRS issues when it comes to
2 rates, is that fair?

3 MS. PECK: A: No, I'm not specifically aware, no.

4 MR. KEEN: Q: And the BCUC hasn't done it before to
5 your knowledge, right?

6 MS. PECK: A: Not to my knowledge, no.

7 MR. KEEN: Q: Okay. And has Hydro considered using
8 confidentiality agreements in this context?

9 MS. PECK: A: We --

10 MR. KEEN: Q: And to be clear, to permit customers to
11 participate.

12 MS. PECK: A: Yeah, no, we haven't considered that, but
13 I'm not sure that we would consider that. It would
14 be --

15 MR. KEEN: Q: That was my next question, would you?

16 MS. PECK: A: Yeah, the protection of the bulk electric
17 system is paramount and I'm not sure that that would
18 be something that we would consider.

19 MR. KEEN: Q: Is it fair to say at this point you've
20 determined that it's not appropriate?

21 MS. PECK: A: I don't think it's appropriate.

22 **Proceeding Time 10:45 a.m. T22**

23 MR. KEEN: Q: All right. And I don't know if this is
24 for -- I'm going to shift gears again. I don't know
25 if this is for Mr. O'Riley or Mr. Wong. It may be of
26 assistance to turn up your response to BCUC IR 60.40.1

1 and that's, for those moving electronically, PDF page
2 758 of Exhibit B-4.

3 MR. WONG: A: Sure. It's Mr. Wong here. You can
4 start.

5 MR. KEEN: Q: I'm going to move electronically and get
6 to figuratively the same page.

7 Mr. Wong, if you've got the response in
8 front of you, this is BC Hydro responding to the
9 Commission about how its pending cost of capital
10 application will or will not rely on FEI's, FortisBC
11 Energy Inc.'s, common equity component. And I think
12 it's fair to say largely this is the interrelationship
13 between the generic cost of capital proceeding that
14 the BCUC has announced, the panel composition was
15 announced this week, and then the application that BC
16 Hydro is planning to file at the end of the year.
17 That's fair in terms of framing?

18 MR. WONG: A: Yeah, the cost, the generic cost of
19 capital will be upcoming, and then we'll be applying
20 for ours in the fall.

21 MR. KEEN: Q: And do you know how they're going to fit
22 together? Does BC Hydro have a plan for those two
23 proceedings in terms of the way they interrelate?

24 MR. WONG: A: Yeah, well, current discussions is that
25 BC Hydro will be engaged in the generic cost of
26 capital we're thinking as an intervener as an example.

1 And then we will be seeing how that proceeding goes,
2 taking information from it. That will help inform as
3 we go through our development of the application. But
4 not relying solely on the generic cost of capital
5 because we do believe that BC Hydro has unique aspects
6 to it and that at the same time concurrently, as I
7 mentioned, we will be working with the province on
8 development of their policy directions and how that
9 would apply.

10 MR. KEEN: Q: So you don't have those policy directions
11 yet?

12 MR. WONG: A: That is correct.

13 MR. KEEN: Q: And do you expect those two proceedings
14 to overlap in time? In other words, the generic cost
15 of capital would be going on at the same time as BC
16 Hydro's application for its cost of capital?

17 MR. WONG: A: Yeah, my understanding is that the
18 Commission wants to complete the generic cost of
19 capital proceeding for the calendar '22 year, so I
20 would assume that that would mean the bulk of it would
21 be happening over the summer. Our anticipation would
22 be to file something in the fall period, so that we're
23 hoping to be able to get an understanding of what that
24 proceeding is like before we develop our -- well,
25 before we file our application I should say.

26 MR. KEEN: Q: So for BC Hydro customers who are

1 concerned about the level of net income, because
2 that's a sizeable component of the revenue
3 requirement, for BC Hydro customers who are expecting
4 to participate, they're facing the prospect of
5 participating in both the generic cost of capital and
6 then also BC Hydro's cost of capital, right?

7 MR. WONG: A: Well, depending upon the timelines, there
8 could be some overlap.

9 MR. KEEN: Q: Sorry, and when you say overlap, you mean
10 both proceedings could be happening at the same time?

11 MR. WONG: A: Exactly.

12 MR. KEEN: Q: All right. And in terms of content
13 overlap, if I understand you correctly, there's going
14 to be content that BC Hydro's going to rely on from
15 the generic cost of capital in its cost of capital
16 proceeding? And so for customers of BC Hydro that
17 want to participate in that component of your revenue
18 requirement, the net income, they're looking at
19 participating in the generic cost of capital, is that
20 right?

21 MR. WONG: A: Well, I'm not saying that we're looking
22 -- the content -- we're not looking for a decision
23 related to the Commission in order to put our
24 application together. I know we would wait to a
25 decision related to a decision related to the generic
26 cost of capital. However, as the generic cost of

1 capital proceeding is underway and there are
2 application submissions, we certainly will be looking
3 at that and reflecting upon it as we develop our
4 policy.

5 MR. KEEN: Q: In the past government has passed orders
6 in council to amend or change the effect of Commission
7 decisions relating to BC Hydro's current own equity
8 and its cost of capital. Do you have any direction
9 from government about whether that is likely in this
10 instance?

11 **Proceeding Time 10:50 a.m. T23**

12 MR. WONG: A: Yeah, I can't talk about our
13 conversations with government related to the opining
14 on cost of capital.

15 MR. KEEN: Q All right, so it is possible that could
16 happen again, is that your understanding?

17 MR. WONG: A: Well, I'm saying I am unable to opine on
18 any of the (inaudible) speak to any discussions.

19 MR. AHMED: Pardon me, I think Mr. Ghikas might pop up
20 to the mic for a moment.

21 MR. GHIKAS: Hi, sorry, we were having technical issues
22 there.

23 MR. SANDVE: Mr. Ghikas, we can't hear you.

24 MR. GHIKAS: Hi, sorry, I was trying to make an
25 objection with respect to the questions related to
26 communications with government at some earlier point.

1 Can you hear me okay now?

2 MR. SANDVE: Yeah.

3 MR. GHIKAS: I don't know whether Mr. Keen is intending
4 to move on, but I think questions aimed at
5 conversations between BC Hydro and government are not
6 appropriate given cabinet confidence.

7 MR. KEEN: I didn't hear Mr. Wong mention cabinet in his
8 response, but I will move on.

9 Q: And at this point I think we are going to go to
10 load forecasting. So, panel, and I'm not sure who
11 this goes to, but panel, if you could go to the
12 response to AMPC 1.7.1, and that's PDF page 48 of
13 Exhibit B-5.

14 MR. O'RILEY: A: We are just getting that exhibit.

15 MR. KEEN: Q: Great. And so in conjunction with that
16 response --

17 MR. O'RILEY: A: Mr. Keen, sorry, we don't have it yet,
18 we are just getting the document.

19 MR. KEEN: Q: Okay, I am not asking the question just
20 yet, Mr. O'Riley, I'm telling that there is another
21 part of the record to go to in parallel with that, and
22 that would be the Excel -- the live Excel sheet that
23 was provided in attachment to that response.

24 MS. DASCHUK: A: Can I ask, John Rich, do you have
25 access to the spreadsheet in the IR?

26 MR. RICH: A: I don't have access to the spreadsheet,

1 but I do have the IR response in front of me.

2 MS. DASCHUK: A: Mr. Keen, can you ask your question?

3 MR. KEEN: Q: I'll ask the question. I expect that Mr.
4 Rich will need the spreadsheet, but I am happy to
5 narrate and pause if you want to get it to him as we
6 go through here.

7 But if you are in that attachment, and for
8 the record, it's the attachment to AMPC 1.7.1, the
9 Excel sheet, on line 3 of that sheet, there is the
10 forecast energy sales to the large industrial class.
11 And line 3 can be found at cell A77 if you are in the
12 sheet.

13 MR. RICH: A: I am looking at the sheet now, so I'll
14 just scroll down here.

15 MR. KEEN: Q: Sure. Tell me when you're there, and
16 I'll continue.

17 MR. RICH: A: So what was the row number again?

18 MR. KEEN: Q: It's line 3, and then within the sheet it
19 is cell A77 where that section starts.

20 MR. RICH: A: Sorry, I don't see it, where is it?
21 Sorry, I'm not familiar with this spreadsheet, so bear
22 with me as I try to find what you're -- can you repeat
23 the --

24 MR. KEEN: Q: Yeah, if you have got the Excel sheet
25 open, and you just scroll down to cell A77.

26 MR. RICH: A: Yeah.

1 MR. KEEN: Q: And if you were to print that, you would
2 see it's line 3 relating to the large industrial
3 class.

4 **Proceeding Time 10:55 a.m. T24**

5 MR. RICH: A: I see that.

6 MR. KEEN: Q: Yeah, it's domestic energy sales.

7 MR. RICH: A: Yes, I see that.

8 MR. KEEN: Q: Okay, all right. And so if we go over to
9 the far right-hand column and within the Excel sheet
10 it's labeled column double-A. And the column heading
11 there is the F2022 plan.

12 MR. RICH: A: I see that.

13 MR. KEEN: Q: All right. And then we have, in the
14 categories we have sales by the 18 -- rate schedule
15 1823 tier one and stepped rate for tier one for your
16 large industrial sales and then below that we have
17 1823 tier 2, you see that?

18 MR. RICH: A: I see it.

19 MR. KEEN: Q: Okay. And so my question relates to the
20 forecast tier 2 sales for fiscal 2022. So there we
21 have 808 gigawatt hours, if I understand the chart
22 correctly, is that right?

23 MR. RICH: A: I see that.

24 MR. KEEN: Q: All right. And then for tier 1 sales we
25 have 9,080 gigawatt hours of forecast tier 1 sales,
26 right?

1 MR. RICH: A: I see that, yes.

2 MR. KEEN: Q: Okay. And so if we go back and we look
3 at the F2021 reporting for tier 1, we'll see, and this
4 is columns W and -- or I should say columns W and X in
5 the RRA, the last RRA for F2021 you forecast -- I
6 should say, you had 8,006 gigawatt hours and you had
7 forecast 9,031 gigawatt hours, you see that?

8 MR. RICH: A: I do.

9 MR. KEEN: Q: And then for tier 2, likewise, you had
10 forecast 206 and you achieved 305 gigawatt hours for
11 tier 2 sales.

12 MR. RICH: A: Yes.

13 MR. KEEN: Q: You see that?

14 MR. RICH: A: Yeah.

15 MR. KEEN: Q: Okay. And then if we skip over, just to
16 look at F2020, fiscal year 2020, again you had
17 forecast 260 gigawatt hours for tier 2 in F2020 and
18 then you achieved 248 gigawatt hours, right?

19 MR. RICH: A: Yes. I'm just going to interrupt here
20 for a second, I'm just going to ask if Ryan is
21 following along because I think where this is going is
22 that finance actually provides the breakout between
23 tier 1, tier 2. From a load forecasting perspective I
24 provide a aggregate number, so I just want to make
25 sure that the right question is where you're going
26 with this is to the right person, so that it's not

1 just me following along.

2 MR. LAYTON: A: Hi John, it's Ryan Layton. We're
3 following along with you.

4 MR. RICH: A: Okay, thanks.

5 MR. KEEN: Q: It's not everyone that follows along the
6 Excel cells of a spreadsheet, so well done, Mr.
7 Layton. But the question is this, we've got a trend
8 in the mid 200s up to 305 for fiscal 2021 and then in
9 F2022 the forecast is 808 gigawatt hours for tier 2.
10 Can you tell me what the basis for that is? That's a
11 big jump in the most expensive part of the rate and
12 I'm curious why.

13 MR. LAYTON: A: Yes, this is Ryan Layton again. Mr.
14 Keen, I don't have that level of detail at my
15 fingertips. I agree with you it's a sizable increase
16 but I don't have a handy explanation as to the
17 methodology or why that's the case.

18 MR. KEEN: Q: All right. Are you able to get back to
19 us on that?

20 MR. LAYTON: A: Yes, I can undertake to provide you
21 with an explanation as to the increase in the tier 2,
22 the stepped rate tier 2, line that we've been
23 discussing in this schedule as between the recent
24 years' fiscal 20, fiscal 21 and the jump to the plan
25 of 808 in fiscal 2022. Would that meet what you're
26 asking for?

Information Request

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MR. KEEN: Q: Yes, thank you.

MR. LAYTON: A: Okay, we'll undertake to do that.

MR. KEEN: Q: All right, so moving right along, we're going to move into hedging. So if we can go back, for those with the binders, to the responses to -- actually, this may not be going back. If you can go to responses to the BCUC Information Requests and this is Exhibit B-4. I'm looking for page 772. This response to BCUC IR 1.62.3.

Proceeding Time 10:59 a.m. T25

MR. WONG: A: Yes, we have that. David Wong here.

MR. KEEN: Q: Thank you, Mr. Wong. So if you are with me, in about the middle of the response there's a sentence that begins, "BC Hydro's current hedging strategy," do you see that?

MR. WONG: A: 162.3?

MR. KEEN: Q: No, one -- that's right, 1.62.3.

MR. WONG: A: Yes, okay, yes. I do see that now, yes.

MR. KEEN: Q: Okay. So that reads "BC Hydro's current hedging strategy allows for BC Hydro to enter into new hedges to hedge up to 75 percent if total forecast borrowing requirements." Has that strategy, if that's the articulation of the current strategy, has that changed since the last revenue requirement application?

1 MR. WONG: A: Up to Fiscal '24, no, it has not changed.
2 We still have the polity to hedge up to 25 percent of
3 the total forecast borrowing reequipments. Same as
4 last time.

5 MR. KEEN: Q: So your strategy now is the same as it
6 was then?

7 MR. WONG: A: Yes. Fiscal '25 is different, but '21 to
8 '24 is the same.

9 MR. KEEN: Q: And why is Fiscal '25 different?

10 MR. WONG: A: Fiscal '25 we were doing 25 percent up to
11 the long-term debt issuances. The reason being that
12 -- one is the -- we have a reduced amount in the
13 further years out, future years out. Second is is
14 taking a look at the total borrowing requirements
15 versus the long-term debt issuances and felt it was
16 more appropriate in that longer term year to do the
17 long-term debt issuances.

18 MR. KEEN: Q: And when did that intended change
19 crystallize? When did you make that decision?

20 MR. WONG: A: About -- let me just see if I have the
21 exact date around here. Around April '20, April 2020.

22 MR. KEEN: Q: April 2020.

23 MR. WONG: A: Change for Fiscal '25.

24 MR. KEEN: Q: And am I correct in understanding that BC
25 Hydro hasn't entered any hedges in the period April 1st
26 through -- April 1st, 2020 through to the end of 2020?

1 So April 1st to December 31st of 2020 BC Hydro has
2 entered into no hedges?

3 MR. WONG: A: That is correct.

4 MR. KEEN: Q: Okay. And then I can take you to the
5 attachment, to the AMPC response -- or the AMPC
6 question on this point, but I hope I don't have to
7 because it's another Excel sheet. Am I also correct
8 in understanding that BC Hydro hasn't entered into any
9 hedges between January 1st of 2019 and April 1st of
10 2020?

11 MR. WONG: A: Sorry, say that again? January 1st, 2019?

12 MR. KEEN: Q: That's right.

13 MR. WONG: A: Just a sec. We've entered into hedges in
14 2019. If you look at your -- the response that we
15 provided to 1.6.2 in the future debt hedge report that
16 you requested, you can see the execution date on all
17 our hedges.

18 MR. KEEN: Q: Right. Do you want to -- I've got that
19 up if you want to go there.

20 MR. WONG: A: Okay, so it might be easier if you take
21 me directly to the Excel spreadsheet if that's what
22 you -- in 1.6.2 if you have a specific question on
23 that.

24 MR. KEEN: Q: Sure. Actually, if you'll give me one
25 minute I might be able to do that with one of the PDFs
26 we have going.

Proceeding Time 11:04 a.m. T26

1
2 MR. WONG: A: But I think in response to the question,
3 we haven't entered into hedges post, and it looks
4 like, late January 2019.
5 MR. KEEN: Q: Okay, that I think gets us to the same
6 place. Thank you. And do you have the aid that I
7 provided Mr. Sandve last night as well as your
8 counsel?
9 MR. WONG: A: I do. I assume my counsel does.
10 MR. GHIKAS: Yes, he does.
11 MR. WONG: A: Thank you.
12 MR. KEEN: Q: All right. And, Mr. Sandve, maybe we can
13 get a little bit of help for my friends? Maybe we can
14 show that on the screen?
15 MR. SANDVE: I think I've just put it up. If someone
16 can confirm they can see it, I think it's up on the
17 screen now.
18 MR. WONG: A: Yes.
19 MR. KEEN: Q: I can see it, but if the witness sees it
20 that's better.
21 MR. WONG: A: We see it, thank you.
22 MR. KEEN: Q: And, Mr. Wong, this was referred to in
23 AMPC IR 1.6.1. You recognize that series, the
24 benchmark bond yields?
25 MR. WONG: A: I see what you have here on the screen,
26 yes.

1 MR. KEEN: Q: Yeah, but you're familiar with that,
2 you've seen it before?

3 MR. WONG: A: Well, I've --

4 MR. KEEN: Q: And, I mean, that bond series. In the
5 course of your work you've seen that bond series
6 before, is that fair?

7 MR. WONG: A: Well, I generally have seen the bond
8 series. I mean, I haven't look at the very details
9 you have here but I generally appreciate what you have
10 in front of us.

11 MR. KEEN: Q: Okay. And so you'd agree with me that
12 what this tells us is that borrowing yields have gone
13 through a persistent period of decline, is that fair?
14 From the start of 2018 all the way down to the end of
15 July of 2020.

16 MR. WONG: A: I would say from late 2018 down to mid-
17 2020 there has been a general decline in interest
18 rates. Future yields -- or yields, I should say, for
19 the 30-year bonds. Should recognize this is the
20 government of Canada 30-year bonds.

21 MR. KEEN: Q: And the period that we just looked at in
22 terms of when BC Hydro is hedging and locking in
23 interest rates between the period from January of 2019
24 until July of 2020, as I understand it -- I guess mid-
25 January of 2019 until July of 2020, BC Hydro was not
26 issuing short-term debt and locking in interest rates,

1 is that right?

2 MR. WONG: A: Well, I just -- to clarify, we were
3 issuing long-term debt but we had not entered into new
4 debt hedges during that period. And I just want to
5 remind you that, you know, we need to go back to your
6 original question about, well, what was our policy?
7 And our policy was to hedge up to 75 percent. I
8 should remind us all the reason we did that is to
9 create cost certainty on our future debt.

10 And so when we entered into those hedges we
11 looked at our future forecast cash flows, what debt
12 they're going to do, and then we applied the -- or
13 executed interest rate hedges in order to create that
14 cost certainty or potentially fix that debt rate at
15 that point in time in accordance with our policy.

16 The reason why we haven't had any more
17 overlay of new derivatives or interest rate hedges is
18 because we filled up the amount that we needed to in
19 order to reach the 75 percent. So effectively we've
20 fulfilled our policy, which is creating debt cost
21 certainty. Very much like as if you were to have a
22 mortgage rate -- or, sorry, a mortgage and you fix the
23 rate. So when you want to go into your mortgage you
24 fix a rate, it's very similar to what we're trying to
25 do here.

26 MR. KEEN: Q: Okay. But so, if I understand correctly,

1 MR. KEEN: Q: Just bear with me. Actually, PDF 16,
2 which is where the full response is.

3 So, if we look at the third paragraph, it
4 begins, "The definitive discount rate..." Do you see
5 that?

6 MR. WONG: A: Yes.

7 MR. KEEN: Q: And it mentions that the definitive
8 discount rate forwards the current service pension
9 cost in the Fiscal 2021, in determining those costs,
10 was 3.83 percent. And that was a difference from the
11 past RRA of 0.5 percent. And just so I'm clear, the
12 3.83 was what was applied for in the last RRA, right?
13 And it changed to 3.33 as a result of the evidentiary
14 update? Is that correct?

15 MR. WONG: A: Just a moment. So, just to clarify, the
16 evidentiary update reflected a 3.33 percent discount
17 rate. When we did the -- when you have to do Fiscal
18 '21 under accounting rules, you have to use a discount
19 rate as of March 31st, 2020. So that is when it will
20 then change to 3.83 percent for Fiscal '21 actuals.

21 MR. KEEN: Q: Right, but I guess what I want to have
22 clear is, you had initially applied based on the
23 circumstances at the time for 3.83. You updated to
24 3.33, and then at the end of the year, at the end of
25 the fiscal year, it changed to 3.83, right?

26 MR. WONG: A: Well, the evidentiary update, which is

1 the basis of the updated application, reflected 3.33.
2 Which is as required by the Commission, using the
3 effective interest rate at that time -- or discounted
4 rate I should say, at the time the forecast is
5 prepared. So it is the best information we had when
6 we prepared the forecast.

7 MR. KEEN: Q: And I'm not trying to challenge you on
8 the rationale of the reasons for it, I just want to
9 get clarity that it happens to be 3.83 before the
10 evidentiary update and after the evidentiary update?

11 MR. WONG: A: Just -- I'm not sure what the discount
12 rate was in the original application, if that is what
13 you're asking.

14 MR. KEEN: Q: I was. But we can move on, just in the
15 interest of time. And am I right in understanding
16 then that the change between the March 31st 2020 rate
17 of 3.83 and the application rate of 3.33, the result
18 was an overcollection of about \$60 million from
19 customers?

20 MR. LAYTON: A: This is Ryan Layton speaking. The last
21 paragraph of that, the IR response to AMPC 1.2.2, we
22 talk about the implications for ratepayers, which
23 results in a \$9.7 million lower cost related to Fiscal
24 2021 than was in the previous application of the
25 evidentiary update, and we explain in that paragraph
26 that through the PEV current pension cost regulatory

1 account, the ratepayers will get the benefit of that
2 \$9.7 million through that regulatory account in future
3 periods.

4 **Proceeding Time 11:14 a.m. T28**

5 So I'm just not sure where -- that you
6 mentioned the \$60 million figure, I'm not sure to what
7 that relates.

8 MR. KEEN: Q: I think I'm lumping together current
9 period costs, and non-current period costs. Maybe we
10 can go to -- Mr. Layton, if you've got the application
11 handy, Exhibit B-2, table 519?

12 MR. SANDVE: Maybe while that's pulled up, Mr. Keen,
13 I'll just note we are at quarter after 11:00, so that
14 was the spot in the agenda where we were hoping to
15 move to RCAA. Are you able to wrap up in the next
16 little bit here?

17 MR. KEEN: This is my last area. (inaudible).

18 MR. SANDVE: Thanks very much.

19 MR. LAYTON: A: We have the table, 519.

20 MR. KEEN: Q: Great. And so if we look at the current
21 service costs, and the change from the F2021 RRA
22 column, which is the far right-hand column, and this
23 is the bottom of page 5-103, PDF page 239 for those
24 who follow along electronically now or later, there we
25 see a \$56 million change. Mr. Layton, can you help me
26 understand what that relates to, and compare that to

1 the \$9 million that you referenced in response to the
2 AMPC IR?

3 MR. LAYTON: A: So, Mr. Keen, if I understand
4 correctly, you are referring to \$56 million you are
5 deriving by looking at the F21 RRA, versus the F22
6 planned column? So, I think I'm with you.

7 What I was referring to just now in
8 responding to -- or mentioning AMPC IR 1.2.2, is the
9 difference between the F21 RRA column and the F21
10 forecast column. That's the \$9.7 million I was
11 mentioning. That's the actual result for Fiscal '21,
12 and ratepayers will get the benefit of the lower
13 amount through the regulatory account.

14 The variance to which you are referring is
15 between the F21 RRA and the F22 plan, and that is
16 explained by the discount rates which you can see for
17 each of those periods in the case of fiscal '21 RRA
18 3.33 percent. In the case of fiscal '22 plan, 2.59
19 percent. That large drop is the main difference in
20 the large increase between those two time periods for
21 the current service pension costs.

22 MR. KEEN: Q: Okay, that's helpful. And in terms of
23 the timing of that refund through the regulatory
24 account, can you tell us how that cycles through back
25 into rates? When do customers see the benefit of
26 that?

1 MR. LAYTON: A: Yes, bear with me a moment. Yes,
2 subject to check, but I'm quite certain it is over
3 this test period as a variance account.

4 MR. KEEN: Q: Okay, if you could confirm that for us as
5 well, that would be helpful.

6 **INFORMATION REQUEST**

7 MR. LAYTON: A: Certainly.

8 MR. KEEN: Q: And so while we're on page -- or with
9 table 519 in the application, the discount rate there
10 we see as 2.59 percent for the F2022 plan, right?

11 MR. LAYTON: A: Correct.

12 MR. KEEN: Q: And if we go back, I don't know that we
13 have to turn back to it, but in the response to AMPC
14 1.2.2, there is a mention that that discount rate
15 comes from the forecast made at the end of July of
16 2020, right?

17 MR. LAYTON: A: Correct.

18 MR. KEEN: Q: Okay, and the application was filed
19 December 22nd, right?

20 MR. LAYTON: A: Yes.

21 MR. KEEN: Q: December 22nd, 2020? Okay. Why did you
22 use July 31st, 2020 date for the forecast with the
23 December 22nd filing date?

24 MR. LAYTON: A: Yeah, so as you may know, it takes a
25 very long time to put together an application, and we
26 -- that's the date that we use. It gives us enough

1 couple questions here?

2 MR. KEEN: This should be the last question, Mr. Sandve.
3 I appreciate your patience.

4 MR. SANDVE: Great, thank you so much.

5 MR. WONG: A: We have the aid.

6 MR. KEEN: Q: And it should be on the screen now as
7 well. So if we look at the bond yield, you'd agree
8 with me that those generally track interest rates,
9 right?

10 MR. WONG: A: Yes.

11 MR. KEEN: Q: And, likewise, they're going to correlate
12 to discount rates?

13 MR. WONG: A: The general movement.

14 MR. KEEN: Q: Right. And so the very bottom of the
15 bond yields, that's the end of July of 2020, July 31st,
16 right?

17 MR. WONG: A: Yes.

18 MR. KEEN: Q: Okay. So the discount rate -- it's fair
19 to say that the discount rate that the application
20 uses to forecast the pension costs is pretty much the
21 low water mark, is that fair?

22 MR. WONG: A: Yeah, while I appreciate the discount --
23 or, sorry, the bond yield rates have gone up since
24 that date and then, as we mentioned, any differential
25 between what's in the application and what we'll
26 actually incur will go into the deferral account and

1 which Ryan has mentioned will be repaid back to
2 customers over the next test period.

3 MR. KEEN: Q: Okay. Can you tell us when we would see
4 that back into rate?

5 MR. WONG: A: Well, assuming we do the test period
6 fiscal '23, '25, will be in that period.

7 MR. KEEN: Q: All right. One passing question on this.
8 Just, if you know this off the top of your head, Mr.
9 Layton. On the topic of pension costs and the future
10 pension liability, is there interest being charged on
11 that that goes into rates? Are ratepayers being
12 charged on the interest for the future pension
13 liability?

14 MR. LAYTON: A: This is Ryan Layton. There's no
15 interest being charged on that account.

16 MR. KEEN: Q: Okay. So ratepayers don't carry the
17 interest cost?

18 MR. LAYTON: A: Correct.

19 MR. KEEN: Excellent. Thank you everyone, those are
20 the questions. I appreciate your time and patience.

21 MR. SANDVE: Great, thank you, Mr. Keen.

22 We'll now go to RCIA, Ms. Thompson.

23 **QUESTIONS BY MS. THOMPSON:**

24 MS. THOMPSON: Q: Thank you, Mr. Sandve, and good
25 morning panel. So my name is Lindsay Thompson and I'm
26 representing the Residential Consumer Intervener

1 Association or the RCIA. And just to provide a bit of
2 background, so this is a society that was recently
3 formed to represent the interests of all residential
4 customers for electricity, natural gas and heating in
5 proceedings before the BCUC and in a non-
6 discriminatory manner.

7 So before I jump into my questions for
8 today I would just like to take an opportunity to
9 thank the Commission and as well as BC Hydro for
10 putting on the session today. And in terms of my
11 questions, I just have a couple of follow-up questions
12 on a number of IR responses that were provided by BC
13 Hydro.

14 **Proceeding Time 11:24 a.m. T30**

15 So the areas I will be covering include MRS
16 compliance, cyber security, vegetation management,
17 risk management, metrics, as well as actions taken to
18 reduce COVID-19 cost pressures.

19 So with that I will just jump into it. So
20 my first question has to do with MRS compliance. So
21 we understand that a lot of this information is
22 confidential, but I was just wondering if the panel
23 can please list or at least provide a count of all the
24 MRS standards and requirements for which BC Hydro has
25 been found non-compliant or in violation of?

26 MS. PECK: A: Hi, Lindsay, it's Kirsten Peck here. I'm

1 sorry, that is confidential information and I can't
2 provide a response to that.

3 MS. THOMPSON: Q: Okay. Are you able to provide sort
4 of a basis for this confidentially and confirm whether
5 this applies to all of the non-compliance and
6 violations?

7 MR. GHIKAS: It's Matt Ghikas, Ms. Thompson. I'm counsel
8 for BC Hydro. The part of the -- well, the reason,
9 leaving aside things that relate to cyber security for
10 a moment, the rationale for confidentiality is that
11 the compliance framework itself the BCUC has
12 established contemplates the things occurring under
13 the compliance framework being confidential. There's
14 a number of references. The compliance framework is
15 posted on the BCUC website and you'll see if -- when
16 you're going through there that throughout each of the
17 steps of the compliance framework, it contemplates
18 that all of the processes are to be treated as
19 confidential and that the --- Mr. Chairman, that there
20 is a sound policy rationale underlying that.

21 What that confidentiality does and it's
22 designed to do is to encourage open dialogue between
23 an entity and the regulator's enforcement arm. And of
24 course it encourages entities to self-report and seek
25 guidance on how to mitigate the risk and ensure that
26 the security and the reliability in the system is

1 maintained, and that's the primary goal of the
2 framework. And so it's to encourage the parties to be
3 able to do that freely without fear of reputational
4 harm before due process has been observed.

5 So that's a consistent theme across North
6 America that we (inaudible) instructed, it's exactly
7 the same for NERC in the United States, and it
8 wouldn't be unusual for any compliance scheme to have
9 that.

10 So when, if and when violations are
11 confirmed, certain information may become -- may be
12 made public by the Commission under the terms of its
13 orders. But as a matter of course, that's addressed
14 in the context of the compliance process and the BCUC
15 determines what becomes public and what doesn't.

16 So hopefully that provides a little bit of
17 context, Mr. Chairman, and thanks for your patience,
18 Ms. Thompson.

19 MS. THOMPSON: Oh wonderful, that's very -- I appreciate
20 that response, thank you.

21 Q: As one quick follow on to that, so not to get
22 into any of the details, but I'm just wondering if the
23 panel can confirm whether the counts of non-compliance
24 and violations will be addressed by the presently
25 proposed MRS spending, or will there still remain some
26 to be addressed in further test proceedings -- or test

1 periods, sorry. If that's confidential, I can move
2 on, I was just wondering if --

3 MS. PECK: A: Yeah, no, I can answer that at a high
4 level and I addressed it in my opening remarks as
5 well. We are anticipating to put a further request
6 into the F23 and beyond test period. So whatever the
7 duration of the next test period is. There will be
8 another request relating to mandatory reliability
9 standards to both evolve the program structure as I
10 mentioned, as well as to get into compliance.

11 MS. THOMPSON: Q: Okay, perfect. Thank you very much.

12 MS. PECK: A: Okay.

13 **Proceeding Time 11:28 a.m. T31**

14 MS. THOMPSON: Q: So I'll move on to my next question,
15 which has to do with cyber security spending. So in
16 response to the RCIG IR number 1.9.6, which is on PDF
17 page 1217 of Exhibit B-5, BC Hydro states that,

18 "The new FTE count, and operating costs
19 associated with Cybersecurity program will be
20 the baseline going forward."

21 So my question is, does BC Hydro anticipate
22 requiring a similar percent increase in cybersecurity
23 spending in its subsequent RRA filings?

24 MR. MORISON: A: Yes, this is Kip Morison. I think the
25 answer to that is yes, but -- sorry, the answer to
26 that is that this year we are going to assess what

1 kind of requirements we may need for subsequent
2 filings. We are expecting to have four FTEs -- new
3 FTEs this year, and part of their work will be to do
4 the assessment on the workforce and resources required
5 to bolster the areas that we know we need to develop,
6 and those include what I mentioned in my opening
7 remarks during the presentation around vulnerability
8 management, around 24/7 monitoring, and around risk
9 assessment and penetration testing.

10 MS. THOMPSON: Q: Okay, thank you, Mr. Morison. And so
11 at this point has BC Hydro prepared a forecast of
12 spending over the next, say five years or so? Or do
13 you have a ballpark?

14 MR. MORISON: A: We have not. We have done some very
15 early numbers on it, but as I mentioned, we need these
16 folks on board to kind of complete the work that will
17 inform how many FTEs we'll need in subsequent years.

18 MS. THOMPSON: Q: Okay, perfect, thank you. So now
19 I'll move on to my next question, which has to do with
20 vegetation management costs. So, in the response to
21 RCIG IR number 1.11.6, which is on PDF page 1235 of
22 Exhibit B-5, BC Hydro provided a table of historical
23 storm restoration operating costs for the previous 15
24 -- or sorry, 14 fiscal years. And then this captures
25 the cost of storm damage inflicted on BC Hydro's
26 distribution infrastructure.

1 So, looking at this trend, it shows a
2 significant increase in storm restoration costs from
3 2015 onwards, to approximately 2019. And then in
4 figure 5.4 of the application, which I understand has
5 been recently revised and the updated version was
6 provided in this morning's presentation. So, this
7 graph provides figures that shows the historical
8 investments in transmission and distribution,
9 vegetation management costs, and it shows a ramp-up in
10 distribution vegetation costs between 2002 and 2009,
11 which is then followed by a relatively flat period of
12 reduced spending from 2010 to 2021. So, the updated
13 graph has different figures, but overall the trends
14 will remain similar.

15 So my question is, does BC Hydro consider
16 that the more active vegetation management program
17 will lead to a reduction in the storm restoration
18 costs?

19 MR. KUMAR: A: This is Ajay Kumar speaking. There is a
20 direct correlation between how much you spend and the
21 impact from the storms. At this point it's too early
22 for us to tell what the impact of the higher spending
23 that we are expecting this year, and in the future
24 years, would be in the storm budget. You have to
25 remember when the storms happen it actually impacts
26 both the healthy trees, as well as the ones that are

1 sort of hazard trees.

2 So we do expect the storm numbers to stay
3 at that level for the time being, but as the increased
4 spending happens on transmission and distribution, we
5 can expect some reduction in the future, but at this
6 point we don't see that happening in the short term.

7 MS. THOMPSON: Q: Okay, and at this point, BC Hydro has
8 not attempted (audio drops) isn't able to provide any
9 analysis of sort of a forecast correlation?

10 MR. KUMAR: A: At this point we can't provide that
11 correlation, because we haven't started ramping up our
12 spending to the levels we are expecting. So as that
13 spending happens in the future, and we take down
14 higher hazard trees on our distribution system, and
15 the higher number of edge trees on our transmission
16 system, then that correlation will become more
17 evident.

18 MS. THOMPSON: Q: Okay, wonderful, thank you very much.
19 And then in the response to RCIG IR number 1.18.3
20 which is on PDF page 1290 of Exhibit B-5, BC Hydro
21 noted that the work output per dollar spent on
22 vegetation management over a decade ago is
23 significantly higher than it is today.

24 **Proceeding Time 11:33 a.m. T32**

25 And BC Hydro provided as part of its response a table
26 of cost pressures to explain this difference.

1 So, in this response BC Hydro has provided
2 a list of reasons for the significant negative
3 productivity trend, but it's not really clear to us
4 where all of the additional money is going. And it's
5 not clear sort of what the weighting and the cost is
6 for each of these reasons.

7 So I was just wondering if BC Hydro could
8 maybe expand on this response a little bit? And also
9 if it is possible to provide any quantified analysis
10 that has been undertaken to understand and address
11 this productivity trend, that would be greatly
12 appreciated.

13 MR. KUMAR: A: So, with respect to the response that we
14 provided, the table actually outlines a number of
15 different things that have happened historically on
16 our vegetation program over the last 10 to 15 years.
17 And each one has an incremental impact, both on the
18 transmission system, as well as the distribution
19 system. Hence we had provided a generic response in
20 terms of what are the cost drivers. Each one is not
21 -- we are not able to quantify the impact of each one
22 of those examples that we shared, but collectively
23 what we can say is that all of them have had a
24 significant impact on our ability to execute, and our
25 units have gone down over the last ten years as far as
26 our programs are concerned.

1 So collectively we've seen a significant
2 reduction in the level of units we are able to achieve
3 for the level of spending that Ms. Daschuk talked
4 about, which has remained very stable over the last 10
5 years. So when we look at the overall impact, we do
6 require additional spending in the future, to
7 compensate not only for those cost pressures that are
8 outlined there, but also some other impacts on the
9 vegetation that we are seeing, which is climate
10 change, as well as the growing vegetation on the
11 system.

12 MS. THOMPSON: Q: Okay, thank you very much. Okay, so
13 I will move on. So in RCIG IR number 1.25.1 which is
14 on PDF page 1319 of Exhibit B-5, again, BC Hydro was
15 asked to explain what is driving the 30 percent
16 increase in market rates for pruning over the last
17 three years, and then again a similar table was
18 provided. I was just wondering -- sorry, as well as
19 -- the table was provided. As well BC Hydro noted
20 that there has been an increase in demand for these
21 types of services. So the pruning services which
22 followed the major wildfire seasons in 2017 and 2018.
23 And so as a result, the contractor costs are a lot
24 higher.

25 So, can BC Hydro please confirm whether it
26 has entered into, or if it plans to enter into any

1 long term contracts for such work before the market
2 has recovered from these extreme cost pressures?
3 MS. DASCHUK: A: Hello, this is Maureen Daschuk. We
4 have a category strategy, as we call it, for
5 distribution, vegetation management, and also one for
6 transmission vegetation management. And we are
7 currently in active procurement process, so I can't
8 disclose how that's going. And our long-term vision
9 is to consolidate our contracts, and to have -- get
10 the most value out of the relationships we have with
11 the contractor community.

12 I think the other part that we are learning
13 is, it's really important for us to signal to our
14 contractors what our long-term demand is. That gives
15 our contractor community time to build up their
16 capabilities, hire the people that they need to hire,
17 so that we're not bidding against ourselves, or
18 bidding against others for those services. And that
19 is a key foundation of the contracting strategies that
20 we're working on.

21 MR. KUMAR: A Just to add to what Ms. Daschuk was
22 mentioning, we already have that kind of an approach
23 implemented for our transmission system for a number
24 of years, and we've seen the benefit of stability of
25 those contract prices. And now what we are doing is
26 taking out that same approach from a transmission

1 system, and applying it on the distribution system
2 going forward. And in the future we are also looking
3 at perhaps combining the transmission and distribution
4 contracts together, because historically they have
5 been separated out as far as the companies that have
6 worked on the system. But I think that is another
7 synergy we will be evaluating going forward in our
8 vegetation management strategy.

9 MS. THOMPSON: Q: Okay, perfect. Thank you very much.
10 Okay, so the next one is RCIG IR number 1.19.1, which
11 is on PDF page 1293 of Exhibit B-5.

12 **Proceeding Time 11:38 a.m. T33**

13 So here we asked about BC Hydro's spending and FTE
14 count increase prior to issuing its new vegetation
15 management strategy. And so the answer provided went
16 into, sort of, the reasons why it's important to
17 implement these costs now. However, it didn't really
18 explain why BC Hydro needs to hire new FTEs right away
19 before the strategy is finalized.

20 So I was just wondering if you could please
21 explain why it wouldn't be more prudent to defer
22 hiring permanent employees until the strategy is
23 issued and approved?

24 MR. KUMAR: A: This is Ajay Kumar here. If you refer
25 to page 539 of our application, that actually breaks
26 down the 18 FTEs that we are requiring for F22. And

1 you'll see that there's a number of different
2 categories that we have outlined there. The first two
3 resources are for the planning requirements and if you
4 look at our overall spending, we are going for a 50
5 percent increase on the vegetation spent in F22, which
6 requires us to plan for that spend. So those two
7 planning resources will be actually part of the
8 requirement for the planning required for the
9 additional funding.

10 The next three resources are for three
11 professional foresters. And the reason for that is we
12 want to increase our oversight of what's happening in
13 the field from a planning standpoint. So these
14 foresters would actually be in the field providing us
15 with the information that we require to develop our
16 plan and also to make sure that we're executing those
17 plans as per the requirements of the work management
18 system.

19 The next category is for distribution
20 coordinators and this is with respect to the increase
21 spending that we are asking for in the distribution
22 side of our business. And one of the trends we've
23 seen in the distribution side is there's a lot of
24 consultation required with municipalities and
25 stakeholders in terms of implementing and executing
26 our programs. And a lot of our vegetation contractors

1 are getting engaged in those conversations with the
2 stakeholders and that is not a very prudent way of
3 managing our contractors. So we do require those
4 additional distribution coordinators to ensure that we
5 are taking on that consultation with the stakeholders
6 and the vegetation contractors are actually focusing
7 on addressing the vegetation on our system.

8 Then we are also looking for one vegetation
9 specialist to manage the riparian and environmental
10 requirements that we see as a key driver for our
11 requirements of our vegetation program.

12 And, lastly, we've also asked for eight
13 LiDAR resources for our program, as Mr. O'Riley
14 mentioned in his initial comments. That's one of the
15 key foundations of our vegetation program going
16 forward and we need to ensure that we can actually use
17 the dynamic information that we get from LiDARs
18 effectively to make those vegetation decisions within
19 the organization.

20 MS. THOMPSON: Q: Okay, thank you, that is very
21 helpful. Okay, I will move on to my next line of
22 questioning, which has to do with BC Hydro's risk
23 management processes. So in the corporate risk
24 matrix, which was provided as attachment 1 to BC
25 Hydro's response to RCIG IR 1.31.1, which is -- the
26 attachment begins on PDF page 1341 of the Exhibit B-5.

1 So in this, on the right-hand side of this
2 matrix, there is a note that states that the matrix is
3 not used to describe risk tolerance. So I was just
4 wondering if BC Hydro can please direct me to where I
5 could find the risk matrix that is used to describe
6 the corporate risk tolerance at BC Hydro?

7 MR. LAYTON: A: Hi, Ms. Thompson, this is Ryan Layton
8 speaking. I'll start here and maybe others will add.
9 There's no specific document that we can point to
10 where we say, "This is our risk tolerance." I think
11 we consider that an evolving thing. We evaluate that
12 on a continuous basis at a management and executive
13 level. We discuss with the board on a quarterly basis
14 and we adjust our risk priority and the actions we're
15 taking in response to activities that are happening on
16 the ground, whether that's a discussion about cyber or
17 MRS or other risks that we're facing as a business, we
18 evolve that over time based on the facts on the
19 ground.

20 MS. THOMPSON: Q: Okay, thank you. And so -- okay, so
21 if there's not an actual risk tolerance matrix, per
22 se, is -- can the panel provide any sort of examples
23 of how BC Hydro approached risk tolerance and sort of
24 what the result was on -- if you want to give maybe
25 like an example for a specific project or however --
26 whatever example you think would be best, but just to

1 get a better understanding of how BC Hydro's goes
2 about determining risk tolerance.

3 **Proceeding Time 11:43 a.m. T34**

4 MR. KUMAR: A: This is Ajay Kumar here. So I think one
5 of the key fundamental approaches that we take for our
6 capital planning process is based on risk of
7 devaluation and that allows us to look at the assets
8 and the requirements on our system from a risk
9 standpoint.

10 So when we are looking at programs and
11 projects we typically use the corporate risk matrix to
12 look at the consequence as well as the severity of not
13 doing that project or program and as a result of that
14 we can come up with a quantification of what the risk
15 score would be for those projects and programs, and
16 then that becomes one of the inputs into our
17 privatization process. It's not to say that every
18 risk score is the only thing we look for
19 privatization, there's many other factors we look at
20 and that's one of the inputs that we look at in our
21 organization to come up with our capital plan, as well
22 as our maintenance plan, that is then put forward for
23 managing that risk.

24 MS. THOMPSON: Q: Okay, thank you. So you come up with
25 the risk, look at the probability of consequence, and
26 then how does BC Hydro determine sort of what is

1 unacceptable risk versus what is a not acceptable
2 risk?

3 MR. O'RILEY: A: Ms. Thompson, it's Chris O'Riley here
4 and maybe I can just add. I think you specifically
5 asked for some examples. So I'll pick three examples
6 that I think indicate where our risk tolerance sits
7 and these would all be informed by discussions with
8 the executive and board.

9 So one example, we have a -- obviously a
10 very low tolerance for risk of a dam failure. And an
11 example, even a small dam failure can have significant
12 reputational consequences for us. So there are a
13 number of examples of small dams that we had
14 responsibility for or own, and rather than incur the
15 risk of those failing or being damaged or resulting in
16 a dam safety incident, we actually removed them and an
17 example was that the -- a recent example was the
18 Salmon River Diversion Dam that came before the
19 Commission a few years ago. So there's a number of
20 small dams that we've said we just don't want to have
21 on our system anymore and doesn't make sense to
22 reinvest in them, let's just simply remove them to
23 avoid the possibility of failure.

24 Another example of something that we
25 consider to be an unacceptable risk would be not
26 having enough supply to keep the lights on in the

1 province. And I'm not referring to, you know, a line
2 outage or a storm, I'm talking about running out of
3 fuel. And so we went through a period in the company
4 of very low water in 2018, 2019 and we did forecasting
5 and looked at, you know, scenarios, very adverse
6 scenarios unfolding and we in response to that, to
7 avoid that occurring, we put in place a whole series
8 of arrangements with Powerex to make sure that we had
9 enough supply and we got through that very
10 effectively. And those -- the program for that, the
11 transactions all came before the Commission.

12 And a third example I would give you where
13 we have a very low tolerance is around the risk of an
14 employee fatality. And a few years ago now we were
15 pursuing a capital project at Mica Generating Station
16 and we realized that because of the circumstances
17 there was a non -- well, an unacceptable probability
18 of fatalities occurring in this particular part of the
19 plant during this particular part of the work. And we
20 did quite a bit of due diligence on that, made a
21 decision that we needed to completely rethink the
22 work, put the project off for a whole year, and then
23 rethought it, came up with a way to manage that work
24 safely. And we had great support from the board to
25 make that happen and incur the extra costs that were
26 required for the work.

1 **Proceeding Time 11:43 a.m. T35**

2 So there are a number of examples that we
3 can give you, and that -- where it's just not
4 acceptable to incur that consequence and we manage
5 accordingly to avoid the situation. So those are
6 three examples that come to mind.

7 MS. THOMPSON: Q: Those are very helpful. Thank you
8 very much. So just to follow on on something that was
9 mentioned earlier. So you look at risk on a per
10 project basis. Would it be possible to get a risk
11 quantified list of all the capital projects in the
12 current RRA?

13 MR. KUMAR: A: Yeah, we can look into that request and
14 get back to you on that.

15 MS. DASCHUK: A: Sorry, I need to maybe understand.
16 Sorry, what was the question?

17 So we have provided -- this revenue
18 requirements application is based on the same capital
19 plan that was put forward in 2021 revenue -- no.
20 Ajay, we need to make sure we get this correct.

21 So we have in the previous revenue
22 requirements application provided a list of all of the
23 projects greater than 5 million and greater than 20
24 million and we have provided in Appendix I information
25 about each of those projects and the risks that those
26 projects are intended to address.

1 So I think that either we can get back --
2 that information is already provided in the previous
3 revenue requirements application, we can point to that
4 or we can point to the evidentiary update that we gave
5 for this one where we added some information about
6 some projects that were recently initiated. So I'm
7 going to ask Ajay if he can just clarify that, please.

8 MR. KUMAR: A: So definitely we can look at providing
9 that information for the projects that are included in
10 this application in terms of the risk, and that's
11 something that we can --

12 MS. DASCHUK: A: Sorry, I'm just wanting to make sure
13 we're clear. For every single project that is in the
14 capital plan? Are we doing projects greater than 20
15 million or -- I want to make sure we're clear on what
16 it is we're going to be providing.

17 MR. SANDVE: A: I might be able to jump in here and
18 help. It's Chris Sandve here.

19 Ms. Thompson, in Appendix I of the current
20 application there is a column, column Y, and that
21 lists the risk score for all capital projects over 5
22 million. So Ajay can advise or Ms. Daschuk can advise
23 as to whether that's the appropriate reference. But
24 that's there.

25 MS. THOMPSON: Q: I'm just pulling that up now, sorry.
26 So Appendix I.

1 MR. LAYTON: A: Yeah, this is (audio drops) speaking.
2 It's Appendix I, Column Y is the risk score column and
3 you'll see that it's not for every single project
4 because it's not applicable to every project. You'll
5 see, for example, the page I'm looking at it's -- for
6 all those projects that are for prioritization you'll
7 see a risk for. However, for projects that are
8 already committed, for example, you will not see risks
9 for.

10 MS. THOMPSON: Q: Okay, I see it now. Okay, no, that
11 sounds good, thank you very much. I hadn't seen that
12 in the first round, so that's very helpful, thank you.

13 So now if we go back to the corporate risk
14 matrix that was provided in RCIG 1.31.1, on the right-
15 hand side a little bit further down, it explains how
16 to use the risk matrix and under point 5 it is stated
17 that based on the risk zone, BC Hydro is to review the
18 risk communication guidelines to determine action.

19 So I'm just wondering if BC Hydro could
20 please direct me to where I could find the risk
21 communication guidelines that are referenced in this
22 matrix?

23 MR. LAYTON: A: This is Ryan Layton speaking. I don't
24 believe it's on the record in the proceeding. We will
25 take a look and see if we can provide that for you.

26 MS. THOMPSON: Q: Perfect. Yeah, if you could

1 undertake to provide that, that would be great. I
2 really appreciate that.

3 MR. LAYTON: A: Just so we're clear, we'll undertake
4 to provide the risk communication guidelines referred
5 to in point 5 on RCIG IR 1.31.1, attachment 1.

6 **Information Request**

7 MS. THOMPSON: Q: Perfect, yes. Thank you very much.
8 So I will move onto my next set of questions which
9 have to do with metrics. So in the response to RCIG
10 IR 1.12.1, which begins on pdf page 1238 of Exhibit B-
11 5, so BC Hydro provided an attachment that includes a
12 detailed matrix of all the historical trends for a
13 number of different matrix. First, I just like to say
14 thank you for providing this detailed matrix, it's
15 very informative.

16 **Proceeding Time 11:52 a.m. T36**

17 And I just a couple follow-up questions on some of the
18 data, as well as some of the trends that we're seeing
19 in this metric.

20 So, for one, there are a couple negative
21 values that show up for two metrics in particular.
22 One being the distribution growth capital expenditures
23 divided by incremental distribution kilometres added.
24 So the negative cost shows up in year 2019 of
25 approximately 2.3 million. And the other metric that
26 I'm referring to is the generation growth capital

1 expenditures divided by incremental generation
2 capacity added. And so this one has the negative
3 number of approximately 1.2 million in 2016.

4 I was just wondering if BC Hydro could
5 please explain how these negative values came about?

6 MR. LAYTON: A: Ms. Thompson, we have the exhibit here
7 in front of us. I'm wondering if you could help me,
8 just on the far left of the attachment you'll see a
9 number for each particular metric. I wonder if you
10 could tell me which line items you're looking at
11 there, please?

12 MS. THOMPSON: Q: So line items 16 as well as 21. And
13 then it's the only negative cost that shows up in the
14 historical trends for each of those metrics.

15 MR. LAYTON: A: Okay, great, thank you. That's
16 helpful. So, and I can undertake to provide specific
17 detail here, but I know that sometimes when you're
18 looking at incremental changes, here in the case of
19 metric 16, incremental distribution kilometres added,
20 or in the case of line 21, incremental generation
21 capacity, that that's considering the overall results
22 for the corporation. And so in a given year if you
23 actually had fewer distribution kilometres than you
24 get the prior year, then it's going to look like a
25 negative metric and so you can get what, I agree, is
26 strange looking results because of those kinds of

1 strange occurrences that may happen from time to time.
2 And, as you point out, it's relative rare occurrence
3 in this spreadsheet but it can happen.

4 MS. THOMPSON: Q: Okay, is the panel able to undertake
5 to just confirm that that is the case?

6 MR. LAYTON: A: Yes, and so again I'll recite the
7 undertaking just so that we are clear. It's in
8 respect of line item 16 and line item 21, in
9 particular, to confirm the reason for the negatives in
10 the two cells in those two lines. We're happy to
11 undertake to do that.

Information Request

12
13 MS. THOMPSON: Q: Wonderful, thank you very much, I
14 appreciate it. And so on this same table we've looked
15 at the numbers provided and some of the results show
16 trends that we don't really understand and we just
17 have a couple follow-up questions.

18 So the first metric is the distribution
19 operating cost per distribution kilometre, which is
20 shown in line 12. So here for this trend we're seeing
21 quite a large increase for this metric over time and
22 it looks like it has more than doubled over the 2012
23 to 2020 period. I'm just wondering if you can explain
24 why this trend has increased so significantly over
25 this period?

26 MR. LAYTON: A: So, Ms. Thompson, this is Ryan Layton

1 speaking again. I don't think we have that level of
2 detail around the table. We are happy to provide this
3 for you, but we haven't gone through and looked at
4 each number and each trend and why those are
5 occurring. I'm happy to undertake to provide you with
6 an explanation as to the trend in row 12, if that
7 would be helpful?

8 **Information Request**

9 MS. THOMPSON: Q: Yes, that would be very helpful,
10 thank you. And if -- so I had a couple of additional
11 questions on different metrics and I'm assuming that
12 it would be probably hard to answer right away. So if
13 we can maybe, I'll just -- I think there are three
14 other metrics that I had questions on.

15 So one of them being the -- sorry, just bear
16 with me one second -- the distribution net capital base
17 rate per customer, which is in line 15. So there
18 we're seeing an odd trend as well, so we're just
19 wondering if you can explain, sort of, what was
20 happening for this metric.

21 MR. LAYTON: A: Line 15?

22 MS. THOMPSON: Q: Correct.

23 MR. LAYTON: A: And can you identify which years you're
24 looking at in terms of the trend?

25 MS. THOMPSON: Q: Just the overall trend. So we see,
26 sort of, an increase happening between 2012 to 2014

1 and then there's a decrease again between 2015 to 2017
2 and then another increase to 2022. So we're -- just,
3 kind of, it's pattern that we don't really understand,
4 so we were just wondering if BC Hydro can explain the
5 reason for this pattern.

6 MR. LAYTON: A: Okay, so we can undertake to do that.
7 Again, just for clarity for the record, that's line
8 15, we will discuss the trends across the time horizon
9 provided here.

10 **Information Request**

11 **Proceeding Time 11:57 a.m. T37**

12 MS. THOMPSON: Q: Wonderful, that's very helpful, thank
13 you. And then the one other one is generation growth
14 capital expenditures divided by incremental generation
15 capacity added. And this one is -- so it's again line
16 21, but rather than the negative number, it's the last
17 number that we're seeing in 2019. There's a very
18 large jump to 212 million. And so we're just
19 wondering if you can explain whether that's, you know,
20 driven by Site C or if there's another reason for that
21 large increase.

22 **INFORMATION REQUEST**

23 MR. LAYTON: A: Okay, we will undertake to provide you
24 in respect of line 21 an explanation as to the last
25 number provided, the \$212 million.

26 MS. THOMPSON: Q: Okay, thank you very much. And then

1 the last one is on line 223, which is FTEs per
2 megawatt hour delivered. So for this one it just --
3 we asked the wrong question, we should have asked per
4 gigawatt hours delivered, because (audio drops) for us
5 to see any trends, so I was just wondering if you
6 could also undertake to provide a revised data set of
7 FTEs per gigawatt hours delivered.

8 **INFORMATION REQUEST**

9 MR. LAYTON: A: Certainly. So, again for the record,
10 line 23 we will provide an additional set of figures
11 which will be FTEs per gigawatt hour delivered. I'm
12 happy to do that.

13 MS. THOMPSON: Q: Okay, perfect. Thank you very much,
14 I really appreciate it. And doing a time check here,
15 well I'll just -- I'll stop there and so that
16 concludes my set of questions for today's session. So
17 I would just like to thank all of the representatives
18 from BC Hydro for participating, for answering our
19 questions, both in the session and in the first round
20 of IRs. It was very helpful and much appreciated.
21 Thank you very much.

22 MR. SANDVE: Thank you, Ms. Thompson. We're now going
23 to go to BCOAPO, Ms. Mis or Ms. Worth, if you're ready
24 to go. We are just prior to noon. We had planned to
25 break for lunch at quarter after noon, but what I'm
26 going to suggest is that we finish BCOAPO's segment

1 and then break for lunch once BCOAPO has concluded.

2 So Ms. Mis and Ms. Worth, over to you.

3 **QUESTIONS BY MS. WORTH:**

4 MS. WORTH: Q: Great, thank you. Can you hear me all
5 right?

6 MR. SANDVE: Yes.

7 MS. WORTH: Q: Great, okay. I'm using earphones today
8 and I just wasn't exactly sure whether they were going
9 to be working very well. Thank you very much,
10 everybody.

11 This is Leigha Worth appearing as counsel
12 for BCOAPO et al. And we may have some instances
13 where Ms. Mis speaks up during the course of these
14 questions, but I will be primarily responsible for
15 posing the question.

16 So the first question that I have is
17 actually a follow up on Mr. Andrews' question earlier
18 this morning about ratepayers who may find that BC
19 Hydro rate increases are unaffordable. And then in
20 response Mr. O'Riley said that BC Hydro is working
21 hard to keep its rate increases, put low inflation.
22 And I'm just going to start with a quick kind of
23 comment, and then we can go from there.

24 I understand that inflation is a convenient
25 benchmark to refer to in discussions around cost, but
26 I think it's important to point out that from our

1 perspective – and this is something that I'll deal
2 with in argument – inflation is not truly a measure of
3 consumers' ability to afford the commodity or
4 services, in this case an essential service like
5 electricity, but rather it's a measure of the increase
6 in the price levels that ratepayers pay.

7 So would you agree with that, Mr. O'Riley?

8 MR. O'RILEY: A: Yes, I would agree with that, yeah.

9 MS. WORTH: Q: Okay. So when you're answering questions
10 about affordability and you've referred to that, I'm
11 just wondering if there are any other measures that BC
12 Hydro is using to gauge its performance in fulfilling
13 the most recent goals as set out by the mandate letter
14 from the government, and if so, could you list those
15 for us?

16 MR. O'RILEY: A: Well, there's really two metrics and I
17 would say inflation is a legitimate metric for us. We
18 have a number of costs that are tied to inflation.
19 For example, we have a number of IPP contracts that go
20 up by that CPI rate every year and, you know, as we've
21 talked about in the context of vegetation we procure
22 from the market and those contracts have upward
23 pressures on them that are tied to those price levels
24 you speak to.

25 So, you know, for us to not -- you know, to
26 keep costs -- keep our rates constant at an absolute

1 level, not reflect inflation, means we're -- you know,
2 we have to find significant savings, significant
3 efficiency savings or we have to do less work. And
4 we've seen some examples in this proceeding where over
5 time we've actually done less work to the detriment.

6 So I think inflation is an important
7 metric. There's been many, many years in the last 20
8 years where the rate increases were well, well, well
9 above inflation. So I acknowledge that for many
10 customers their income levels don't, you know, don't
11 go up with inflation and I'm sensitive to that, but
12 for us it is an important benchmark.

13 The other benchmark that we pay a lot of
14 attention to is how we're doing relative to other
15 utilities, and so the importance of staying in that
16 first quartile. And we've updated our service plan
17 metric to include all three classes of customers there
18 as a means of reflecting the broad concerns around
19 affordability.

20 **Proceeding Time 12:03 p.m. T38**

21 So those are two important metrics that we
22 pay attention to. But I do want you to know that I am
23 sensitive to the ability of customers to pay and
24 particularly for lower income customers and that's why
25 you see investments in things like the conservation
26 programs that help lower income customers bring their

1 bills down, why we have had the customer crises fund
2 and hope to have some form of that in the future and
3 why we pay attention to groups like the members of our
4 Low Income Advisory Council.

5 MS. WORTH: Q: Okay, we've already established that
6 you've acknowledged the inflation rate is not a
7 measure of affordability, and then you've referred to
8 the performance of BC Hydro in the prices compared to
9 other jurisdictions. So is it your position that that
10 is an accurate reflection of affordability as it
11 relates to -- the affordability for B.C. residents
12 when it comes to paying for their electricity bills?

13 MR. O'RILEY: A: Well, I think if we are coming in
14 under inflation for our revenue requirements, as we
15 have for the last three years -- if you take a 1.3
16 percent bill increase over three years I think we are
17 doing pretty well from an affordability perspective.
18 And we've seen -- I mean one place to look for
19 validation for that is the provincial government which
20 brings a broader lens to societal interests and in
21 their mandate letter to us, they specifically call out
22 affordability and they have -- you know, they've been
23 positive about the results we've been able to achieve
24 here and recognizing the balance we have been
25 affordability and investment, which I've described as
26 a tension up front.

1 MS. WORTH: Q: Okay, well I will leave this for
2 argument.

3 MR. O'RILEY: A: Yeah, well, Ms. Worth, just -- I mean,
4 if you had a suggestion that might be useful as well.
5 Like what would you suggest as a measure of
6 affordability for customers and we'd be happy to look
7 at that.

8 MS. WORTH: Q: I don't have a specific suggestion at
9 this time. It's not something I was prepared to
10 present because obviously that's something that would
11 require, I think, the presentation of some support
12 materials and a review of other jurisdiction. But I
13 do know that there are jurisdictions and governments
14 that look at more than just the interest rates and a
15 comparison -- an interjurisdictional comparison,
16 because to be frank, the ability of somebody in Quebec
17 to afford, you know, their electricity bills is wholly
18 disconnected from ours, as is the price they pay for
19 their hydro. You know, there's all sorts of other
20 factors that do come in and I'm happy to engage with
21 BC Hydro and I know a lot of the other members of the
22 Low Income Advisory Committee would be happy to engage
23 with BC Hydro on that as well.

24 But yeah, I think this is something that if
25 you're going to put forward a representation that you
26 are relying on these for affordability, you have to be

1 able to draw a direct line between two.

2 So like I said, I'll deal with that in
3 argument. Thank you.

4 MR. O'RILEY: A: Sure. I'm going to do both, so I'm
5 going to keep using it as a benchmark, but I am
6 absolutely open to any suggestions you have outside of
7 this process through the Low Income Advisory Council
8 for other ways of doing it. We're happy to add that
9 to the dialogue. So thank you very much.

10 MS. WORTH: Q: Just so we're clear for the record,
11 there's not a disagreement from BCOAPO or for us as a
12 counsel for BCOAPO at all that the benchmarks that
13 you're pointing to are a valuable tool. It's just
14 when you are being asked questions about affordability
15 and you rely solely on those, that's the issue that we
16 have with them.

17 So I'm going to move onto questions about
18 the EPAs and I'm going to be referring the IR 1.21.3
19 in exhibit -- or sorry, the BCOAPO IR 1.21.3 in
20 Exhibit B-5. So in that BC Hydro provided a table
21 that showed the majority of EPA costs and the revenue
22 requirement associated with exempt EPAs, where the
23 contract was not subject to a review by the B.C.
24 Utilities when it was entered into.

25 **Proceeding Time 12:08 p.m. T39**

26 And I note that section 4 of Direction

1 Number 8, the BCUC states that it must not disallow
2 recovering in rates the costs incurred for energy
3 supply contracts entered into before Fiscal 2017. So,
4 I'm just wondering if you could explain where those
5 costs are captured on table 4-6, on page 4-13 of
6 Exhibit B-2 of the application? And that's
7 specifically the exempt IPP long-term commitments.

8 MR. WONG: A: Well, then we need to get the application
9 in front of us.

10 MS. WORTH: Q: Absolutely.

11 MR. WONG: A: The cost of energy section.

12 MS. WORTH: Q: I think it was table 4-6.

13 MR. WONG: A: I mean, these costs are in general in-
14 cost of energy in the total, and it would be included
15 in the IPP section of that, without having the
16 application right in front of me.

17 MS. WORTH: Q: Okay, because on table 6, that's sort of
18 the pre-2003 electricity purchase agreement, it's at
19 the 2003 green power energy generation call, the 2006
20 open call, that would presumably be one of them. Like
21 I'm just wondering -- yeah, I mean if there is any
22 part of the table 4-6 where those are not captured I
23 guess? Or where they are captured?

24 MR. WONG: A: Well, they would be captured in the
25 total, at the bottom, where they fall within one
26 specific line out from the top -- I don't have that

1 specific information right on my hand.

2 MS. WORTH: Q: Okay, so you don't have a breakout then

3 of the aspects of -- or the parts of this that were

4 not subject to B.C. Utilities Commission oversight, as

5 opposed to those that were, because obviously B.C.

6 Utilities Commission had oversight over some of these,

7 while it did not have oversight over other, other

8 contracts that were entered into that are listed in

9 these -- in table 4-6, is that correct?

10 MR. WONG: A: Just a moment. So, I think I appreciate

11 you are asking where does the -- from the IR say the

12 non-exempt -- sorry, the exempt or non-exempt items

13 are incorporated. What we don't have in front of us

14 is to be able to break in the line-by-line to align

15 with this. That's what you are looking for right now.

16 MS. WORTH: Q: Would you be able to provide that in an

17 undertaking?

18 MR. WONG: A: I think we would be able to. So under

19 the undertaking what we would like to see is, how does

20 the information from IR 1.21.3 align to the various

21 lines on the table of 4-6, so I we will undertake to

22 look into that.

23 MS. WORTH: Q: Okay, because specifically what we are

24 looking for is in each of those, and you know,

25 obviously we're not going to be looking for specifics,

26 because there are commercial concerns, but just sort

1 of, you know, in the, lets say, in a specific line
2 item, in table 4-6, what relates to any contract that
3 was entered into under B.C. Utilities Commission
4 supervision or oversight, and what figures relate to
5 those that were not. So, it would just be sort of an
6 exempt and non-exempt breakdown for each of those.

7 MR. WONG: A: Yeah, so we'll get that information on
8 breaking out 4-6 into the exempt and non-exempt.

9 **Information Request**

10 **Proceeding Time 12:13 p.m. T40**

11 MS. WORTH: Q: Great, thank you. And I just wanted to
12 confirm that those costs are included in the exempt
13 category of the table that was provided in response to
14 BCOAPO 1.21.3 in Exhibit 5. There's the fiscal 2021
15 exempt cost and then the forecast and then the plan.
16 So there's all of those commitments, those costs are
17 included there, correct? So any of the ones that are
18 listed in 4-6, those are reflected in the actual
19 BCOAPO 1.21.3, correct?

20 MR. WONG: A: We're going to have to get the IRs.

21 MS. WORTH: Q: Okay.

22 MR. WONG: A: Sorry, just a second. Yeah, the two
23 tables, both 4-6 and the response to the IR tie to
24 each other.

25 MS. WORTH: Q: Okay, great, thank you. All right, so
26 I'm going to be moving on to a discussion of electric

1 vehicles and prescribed undertakings under the GGRR.
2 Would Hydro like any time to adjust its panels or
3 anything like that before I proceed?

4 MR. O'RILEY: A: I think we're good.

5 MS. WORTH: Q: Okay, great. So, as set out on page 2-
6 15 of Exhibit B-2 of the application, BC Hydro is
7 seeking to establish an electric vehicle cost
8 regulatory account to recover in this test period its
9 fiscal 2020 and fiscal 2021 costs relating to electric
10 vehicle charging stations that are prescribed
11 undertaking. And for fiscal 2022 costs with respect
12 to the prescribed undertakings are included in the
13 revenue requirements in the categories of cost which
14 they relate.

15 So I'm looking at the decision in the
16 previous application where the B.C. Utilities
17 Commission panel noted that BC Hydro had not in its
18 findings demonstrated subsequent to the GGRR amendment
19 that electric vehicle charging stations are prescribed
20 undertakings and thus denied BC Hydro recovery of
21 related cost for the fiscal 2020 and 2021 test period.
22 So in accordance with that decision then BC Hydro
23 removed those capital additions from its rate base and
24 the associated amortization operating costs and the
25 cost of energy to serve those BC Hydro owned electric
26 vehicle charging stations from its revenue requirement

1 for that test period.

2 So we've looked at BC Hydro's compliance
3 filing in setting out the costs that were removed.
4 And, for the transcript, that compliance filing and
5 specifically the table that I'm referring to is table
6 2-7 and that's on page 13 of that filing. And on
7 that, for those that don't have the luxury of looking
8 at it, it describes that BC Hydro -- or it sort of
9 quantifies the operating costs, depreciation and cost
10 of energy that BC Hydro has removed for fiscal 2020,
11 fiscal 2021 and for the total. So there's two figures
12 and then there's the added total.

13 And I was wondering if BC Hydro could
14 explain why if EV capital costs were removed from rate
15 base why there wasn't any interest or financing costs
16 associated with that that was also removed from the
17 revenue requirement? Because -- and the reason that
18 I'm asking that is because the costs shown have been
19 recorded in the proposed electrical vehicle costs
20 regulatory account, which is Exhibit B-2, Appendix A,
21 Schedule 2.2. BC Hydro is proposing to recover those
22 costs plus interest in this test period.

23 MR. LAYTON: A: So, Ms. Worth, just so I make sure I
24 understand your question. Was your question in terms
25 of the costs removed, why there were not finance
26 charges removed?

1 MS. WORTH: Q: Yes, interest and financing.

2 MR. LAYTON: A: Interest and financing.

3 MS. WORTH: Q: Or interest/financing, sorry, yeah.

4 However it's characterized in various parts of the
5 application and in the compliance filing.

6 MR. LAYTON: A: So I believe the answer to that would
7 be that when we consider our finance charges we don't
8 allocate them to specific projects or specific items,
9 as the case may be, like an electric vehicle or a
10 specific project. We look at those on a total
11 portfolio basis and therefore we don't adjust for,
12 like I said, for specific items such as these.

13 **Proceeding Time 12:18 p.m. T41**

14 MS. WORTH: Q: So, I'm just going to put a hypothetical
15 to you here to clarify that. So if BC Hydro were to
16 undertake between test periods a significant capital
17 project, and then that was in a subsequent hearing,
18 and an expense that was disallowed by the B.C.
19 Utilities Commission, would BC Hydro not then also
20 remove any interest or financing charges that were
21 associated with that project, from the revenue
22 requirement going forward? Or is it your position
23 that based on sort of the portfolio, you wouldn't
24 break it out and then remove it from the revenue
25 requirement?

26 MR. WONG: A: Well, one part is when you refer to the

1 capital projects, when capital projects are built, we
2 apply an interest capitalization against that. So the
3 debt, in order to borrow, in order to do our capital
4 projects, that would be incorporated in the total
5 asset value. So the depreciation would incorporate a
6 piece of that interest.

7 MS. WORTH: Q: A piece, but not all of it.

8 MR. WONG: A: Well, the total capital asset
9 incorporates interest associated with building that
10 asset, and then the depreciation is the part that we
11 will put into the revenue requirements for that
12 particular year.

13 MS. WORTH: Q: So, in that case, it's your testimony or
14 it's your evidence that they would, you know, in that
15 sort of circumstance, where BC Hydro did go ahead with
16 a significant capital project in the absence of a B.C.
17 Utilities Commission approval, BC Hydro would then
18 ensure that all interest costs were removed from the
19 revenue requirement if that cost was then disallowed.
20 But in this case, and potentially others, BC Hydro
21 doesn't bother to do that, is that correct?

22 I apologize, did I lose audio? Or --

23 MR. O'RILEY: A: We just went off for a caucus there.
24 I think I was supposed to tell you.

25 MS. WORTH: Q: My apologies, go right ahead. Okay, I
26 just wanted to make sure. Everybody has been having

1 so many technical issues.

2 MR. LAYTON: A: This is Ryan Layton speaking. I think
3 we agree with, broadly the construct that you're
4 outlining, which is that in the case of a large
5 project we would perhaps attempt to do that, but in
6 this case, we have not.

7 MS. WORTH: Q: Can you please explain -- you've made
8 some reference to maybe the quantum. Can you explain
9 what BC Hydro feels is significant enough to warrant
10 that kind of treatment, and what it does not? Because
11 from a ratepayer perspective, particularly people who
12 are experiencing COVID related impacts on employment
13 and costs, people who experience energy poverty, who
14 are on fixed incomes, and even people who are in the
15 middle class who we have now discovered are far more
16 precariously positioned within that class, that
17 socioeconomic class than they might have otherwise
18 thought. Every dollar counts. So I'm just wondering,
19 where does BC Hydro draw the line on where it will
20 make that effort, and where it won't?

21 MR. LAYTON: A: This is Ryan Layton speaking again. We
22 don't have a black and white rule in terms of where we
23 would draw that line.

24 MR. WONG: A: But I think it is fair to say that, I
25 mean if BC Hydro needs to borrow -- it's a portfolio
26 debt portfolio, and that interest costs need to be

1 recovered, and that is part of our revenue requirement
2 in its totality. And so we --

3 **Proceeding Time 12:22 a.m. T42**

4 MS. WORTH: Q: But this is specifically about interest
5 costs relating to expenses that the Utilities
6 Commission has disallowed. So that is the concern
7 here, is that the BC Hydro -- you know, BC Hydro is
8 recovering, proposing to recover these costs and did
9 not in the first instance remove these costs when the
10 B.C. Utilities Commission had ordered them to remove
11 them from the revenue requirement and BC Hydro
12 provided a compliance filing.

13 It's a concern to ratepayers that BC Hydro
14 did not fully remove all of the costs associated with
15 that, and that's the gist of my question is, you know,
16 why was that not done and just that -- you know, and
17 then you referenced the materiality, so I pursued that.
18 But I'm just wondering, you know, did BC Hydro engage
19 with the Utilities Commission to discuss its decision
20 not to remove those associated costs with expenses
21 that were disallowed in the last revenue requirement?

22 MR. LAYTON: A: This is Ryan Layton speaking again. I
23 think it's a fair question. I think what you've
24 raised is a fair point and a fair question for us to
25 consider. I can say I don't believe we engaged with
26 the Utilities Commission to the second part of your

1 question on that.

2 MS. WORTH: Q: Okay, thank you. So I'm going to be
3 moving on here. There was a table provided in BC
4 Hydro's response to BCUC IR 1.1.4 and that's in
5 Exhibit B-4. And that sets out the history of capital
6 expenditures for EV stations. So it starts at Fiscal
7 2013, goes to Fiscal 2020 in actuals, and then here's
8 a forecast for Fiscal 2021 and 2022. So my question
9 is can you provide on the record or refer us to where
10 in your evidence the Fiscal 2022 opening and closing
11 net book values associated with the EV stations that
12 are prescribed undertakings as defined in the GGRR?

13 MR. LAYTON: A: So, Ms. Worth, this is Ryan Layton
14 speaking again. I'm just reading that response, I
15 have it in front of me, and you can see that there's a
16 line item to remove the non-prescribed undertakings
17 and so you can see the net capital expenditures in the
18 row below that. But those are capital expenditures.
19 I think your question is about net book values?

20 MS. WORTH: Q: Yes, it is.

21 MR. LAYTON: A: Yeah. Okay, so I understand your
22 question. Those are not provided here in this table.

23 MS. WORTH: Q: Would BC Hydro be prepared to provide
24 that, either in an expansion of this particular table
25 or in a separate table as an undertaking today?

26

INFORMATION REQUEST

1 MR. LAYTON: A: Yes, I think we can do that. So just
2 so we're clear, we will undertake in respect of BCUC
3 IR 1.1.4 to add information regarding the net book
4 value related to these capital expenditures. Is that
5 -- would that provide what you're looking for?

6 MS. WORTH: Q: Yes, please. Thank you.

7 MR. LAYTON: A: Certainly.

8 MS. WORTH: Q: Now, I'm continuing to refer to the BCUC
9 IR series, but I'm going to be now BCUC IR 1.1.3. So
10 it's the same exhibit, Exhibit B-4. And BC Hydro's
11 response to that provided a table that listed the
12 operating and maintenance costs, labour, contract
13 services, and then the total operating and maintenance
14 costs, including depreciation cost of energy for
15 electric vehicle infrastructure costs. And I'm
16 wondering why in response to this IR there are no
17 financing or interest costs associated with the EV
18 station, and if BC Hydro has information about what
19 that figure would be?

20 MR. LAYTON: A: Yeah, so I think it goes back to what
21 we were discussing before where we don't allocate our
22 finance charges to this level of granularity. If
23 you'd like us to make a calculation in that regard, I
24 think we could do that.

25 MS. WORTH: Q: Yes, please.

26

INFORMATION REQUEST

1 MR. LAYTON: A: So we'll undertake in respect of BCUC
2 IR 1.1.3 to estimate a finance charge component
3 associated with these costs.

4 MS. WORTH: Q: Great. That's much appreciated, thank
5 you.

6 Okay, so I'm going to continue to refer to
7 that particular IR, which is BCUC IR 1.1.3 in Exhibit
8 B-4. And as I've said, that is the cost associated
9 with this activity in the Fiscal 2022 test period with
10 respect to the electric vehicle. I'm wondering if
11 based on section 5(2) of the GGRR, which says BC Hydro
12 must both own and operate the charging station for it
13 to be a prescribed undertaking, whether BC Hydro can
14 provide for clarify whether confirmation that that's
15 the basis upon which it is formulated its Fiscal 2022
16 RRA? So are the costs that are included in this
17 revenue requirement only those that are prescribed
18 undertakings where BC Hydro both owns and operates the
19 charging station.

20 **Proceeding Time 12:28 p.m. T43**

21 MR. LAYTON: A: This is Ryan Layton speaking, I'll
22 start there. My understanding is, yes. I don't know
23 if Mr. Anderson wants to add anything to that.

24 MR. ANDERSON: A: That's correct, Ryan. That's my
25 understanding as well.

26 MS. WORTH: Q: Thank you. So I'm going to just sort of

1 look at -- it's in Exhibit B-2 -- or, no, sorry, it
2 would be B-4. There's BCUC IR 1.2.9.1. Okay, hold
3 on just a moment, my apologies. Okay, my apologies,
4 I'll leave that.

5 Now, I note that in the application there's
6 stations that BC Hydro seeks cost recovery under
7 section 18 of the *Clean Energy Act*, including 24
8 stations that have indicated they have third-party
9 operators in the previous application, except for the
10 stations at Keremeos and Princeton as they are subject
11 to exchange with FortisBC. And then there are nine
12 stations, Exhibit -- listed on page 2-7 of Exhibit B-2
13 that specifies BC Hydro currently leases the charging
14 equipment. And a lease requirement -- or, sorry, the
15 lease revenue for the equipment leasing was set at a
16 nominal value of \$1 per month and in your response to
17 BCOAPO IR 1.10.2 in Exhibit B-5, the amount related to
18 leasing that equipment for the nine stations was about
19 \$108 per year.

20 So I'm wondering, and it may just be that
21 I'm having difficulty reconciling the two because I'm
22 coming at it from a different perspective, but I'm
23 wondering are the nine stations that were referenced
24 in BCUC IR 1.2.5 separate and distinct from the 24
25 stations that are referenced in BCUC 1.2.9.1?

26 MR. ANDERSON: A: It's Keith Anderson here, I can start

1 with that. So it's a bit of a continuum, if you will.
2 So at one time through our phase 1 stations we had 30
3 stations that were all subject to an equipment lease
4 agreement. Over time that moved to 24, which was a
5 point in time where that reference was made. And now
6 we have, currently we have nine stations that have an
7 amended now equipment lease agreement, and all other
8 stations that we have have a site lease arrangement.
9 So it's really just a continuum, a period of time, if
10 that helps.

11 MS. WORTH: Q: Okay. So you have only nine lease
12 stations and --

13 MR. ANDERSONS: A: Only --

14 MS. WORTH: Q: Sorry, go ahead.

15 MR. ANDERSON: A: Sorry to interrupt. Yeah, it's only
16 nine and we say "lease", it's an equipment lease
17 versus a site lease.

18 MS. WORTH: Q: Okay. But there are still 24 stations
19 with a third-party operator?

20 MR. ANDERSON: A: No, no. And two points there, I
21 guess. From a BC Hydro standpoint, I think we've been
22 clear and consistent, hopefully anyway, in saying that
23 we've always been the operator of these stations. The
24 leasing arrangement that we had with our first phase
25 stations, which was an equipment lease, we found over
26 time that, you know, that wasn't the best type of

1 arrangement and we've been slowly modifying those for
2 the phase 1, which were the first 30, such that it
3 went from 30 to 24 and now we have nine remaining on,
4 kind of, that modified -- on a new type of equipment
5 lease agreement.

6 All other stations, phase 2 on, are site
7 lease arrangements, not equipment lease.

8 **Proceeding Time 12:33 p.m. T44**

9 MS. WORTH: Q: Okay, so it's just benign where BC Hydro
10 is not fully responsible for the operation of this
11 station, is that correct?

12 MR. ANDERSON: A: No, so it's nine with an equipment
13 lease -- we're getting close. But the only
14 distinction I would say though is we are still the
15 operator of those. So it's an equipment lease to that
16 particular site, but BC -- they are still branded BC
17 Hydro stations, BC Hydro still is the one who operates
18 them in terms of the maintenance of them, monitoring
19 of them, to ensure that they are up and responding to
20 customer inquiries, or to, you know, if a customer is
21 there and wants to initiate a charging session and
22 doesn't have a network or an app to do that, they call
23 BC Hydro.

24 MS. WORTH: Q: Okay, all right. Perhaps what I will do
25 is will come at this from a different direction, just
26 so that I can be clear, because I think I kind of

1 fudged the wording here.

2 So, could you please indicate the number of
3 stations where BC Hydro is not fully responsible for
4 the operation of the station? Meaning, it's, you
5 know, not fully responsible for routine maintenance,
6 service and repair of the charging equipment and
7 filling -- filling and collection of any of the
8 charges, levy to users, payment of the sites'
9 electrical charges to BC Hydro, et cetera?

10 MR. ANDERSON: A: Yeah, so right now we'd say there is
11 no stations where we are not the operator of those
12 stations. There is currently only one where under
13 that equipment site lease arrangement, one community
14 is currently charging customers for service, and
15 they've agreed with us that once we have a rate in
16 place through the Utilities Commission, that that will
17 transition to BC Hydro as well.

18 MS. WORTH: Q: Okay, so --

19 MR. SANDVE: (Inaudible) sorry, I am just jumping in
20 noting the time. Are you able to wrap up in the next
21 couple of minutes here?

22 MS. WORTH: Q: Oh dear. Oh my goodness, I am not very
23 far into my questions, I apologize. Yeah, let me just
24 see -- if I may take just a few seconds to prioritize
25 the rest of my questions? I have a very long
26 document, I apologize.

1 MR. SANDVE: No problem. You are in the unenviable
2 position of being between people and lunch.

3 MS. WORTH: It's not an enviable place to be, that's for
4 sure. It is kind of analogous to having cross-
5 examination or questioning taking place during the
6 middle of the afternoon when everybody is sort of in
7 the energy lull.

8 I think what I will do is I will leave the
9 balance of our questions, and I will just finish up
10 the questions that I have here, and yeah, I apologize.
11 I really (inaudible) underestimated the time of my
12 questioning. Okay, so what I will do is I will leave
13 the rest of my questions in the hopes that others will
14 deal with them, or the fact that we will just simply
15 comment on them. I am going forward as (inaudible)
16 should be examined, either, you know, the Commission
17 can do that, or we can do that in the Fiscal 2023.

18 So, where were we here, we were looking at
19 -- ah, correct.

20 **Proceeding Time 12:37 p.m. T45**

21 Q: Okay, I just wanted to follow up with you, Mr.
22 Anderson. It's your evidence that BC Hydro is fully
23 responsible for all of the charges and
24 responsibilities for maintenance and service and
25 repair and things like that, for all but one of the
26 charging stations, is that correct?

1 MR. ANDERSON: A: We're fully -- yes, it's my evidence
2 that we're fully responsible for the operations and
3 expect, as we have a rate in place, to be the one
4 that's the only one billing customers for those
5 charging stations.

6 MS. WORTH: Q: All right. Those are my questions.
7 Thank you so much.

8 MR. SANDVE: All right. Thank you very much, Ms. Worth.
9 We are now at 12:38. We had planned to come back at
10 1:00 but I think that will be too short of a lunch
11 break so what I'm going to suggest is that we break
12 now and come back at ten after one, so that would be
13 just over half an hour for lunch and resume at 1:10
14 p.m.

15 Thanks very much, everyone.

16 **(PROCEEDINGS ADJOURNED AT 12:39 P.M.)**

17 **(PROCEEDINGS RESUMED AT 1:10 P.M.)**

T45/46

18 THE CHAIRPERSON: Mr. Sandve?

19 MR. SANDVE: Yes, Commissioner Morton.

20 THE CHAIRPERSON: I'm wondering if I could have a few
21 minutes just before we start this session.

22 Thank you very much. On behalf of the
23 panel I'd like to express a -- I wouldn't necessarily
24 characterize it as a concern, but it is a matter that
25 concerns us and that is that while this has been a
26 very informative morning, we have noted that there

1 have been a number of interveners that have had a list
2 of questions that's longer than the time that's been
3 provided for them.

4 Under normal circumstances, if we were in
5 the hearing room, I'm sure that the panel would have
6 tried to make some accommodation and although it may
7 not have been easy, we would have tried to ensure that
8 an opportunity was provided to answer the questions.

9 So Mr. Sandve, I'm going to ask you, if you
10 could, please, to think about this and for the
11 remainder of the time see if there's a way that it
12 could be addressed, although given the time
13 constraints I appreciate that that might be difficult.

14 So accordingly what we will do is we will
15 be asking all interveners for submissions on any
16 further process that may be required to ensure that
17 any questions that didn't get asked today, the parties
18 have an opportunity to ask those questions, and
19 whether that's scheduling another day like this or
20 whether it's another round of IRs, we'll leave it up
21 to you if you have any suggestions. But I just want
22 to assure everyone, the panel is keen to ensure that
23 people have the opportunity to ask the questions that
24 they need to.

25 MR. QUAIL: Mr. Chairman, this is Jim Quail here. This
26 might assist a little bit for this afternoon. I'll

1 expect I'll be quite brief. I don't think I'll need
2 the half hour that's allocated. I've been sitting
3 here crossing out things that have been covered. So
4 just perhaps to let Hydro know this and, for example,
5 if my friend Mr. Weafer has more than his half hour of
6 allocated time, feel free to run into what's been set
7 aside for me. I don't expect to be more than five or
8 ten minutes to be frank.

9 THE CHAIRPERSON: Thank you, Mr. Quail, that's very kind
10 of you.

11 MR. GHIKAS: Mr. Chairman, it's Matt Ghikas calling. You
12 know, I think if there's a concern, I think rather
13 than reconvening and having the same interveners come
14 up and ask more questions again, you know, I think it
15 would be better if we finish with an intervener and
16 then move on. And if there's really issues -- you
17 know, I think we'd like to bring this -- rather than
18 have another full round of IRs on this or some future
19 process, it seems to make sense that, you know, if
20 someone like Ms. Worth had another twenty minutes of
21 questions that we just have Ms. Worth ask the
22 questions and hope to try to resolve it rather than
23 having another day where Ms. Worth comes back and asks
24 more questions.

25 THE CHAIRPERSON: And that would then -- thank you, Mr.
26 Ghikas. If that's the way it played out then, there

1 would in all likelihood that there would be
2 interveners that had no opportunity today at all. So
3 I assume then you'd be proposing that we'd have
4 another day like this to deal with those questions.
5 Is that correct?

6 MR. GHIKAS: I'll get instructions, Commissioner Morton,
7 and get back to you on that, but perhaps if you could
8 give us ten minutes to deal with it now, we could go
9 offline and I'll get instructions because, yeah, we'd
10 like to make sure it moves as quickly as possible and
11 don't want the -- you know, we don't want it to drag
12 on longer than it needs to.

13 THE CHAIRPERSON: Understood. So we'll stand down for
14 ten minutes now then. Is that --

15 MR. GHIKAS: Yes. In fact we can probably do -- yeah,
16 let's do ten, that's fine. Thank you.

17 THE CHAIRPERSON: Okay. So it's 1:15 now, so 1:25 we'll
18 come back.

19 MR. GHIKAS: Thanks.

20 THE CHAIRPERSON: Thanks. Okay.

21 **(PROCEEDINGS ADJOURNED AT 1:15 P.M.)**

22 **(PROCEEDINGS RESUMED AT 1:25 P.M.)**

T48/49

23 MR. SANDVE: Okay, we are at 1:25, so I think we will
24 resume.

25 Mr. Chairman, thank you very much for your
26 guidance in terms of the process here today. We've

1 had some discussions during the break, and I will turn
2 it over to our counsel, Mr. Ghikas, to suggest a path
3 forward, if we may.

4 MR. GHIKAS: Thanks. I just wanted to make sure that
5 the Commissioners were back online? I wasn't positive
6 that they are, so.

7 COMMISSIONER MASON: I am, Mr. Ghikas.

8 MR. GHIKAS: Okay, thank you.

9 THE CHAIRPERSON: I was informed that I was badly
10 echoing, my apologies for that. Am I still doing
11 that?

12 MR. GHIKAS: No, you sound fine, Mr. Chairman.

13 THE CHAIRPERSON: Okay, thank you.

14 THE HEARING OFFICER: Just to confirm, this is Keith
15 with the record. We didn't have an echo for you at
16 all, Mr. Chairman.

17 THE CHAIRPERSON: Okay, thank you. Thank you. So this
18 is the echo is in the ear of beholder then, is it?

19 MR. GHIKAS: It is. Mr. Chairman, thank you for the
20 break. The strong preference of BC Hydro is to try to
21 do our best to bring this to a conclusion today. And
22 if that means, you know, we have to backtrack a bit so
23 that the interveners that have already gone, if they
24 had questions that they cut short because they felt
25 they needed to, that we allow them to continue to do
26 that, and to bring it to a conclusion today. Do our

1 best to get it done, but if there is a need to push
2 things to tomorrow, one solution would be to push the
3 in camera hearing to tomorrow, and just finish up with
4 the interveners today. And I am optimistic that we
5 can do a significant amount of that work today,
6 particularly as Mr. Quail says that he is going to be
7 relatively short. So that would be the strong
8 preference, and we'd ask for your indulgence to do
9 that.

10 THE CHAIRPERSON: Thank you, Mr. Ghikas. Yeah,
11 speaking personally I can be available tomorrow, but I
12 can't speak for all my colleagues, but let's see what
13 we can do today.

14 MR. GHIKAS: Thank you. So what -- we had one
15 housekeeping matter from Mr. Keen. My friend Mr. Keen
16 wanted to mark an exhibit, but you know, if -- perhaps
17 if we return to -- after he does that, return to Ms.
18 Worth and just get her to confirm whether she'd like
19 to continue with her questions or not? Mr. Keen?

20 MR. KEEN: If this is working, you can hear me, and see
21 me hopefully. Mr. Chairman, I neglected to mark the
22 AMPC aid to our questions earlier this morning, and so
23 with your permission I'd like to have that marked?

24 THE CHAIRPERSON: Sorry, yes, that's fine, thank you.
25 Thank you.

26 MR. BUSSOLI: That would be C11-3 for the Court

1 Reporter.

2 (ONE-PAGE AMPC AID MARKED C11-3)

3 MR. KEEN: And I can advise, in terms of further
4 questions from AMPC, should folks have that
5 opportunity, we would not be taking advantage of that.
6 We are satisfied with the morning, but appreciate
7 everybody's efforts to make sure that everything is
8 complete.

9 THE CHAIRPERSON: Thank you.

10 MR. GHIKAS: Ms. Worth?

11 MS. WORTH: Thank you, this is Leigha Worth, counsel
12 for BCOAPO et al. I might potentially want to take
13 advantage of a further opportunity to pose some
14 questions. I wasn't expecting this. So what I would
15 like to do to ensure that I am conscious of the time,
16 is have an opportunity to review the remaining
17 questions that I had, to prioritize those that we on
18 behalf of our clients would really like to pursue in
19 this revenue requirement, and that we feel warrant a
20 more urgent treatment than simply noting it in our
21 final argument. And perhaps if I could do that after
22 another intervenor or two has gone by. Or if you want
23 to check back with me after everybody else has gone,
24 that would be great. Thank you.

25 THE CHAIRPERSON: Thank you. Mr. Ghikas, can we just
26 canvass the other intervenors from this morning, to

1 ensure that they are satisfied with what they've
2 asked? Or if they want any further time?

3 MR. GHIKAS: Yes, Mr. Chairman. And I believe Mr.
4 Andrews would be next?

5 THE CHAIRPERSON: Mr. Andrews, are you with us? Mr.
6 Andrews? I don't see him on the list.

7 **Proceeding Time 1:30 p.m. T50**

8 MR. GHIKAS: Perhaps we could go to RCIG as well, Ms.
9 Thompson, and check in with her.

10 MS. THOMPSON: Hi everyone. So, thank you, appreciate
11 the offer, but we are also satisfied with the morning
12 and we have no further questions. So, thank you.

13 MR. GHIKAS: Mr. Chairman, we'll -- I don't see Mr.
14 Andrews on the list of participant either. We'll try
15 to contact him offline and perhaps we can move to the
16 next intervener and then we'll let you know the
17 results of our attempts.

18 THE CHAIRPERSON: Wonderful, thank you for your
19 indulgence, thank you very much.

20 MR. SANDVE: Thank you, Mr. Chair and Mr. Ghikas. The
21 next intervener is Commercial Energy Consumers, Mr.
22 Weafer.

23 **QUESTIONS BY MR. C. WEAFER:**

24 MR. C. WEAFER: Q: Thank you, can you hear me?

25 MR. SANDVE: We can hear you.

26 MR. C. WEAFER: Q: Wonderful. Good afternoon. Thank

1 you, Mr. Chairman, members of the panel. And to BC
2 Hydro's panel I'd just like to start off with an
3 expression of appreciation. Mr. O'Riley, you
4 highlighted the COVID times and the dealings of your
5 company and from the Commercial Energy Consumer's
6 perspective and those we represent, we just want to
7 acknowledge the leadership and the across-the-board
8 efforts of your company to keep the lights on in this
9 extraordinary time.

10 I have eight topics and they're all going
11 to relate, actually, to keeping the lights on for the
12 commercial sector. The topics are BC Hydro's approach
13 to the commercial sector, capital planning, the risk
14 of off shedding between the regulated BC Hydro and the
15 Site C project, IPPs and negotiated electric purchase
16 agreements, COVID costs, DSM expenditures on the
17 commercial class, forecasting and a follow-up on
18 hedging from Mr. Ghikas' question.

19 And so just turning firstly to the
20 commercial sector, we did have -- while we recognize
21 this is not a rate design proceeding, we did have some
22 questions, as we always do, with respect to the fact
23 that the commercial sector is paying, in some
24 instances, over 120 percent of its cost of service.
25 And we take it that Hydro, at this point in time and
26 not in the near future, is planning to address that

1 rate design inequity for the commercial customers, is
2 that correct?

3 MR. O'RILEY: A: We're not proposing to bring forward a
4 rate rebalancing application.

5 MR. C. WEAFFER: Q: Thank you. The opening comments
6 also spoke to BC Hydro's commitment to recovery
7 efforts and the rebuild of our economy. And so I'd
8 just like to explore with you how you see the
9 commercial sector, which is a significant employer in
10 the B.C. economy and has been in some sectors quite
11 devastatingly hit by COVID, how does BC Hydro see
12 itself assisting the recovery effort of rebuilding our
13 economy in relation to its commercial sector
14 customers? Have you had any initiatives that have
15 been brought forward or anticipate to be brought
16 forward in the test period given the situation is
17 fairly urgent?

18 MR. O'RILEY: A: Yeah, and I appreciate it's quite a
19 diverse sector, ranging from commercial enterprises,
20 large and small, to the institutional sector. And,
21 you know, many of those sectors are significantly
22 impacted. You know, you think of real estate and
23 hospitality and tourism, for example, as being
24 particularly heavy hit.

25 We have endeavored to keep our own
26 commercial activities going through our capital plan

1 execution and all of our maintenance activities and we
2 think there is a direct impact on the economy through
3 that.

4 **Proceeding Time 1:34 p.m. T51**

5 I think there's a significant opportunity
6 through our implementation of the electrification plan
7 and the CleanBC plan to support the broader economy
8 and there's sort of a build back better opportunity
9 here in B.C. that we think we can be part of. And I
10 think pointing to our Site C project there's a
11 significant economic impact from that project, lots of
12 people employed around the province who are spending
13 money and supporting their families from that and I
14 think that is also supporting the commercial sectors.

15 But I do acknowledge the challenges, and
16 think about the restaurant industry, for example, or
17 the tourism sector. It is significant.

18 MR. C. WEAFFER: Q: You wouldn't disagree with me that

19 --

20 You wouldn't disagree with me, I take it,
21 that paying 120 of your costs for a product is not
22 conducive necessarily to recovery of a business that's
23 been devastated by -- (feedback).

24 MR. O'RILEY: A: Yes, Mr. Weafer, I think that -- I
25 mean that is a complex issue, as you know, and I think
26 it ties into the broader question of the rates that

1 they pay, as well as other costs and economy, taxes
2 and such. I do note that the cost of electricity is a
3 relatively small portion of the costs of businesses in
4 the commercial sector. I say that relative to the
5 industrial sector for example, so I think that has to
6 be considered as part of that.

7 MR. C. WEAFFER: Q: Yes, but if you're not profitable,
8 any cost is relevant, you agree?

9 MR. O'RILEY: A: I think all costs are a challenge, as
10 are the revenues for businesses.

11 MR. C. WEAFFER: Q: Turning to the positive, you did
12 mention in earlier questioning rate design proposals
13 and you acknowledge there was a very brief half-day
14 meeting on rate design for commercial customers
15 recently. What is the timeline for addressing rate
16 design proposals to assist commercial customers in
17 these times and go forward that could help them find
18 more effective ways of utilizing electricity to the
19 benefit of the company and BC Hydro?

20 MR. O'RILEY: A: Well, we are broadly looking at -- as
21 I mentioned earlier, the rate design principles for
22 the residential customers expire in a year, and so
23 that is certainly a priority. And we are looking at
24 different options for the industrial customers. We
25 similarly -- we have an expiring rate design
26 principles around the two-part rate there. The

1 commercial rate was already flattened a number of
2 years ago and, you know, I think we're satisfied with
3 that as a rate structure, and the feedback we've had
4 on that are positive.

5 So we are open to hearing other proposals
6 from the sector and from customers in particular.
7 I've met, personally, in the last year with a number
8 of larger commercial customers, and they're all in
9 different places in terms of their businesses and the
10 like, and I'm not hearing rate design as a particular
11 topic that's coming up in those discussions. But I
12 appreciate it's a very diverse sector and some may see
13 that as a priority.

14 MR. C. WEAFFER: Q: No, fair enough, and I acknowledge
15 the diversity. But you'd also agree that rate design
16 is a complicated topic that to some extent needs to be
17 driven by Hydro. The customers aren't necessarily the
18 best (audio drops) of rate design proposals. But with
19 that said, I take it you're saying that Hydro is open
20 to cooperation consultation with the commercial sector
21 to come up with rate design proposals?

22 MR. O'RILEY: A: Yes, absolutely.

23 MR. C. WEAFFER: Q: Okay, thank you, sir. Just moving
24 onto capital planning and it's with some reluctance
25 that I phrase it this way, but I think it's probably
26 fair of you to do it. We've obviously had some media

1 the best value out of the capital. It was a value
2 based framework, as opposed to a risk based framework.
3 It would have given us some ability to look at
4 different ways in which capital investments could add
5 value to the company and to our customers.

6 We still have a plan to pursue the asset
7 portfolio tool, we are just not doing it right now.
8 So, a couple of things happened. One is the cost of
9 the tool, or the cost of this approach was becoming
10 increasingly high. And then we also worked with the
11 technology roadmap and we learned that by talking to
12 other utilities and to suppliers that we would make a
13 better decision to make other investments in the
14 technology first, and then come back to this one, and
15 this would sort of be a layer on onto an existing
16 enterprise asset management platform.

17 So, over the longer term I say we would
18 still be committed to the concept, but we've just
19 decided not to do it right now.

20 MR. C. WEAFFER: Q: But just to put that in a timeframe,
21 BC Hydro identified over two years ago the asset
22 planning tool that it was worth investing in, and
23 looking at capital expenditure cost effectiveness.
24 We've now had two years pass, and it's cancelled, and
25 now when do you think you will be in a position to
26 have what you are proposing in place at BC Hydro?

1 MS. DASCHUK: A: We don't have a timeline.

2 MR. C. WEAFFER: Q: And so, if you acknowledge there was
3 a need, and now you don't have a timeline to address
4 the need, how is the Commission going to be comforted
5 that you are taking as close a look at cost
6 effectiveness of capital as you identify as was needed
7 in the last RRA?

8 MS. DASCHUK: A: I would say that we feel we have a
9 very robust capital planning process, and the asset
10 portfolio optimization tool was going to make us even
11 better. And we still believe that we have a robust
12 approach, which is albeit a risk-based approach. We
13 are going to look at those opportunities to do that in
14 the future. I still feel very confident that we have
15 a good capital program, good capital plan, we're
16 making good decisions on what types of projects to
17 advance.

18 MR. C. WEAFFER: Q: The decision to terminate that
19 project, as I understood the reasoning provided in the
20 IR responses, is that it was too costly. Is that
21 fair?

22 MS. DASCHUK: A: There were costs -- it was costing
23 more than our original forecast was. We were also
24 looking at the benefits we could expect to achieve
25 from that investment and we didn't see the benefits
26 justifying the costs at this time.

1 MR. C. WEAFFER: Q: Is it not difficult to predict
2 whether -- what the cost effectiveness opportunities
3 will be if you don't have the tool in place? I
4 understand the budget and cost may have gone up, but
5 would you agree with me that it's difficult to measure
6 the value of a tool like that if it is to help avoid
7 future costs by increasing cost effectiveness and
8 deployment of capital?

9 MS. DASCHUK: A: What we did do is talk to other
10 utilities that have deployed similar types of tools,
11 and what kind of benefits they achieved from the
12 deployment of those tools. We also talked to them
13 about the technology roadmap that they used and what
14 kinds of technology projects they did first, and
15 second, and third.

16 **Proceeding Time 1:44 p.m. T53**

17 And it was based on that -- those discussions as well
18 with pure utilities that we felt that we were not
19 going to achieve the benefits that we would have
20 otherwise have expected if we did the things in the
21 order in which we had originally concentrated.

22 MR. C. WEAFFER: Q: But at this point we don't know when
23 we will implement a tool to try and address the
24 issues.

25 MS. DASCHUK: A: That's true.

26 MR. C. WEAFFER: Q: Just moving on. The next topic, and

1 just to be clear, I'm not asking about Site C costs.
2 The issue here is the day-to-day operations of BC
3 Hydro given that we now know the costs of Site C. I'd
4 like to get a general understanding as to how this
5 Commission is able to monitor the interaction between
6 what I'm going to characterize as the non-regulated
7 Site C project and the regulated activities of BC
8 Hydro by this Commission.

9 And to give it context, the utilities
10 operating in B.C., from Creative Energy which is
11 seeking approval, to Fortis have transfer pricing
12 agreements and code of conduct with respect to non-
13 regulated versus regulated businesses.

14 So can you just refresh the Commission as
15 to how they can be comforted that activities related
16 to Site C are not creeping into the costs of the
17 regulated utility and vice versa?

18 MR. O'RILEY: A: Well, Mr. Weafer, firstly, I think we
19 would reject the assertion that Site C is a non-
20 regulated asset. It's being built for domestic use
21 and we expect for the life of the asset, the vast
22 majority of the life, the long life of the asset it
23 will be used for domestic supplies, so we are
24 considering it will be part of rate base and will be
25 subject of future revenue requirement applications.
26 So we're not seeing it as a separate entity.

1 I think it is accurate and I think what you
2 are alluding to is there is a different oversight model
3 for the project that's been established by the
4 government and was established many years ago and has
5 been modified over time and we expect that to carry on
6 and be adjusted as see fit.

7 So the impact of the project on the
8 organization is also a good question and an important
9 question. Largely we've allocated resources to manage
10 the project. There's several hundred BC Hydro
11 employees who work on the project and they are
12 supported from time to time by other parts of the
13 organization, the dam safety group, the generation,
14 system operations, the finance group. But largely the
15 heavy workload of delivering the Site C project is
16 staffed on a stand-alone basis. So we don't think
17 that work unduly impacts the rest of the organization
18 and we're able to keep up our service obligations in
19 the remaining five years we have of construction.

20 MR. C. WEAFFER: Q: So just to drill a little deeper on
21 that, when capital projects are undertaken, I
22 understand they are overhead costs charged to the
23 projects which are capitalized. Can you confirm
24 whether or not this is the case with respect to Site C
25 and whether or not these charges remain as a
26 percentage of the capital expenditures?

1 MR. WONG: A: Yes, just speaking to all the costs that
2 Mr. O'Riley was speaking to, they get all capitalized
3 to the Site C project.

4 MR. C. WEAFFER: Q: And in terms of the overhead
5 attributed to Site C -- I mean take for example Mr.
6 O'Riley's time. I have to assume that a fair bit of
7 Mr. O'Riley's time has been taken up by Site C. In
8 fact, I don't know how he does all that he does, and
9 that's a compliment, sir. But how are you managing
10 allocating the costs of, say, Mr. O'Riley between Site
11 C and the day-to-day regulated operations of a
12 utility?

13 MR. O'RILEY: A: I can just speak to that. My time is
14 a hundred percent expensed to operating costs. So I
15 do not cross-charge my time to Site C, and for
16 employees that occasionally support this IT project,
17 like they are managing flows down the Peace River, we
18 do not cross-charge that time.

19 **Proceeding Time 1:49 a.m. T54**

20 But anyone working on the project doing design or
21 environmental work or, you know, typical staff work,
22 that is charged directly to the project as capital.

23 MR. C. WEAFFER: Q: And to the extent those employees
24 spend any time on day-to-day -- and I don't mean to be
25 provocative, but the regulated utility, the operations
26 of BC Hydro, are those charged to a non-Site C

1 account?

2 MR. WONG: A: The people who work on the Site C project
3 specifically, we have a group, 100 percent of their
4 costs would be allocated to Site C.

5 MR. C. WEAFFER: Q: But do you have people who were
6 involved in both and how do -- how does the Commission
7 monitor that, if you do, in terms of appropriate
8 allocation?

9 MR. WONG: A: Yeah, I mean as Mr. O'Riley mentioned,
10 like for myself, I would at times have involvement
11 related to Site C. I see that as part of my overall
12 management of BC Hydro, and as Mr. O'Riley says, given
13 that it would be part of our regulated asset base. So
14 I wouldn't be charging specific time. And so it's
15 really the people who are fully committed 100 percent
16 that are being capitalized to it. As others within
17 the company in the operating side, as you may call it,
18 support the Site C team, we wouldn't be cross-charging
19 unless they would be dedicating a significant amount
20 of their time, like say months or whatever, into the
21 project.

22 MR. O'RILEY: A: And that is the same as for other
23 capital projects. So our operating, planning
24 engineers who have to coordinate the Columbia River
25 and manage around outages and such, they don't charge
26 their time to particular projects that are impacted.

1 So there is good discipline in the organization about
2 when work is charged to capital and when it's charged
3 to operating and that is being applied for Site C as
4 is it's being applied in other projects in the
5 organization.

6 MR. C. WEAFFER: Q: And how does that get monitored in
7 terms of specifically the allocation between Site C
8 and the day-to-day operations of the utility given its
9 modified exempt status at this point?

10 MR. WONG: A: Maybe to address how do we find whether
11 people are spending a lot of time on Site C in the
12 operational side, we would be going through -- our
13 management team would know specifically if there -- a
14 group of people were being allocated over, and then
15 like I said, if they were spending a material amount
16 of time for a duration period, we would then start
17 looking at allocating those costs over.

18 We see if we're -- we basically agree that
19 if it's a general management activity where Site C may
20 come in part of their role, but not a material part,
21 then that would not be allocated. And that is, as Mr.
22 O'Riley says, is something that we would do through
23 all capital projects.

24 MR. C. WEAFFER: Q: So just to summarize, and I
25 appreciate the responses and it's a difficult topic,
26 but we've got a commitment for affordability of rates

1 and we've got low rate applications from BC Hydro, can
2 you help me understand whether there should be a
3 concern for the Commission in terms of whether costs
4 are being borne by Site C that are enabling you to
5 keep rates down on the – for lack of a better term –
6 regulated day-to-day operations of BC Hydro?

7 MR. WONG: A: Well, yeah, I mean the Commission should
8 absolutely ensure that we're doing the appropriate
9 capitalization to the assets. I would like to premise
10 and say that I believe we are. And I think, you know,
11 to try to summarize it is, when it's allocated to the
12 project itself, we capitalize it. If it's a more
13 management, managerial type of oversight or support,
14 then it wouldn't be capitalized. And that's a process
15 that we take a look at and we're very thorough about
16 how we look at what's capital versus non-capital.

17 MR. O'RILEY: A: And the accountability for sure --
18 really you're asking can we be confident in the
19 financial statements of the company and Mr. Ryan and
20 Mr. Wong are responsible for ensuring the financial
21 integrity of the statements and that's reviewed by the
22 Auditor General and signed off. So I think that is
23 where the Commission would get that assurance.

24 MR. C. WEAFFER: Q: Okay, that's helpful. Thank you
25 very much. Moving on. The next topic is IPP and
26 negotiate electric purchase agreements.

Proceeding Time 1:54 p.m. T55

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I don't think you need to turn to it, but it is in Exhibit B-5 and CEC IR 1.21.1. And just dealing with IPPs and cost of energy, BC Hydro is continuing to sign renewals for IPP and in this application I believe there's a Huey Lake renewal and the Coats renewal, is that correct?

MR. O'RILEY: A: Well, we have very few renewals that we're signing. I think both of those are remote communities that -- ask my colleagues here. On the integrated system our plan is to complete the integrated resource plan and one of the topics in there will be providing a context for renewals of IPPs and that approach is really based on the feedback from the Commission in some recent proceedings. So we're not right now looking at a number of renewals and I think those were, the one you quoted, were very particular specific cases.

MR. C. WEAFFER: Q: No, no, thank you. So moving to the forecast of actual costs for negotiated EPAs, in response to CEC IR 1.21.1 it's apparent that for fiscal 2020 for the negotiated EPAs they were 41.4 million in excess of the anticipated fiscal 2020 approval. And there was some explanation provided to that in the IR, but I'd just like to get a little more -- a better understanding of that significant variance

1 in relation to these negotiated EPAs. Is there
2 someone who can address that?

3 MR. O'RILEY: A: We'll take an undertaking on that, Mr.
4 Weafer.

5 **Information Request**

6 MR. C. WEAFFER: Q: Okay. And there's a trend that
7 we're concerned with, and again it may be an
8 understanding issue with respect to these negotiated
9 EPAs. The fiscal 2020 plan for negotiating the EPA
10 costs is expected to be 72.5 million in excess of the
11 fiscal 2021 approved level. And apparently it's
12 driven by three Hydro projects and a solar project.
13 And essentially, to move to the question and I'm not
14 sure we need the undertaking, as -- how is BC Hydro
15 addressing what appear to be fairly significant
16 variances forecast to actual in these purchase
17 agreements? What steps are you taking to mitigate
18 those results?

19 MR. O'RILEY: A: Well, these, in general we're applying
20 the contracts, right? So what can bear -- typically
21 these contracts are unit based contracts that based on
22 the amount of supply available, whether it's hydro or
23 wind, we take all the output of them. So typically if
24 there's a variance between actual and planned or
25 forecast, it's because the conditions were different.
26 And we've seen that in wet years and dry years,

1 as well. Is that fair?

2 MR. O'RILEY: A: Oh, absolutely. And the whole
3 question of renewals is a really important topic and
4 how we think about those in periods when we are
5 surplus versus deficit, absolutely.

6 MR. C. WEAFFER: Q: Okay, thank you for that. I'll move
7 on from that topic.

8 The next is, I think, a fairly
9 straightforward question and it relates to the COVID
10 costs and just a clarification that investment -- and
11 again I appreciate the efforts of Hydro across all
12 classes in the COVID environment. There was
13 materially more expenditure on the residential class
14 than on the commercial class. The cost recovery from
15 COVID expenses, are they recovered on a class basis?

16 MR. LAYTON: A: This is Ryan Layton speaking. They
17 are not. They are by order-in-council from the
18 provincial government to be recovered from all
19 ratepayers.

20 MR. C. WEAFFER: Q: Thank you. Moving on to DSM and
21 this is probably for Mr. Hobson, I assume.

22 MR. HOBSON: A: I'll hear your question, Mr. Weafer,
23 and I assume you're right.

24 MR. C. WEAFFER: Q: Well, I hope so. I hope so, and
25 it's Exhibit B-5, and we have a number of questions in
26 terms of commercial customer DSM. In particular, and

1 I don't think you'll need to turn to it, but Exhibit
2 B-5, CEC IR 1.64 which states that commercial and
3 light industrial DSM have the highest ratio of cost
4 and benefits, the MTRC test of 2.7 and the highest UC
5 test of 2.5. Does that ring accurate to you?
6 MR. HOBSON: A: The reference doesn't. So you lost me
7 on that.
8 MR. C. WEAFFER: Q: I'm sorry.
9 MR. HOBSON: A: 1.6.4?
10 MR. C. WEAFFER: Q: Yeah, CEC IR 1.64, I apologize.
11 Exhibit B-5, CEC IR 1.64. Sorry if I misspoke.
12 MR. HOBSON: A: No, that's okay. We're just getting
13 the IR. Okay, I've got the IR reference now.
14 MR. C. WEAFFER: Q: And have I reflected those numbers
15 accurately, that those results are quite positive for
16 commercial and light industrial DSM?
17 MR. HOBSON: A: The 2.5 and 2.7? Is that your
18 reference?
19 MR. C. WEAFFER: Q: Yes.
20 MR. HOBSON: A: Yes, those are positive values.
21 MR. C. WEAFFER: Q: The most positive values, you'd
22 agree?
23 MR. HOBSON: A: Within that table, yes.
24 MR. C. WEAFFER: Q: Okay, so there is benefit to
25 investment in DSM for those customers it would appear
26 based on those results.

1 MR. HOBSON: A: There's benefit in DSM for all of our
2 customers in the portfolio and including the
3 commercial sector.

4 MR. C. WEAFFER: Q: Right. And would you agree with me
5 that commercial sector DSM has declined from 2017
6 actual of 34.5 million to the 2021 updated forecast of
7 16.8 million and for the fiscal '22 plan to 16.6
8 million. Do those numbers --

9 MR. HOBSON: A: Yes. Your numbers are correct and I
10 think we've gone through in past applications some of
11 the reasons for the declines. But you are accurate
12 with your numbers.

13 MR. C. WEAFFER: Q: Right, and given the discussion
14 earlier with Mr. O'Riley and the fairly challenging
15 state of many sectors of our economy, would you agree
16 with me that investment in DSM may prove to be a
17 valuable benefit to customers in that sector who may
18 be able to (audio drops) conservation to the benefit
19 of BC Hydro and to their own benefit?

20 MR. HOBSON: A: I do think there's value to customers
21 that participate within the initiatives and that's
22 across all sectors. I would point you back to the
23 moderation approach that we've been following over the
24 past couple of applications and I think we've outlined
25 it again in BCUC 1.69.1. There's a number of things
26 that we trade off within that and cost effectiveness

1 is one of those things.

2 MR. C. WEAFFER: Q: In one of the responses to our IRs
3 you indicated the commercial DSM sectors in DSM
4 investment has decreased, and that was in response to
5 the COVID-19 pandemic. Was that part of the reason
6 for the reduction?

7 **Proceeding Time 2:03 p.m. T57**

8 MR. HOBSON: A Yeah, I think if it's the IR I'm
9 remembering, there is a few offsetting changes within
10 the commercial sector, but the variance of the half a
11 million dollars that you were referring to, I think
12 aligns with the half a million dollar line item that
13 we have for COVID.

14 I should mention across all our sectors, as
15 we've gone in to F22, we've looked at Fiscal '22 and
16 we've looked at the potential impacts for COVID, and
17 we've taken that into account in arriving at our
18 values for this application. But we also recognize
19 that there is still a fair bit of uncertainty that
20 comes with COVID-19 impacts that we're still going to
21 need to be able to respond to as we go through the
22 upcoming fiscal period.

23 MR. C. WEAFFER: Q: In terms of the commercial sector
24 seeking more investment in DSM by BC Hydro, how do we
25 most effectively cause that to happen?

26 MR. HOBSON: A Well, I think the question of the level

1 of DSM is really a question for the next IRP. So,
2 when we take a look at the moderation approach, the
3 moderation approach is about striking the right
4 balance, making sure that we've got broad
5 opportunities for customers to be able to participate
6 in our programs, making sure that we have the
7 capability of ramping up if needed, making sure that
8 we are using our market price against utility costs to
9 ensure that we are not having an upward pressure on
10 revenue requirements, recognizing the DSM in the
11 surplus environment comes with a rate impact. And we
12 consider a number of other things around market
13 opportunities and different policy constructs from
14 government and decisions from the Commission.

15 But with all that, we are striking a
16 balance. And I think the thing that you should point
17 to is really the upcoming integrated resource plan,
18 because that's where I think we'll have the
19 opportunity to say what is the level of DSM that we're
20 going to move forward with beyond Fiscal '22. Is it a
21 higher level? A lower level? What are we striving
22 for? And I think it really is the question for that
23 particular process.

24 MR. C. WEAFFER: Q: But Mr. Hobson, you've halved your
25 DSM investment (audio drops) commercial sector of the
26 evidence is that it's positive in terms of the tests,

1 and we've got a situation now where professional
2 customers are struggling, and DSM may be an
3 opportunity to help them, and Mr. O'Riley said, try
4 and reinvigorate the B.C. economy, be back better.

5 Is that -- does that create an opportunity
6 for more immediate action, as opposed to waiting two
7 or three years to the completion and result of an IRP
8 process?

9 MR. HOBSON: A Yeah, I mean there are some measures
10 that we took, and I think we've outlined those in an
11 IR to BCUC's 1.68.1, I believe, that talks about some
12 of the steps we took with incentives for some programs
13 within fiscal periods. But we are not looking at our
14 DSM initiative as a COVID relief initiative. I think
15 there is other COVID relief initiatives within BC
16 Hydro that were put in place, and those have been
17 outlined. But the balance that we've been operating
18 to has been around that moderation approach, and it
19 has been to strike the right balance in terms of
20 creating the broad set of opportunities, and then
21 balancing some of these other factors in advance of
22 the next integrated resource plan, which would explore
23 those levels.

24 MR. C. WEAFFER: Q: You'd agree with me the moderation
25 approach was struck before COVID-19 struck?

26 MR. HOBSON: A Yes, I absolutely would agree with you.

1 front of me. So can you repeat your question, Mr.
2 Weafer?

3 MR. C. WEAFFER: Q: Certainly, the 2018 forecast for the
4 period through to 2024 shows that the prior
5 forecasting has proven to be higher than the current
6 circumstances, would you agree with that?

7 MR. RICH: A: What do you mean by "current
8 circumstances"? It's higher than the current
9 forecasts.

10 MR. C. WEAFFER: Q: Yes.

11 MR. RICH: A: Yes, that's correct. It's projections
12 were higher than the current March 2020 forecast is
13 projecting.

14 MR. C. WEAFFER: Q: Right. And the 2020, March 2020
15 forecast for 2021 through to 2024 is higher than the
16 relevant forecast made in October 2018. The COVID-19
17 forecast A is significantly lower than the 2018
18 forecast and, of course lower than the 2020 forecast.

19 MR. RICH: A: That's correct.

20 MR. C. WEAFFER: Q: And would you agree also that the
21 COVID-19 forecast B is significantly lower than the
22 COVID-19 A forecast?

23 MR. RICH: A: That's correct.

24 MR. C. WEAFFER: Q: And would you agree that these
25 declines relate to short-term realities for
26 electricity usage and anticipate some longer-term

1 carry-over effects?

2 MR. RICH: A: Yes, depending on the sector, yes. So
3 residential is actually a positive increase, but the
4 other sectors, a short term decline with a recovery.
5 And in the large industrial sector we assumed a
6 permanent closure, so that carries through beyond the
7 current forecast test period.

8 MR. C. WEAFFER: Q: Is it true that the recovery time
9 that is now expected is expected even slower than the
10 COVID-19 forecast A and B?

11 MR. RICH: A: I would say the recovery time is slower
12 relative to scenario A in the sense that scenario A,
13 for example, assumes that life generally returns to
14 pre-pandemic levels and people are back to work. And
15 as evidenced by this virtual workshop, that's clearly
16 not the case yet. But I think the scenario B
17 narrative assumes that things are more dire than they
18 are today.

19 MR. C. WEAFFER: Q: Okay. Can you confirm that for this
20 rate application BC Hydro is using the COVID-19 A
21 forecast or is it something different?

22 MR. RICH: A: It's using the A scenario.

23 MR. C. WEAFFER: Q: Thank you. My last topic is a
24 follow up from Mr. Keen and an undertaking request.
25 And this was on the future borrowing and hedging. And
26 as we understand it, the hedging was done for

1 certainty of interest rates up to 75 percent of
2 anticipated borrowing, is that correct?

3 MR. WONG: A: Yeah. It's David Wong here. Yes.

4 MR. C. WEAFFER: Q: Okay. Would you be able to provide
5 through an undertaking the difference between the
6 actual achievable rates with hindsight and the hedged
7 cost?

8 MR. WONG: A: Sorry, you have to repeat. I'm trying to
9 understand what your question is.

10 MR. C. WEAFFER: Q: We're looking at the difference
11 between what you hedge at versus what occurred in
12 terms of interest rates since the point in time you
13 made the hedge.

14 MR. WONG: A: Okay, so assuming nothing was hedged,
15 what's the difference? Is that what you're asking?

16 MR. C. WEAFFER: Q: Yes.

17 MR. WONG: A: Okay, we can --

18 MR. O'RILEY: A: Or did we pick the bottom? Are you
19 asking that?

20 MR. C. WEAFFER: Q: Sorry?

21 MR. O'RILEY: A: If we picked the bottom of the curve
22 that Mr. Keen showed, is that what you're referring
23 to, or?

24 MR. C. WEAFFER: Q: No, I'm looking to what would have
25 been -- if you had actually operated without the
26 hedge, what would your cost of borrowing be for that

1 MR. SANDVE: Thank you very much, Mr. Weafer.

2 Next on the agenda is MoveUP, but, Mr.

3 Chair, you had asked us to canvass with Mr. Andrews
4 from BCSEA previously when he was on the line in terms
5 of if he had any other questions and I understand that
6 he does have a quick point to raise. So, Mr. Andrews,
7 perhaps we'll go to you now, and then to MoveUP, and
8 then Ms. Worth, if you're ready to resume your
9 questions after MoveUP, perhaps we could go to you
10 after that.

11 But Mr. Andrews?

12 MR. ANDREWS: Thank you. Bill Andrews for BC
13 Sustainable Energy Association. I'd just like to
14 confirm for the record that the reference that I made
15 during my questions was regarding the herbicides and
16 vegetation management, is to BCSEA 1.15.1 and
17 following in Exhibit B-5 and PDF page 421. I don't
18 have any further questions. Thank you for this
19 opportunity.

20 MR. SANDVE: Great, thank you. Okay, so next is
21 MoveUP, Mr. Quail.

22 **QUESTIONS BY MR. QUAIL:**

23 MR. QUAIL: Q: Yes. And I'll be brief. I'd like to
24 make just a brief comment, I'll avoid becoming a
25 witness in this, but on vegetation management I've
26 been living on Gambier Island for the last several

1 months keeping away from viruses and things. In the
2 windstorm we had a while ago our power was out for two
3 days, there were trees down all over the place, very
4 hazardous situations with -- along the roadways with
5 trees down on the lines. And I could tell you the
6 community here would be very grateful for more
7 proactive work to keep things clear. I'll just leave
8 it at that. Sometimes this is dealt with in sort of
9 an abstract question, but for people who rely on the
10 power to pump their water and all these other basic
11 necessities of life, it's very important.

12 I have a question regarding workplace
13 safety. And then I've got some questions regarding
14 cyber security issues. And I think I've crossed
15 everything else off my list as we've gone through
16 things today.

17 Workplace safety, references to Exhibit B-
18 4, the responses to the Commission staff IRs, at PDF
19 page 210, that is IR 1.20.3. And in this one this
20 addresses Hydro's standing in relation to its peers in
21 the Canadian Energy -- Electricity Association when it
22 comes to workplace accidents. And there's a chart
23 that's provided there showing when it comes to lost
24 time BC Hydro is about double sort of the peer
25 average, and when it comes to all injury frequency is
26 roughly 50 percent worse. This was dealt with I think

1 by Ms. Peck at a very high level, not drilling down to
2 these issues.

3 First question is whether BC Hydro has set
4 a specific target of coming into line with the CEA
5 peers when it comes to workplace safety standards?

6 MS. PECK: A: Thank you for the question. It's Kirsten
7 Peck. We haven't set a specific target with respect
8 to coming in alignment with our CEA peers, no. What
9 we have been focusing on over the prior few years is
10 to decrease the lost time incident ratio frequency and
11 we have been doing that steadily over the years.

12 We have been focusing on decreasing our
13 serious incidents and obviously the fatalities, and so
14 focusing on the stuff that can kill you, per se.

15 **Proceeding Time 2:18 p.m. T60**

16 And now what we are experiencing is a number of what
17 we call slips, trips and falls, or those musculo-
18 skeletal injuries where you're pushing or pulling.

19 So we've been really focusing on winter
20 safety awareness programs, which is typically we range
21 30 to 35 wintertime injuries of that nature, and we've
22 been focusing on decreasing the time that people are
23 off once they do experience an injury because it's
24 healthier for them overall, both mentally and
25 physically, to get back to work as soon as possible.

26 It is hard to compare us to all the peers

1 on that table. There's three other integrated
2 utilities in that table, fully integrated utilities
3 that are about the size of BC Hydro and we do do as
4 well as or significantly better than our peers there.
5 But there's also utilities such an ENMAX in the City
6 of Calgary, which is primarily a distribution utility
7 that has a simpler business.

8 So it's a very dynamic, complex thing to
9 understand the difference between the CDA performance
10 metrics and our performance.

11 MR. QUAIL: Q: Okay, so you wouldn't see that index as
12 being the appropriate benchmark, for example, if a
13 benchmark were required as to measure performance
14 standards of BC Hydro under some kind of regulatory
15 regime that might call for it?

16 MS. PECK: A: It would be a challenge. What I like
17 about it is I like monitoring the trend. So if the
18 CEA utilities are trending downwards, I'd want to be
19 trending downwards with them. And we are trending
20 downwards at a slightly higher rate than the CEA
21 benchmark. So it is helpful, but comparing us
22 directly is not quite apples to apples.

23 MR. QUAIL: Q: Okay, thank you.

24 A couple of matters arising from Mr.
25 O'Riley's comments at the beginning about cyber and
26 other threats and he made a comment, my notice, to the

1 effect that Hydro had had direct experience dealing
2 with what appears to be physical or cyber threats. I
3 don't know if you are able to enlighten us further as
4 to the nature or extent of those. I appreciate there
5 can be sensitivities around it.

6 MR. O'RILEY: A: Well, why don't I start. We publicly
7 announced recently that we experienced a cyber attack
8 at Powertech and that had some cross-over impacts to
9 BC Hydro, and part of the reason we wanted to be
10 public about that is that there were impacts of
11 customers, third-party customers, there were impacts
12 on employees, and we wanted to be clear that the
13 perpetrator had no leverage over us by the fact that
14 it wasn't public and we thought it was appropriate as
15 a public agency that we disclose that.

16 So it's been quite impactful for the
17 business, quite a learning exercise for all of us.
18 It's been an opportunity to put in action our incident
19 response plan and we've been working BC Hydro very
20 closely with Powertech to respond to the incident.
21 We've got our external contacted expert, our breach
22 coach helping us, and we are focused on the forensic
23 identification of what happened. I think we are well
24 along the path there.

25 We are looking at assessing the risk of
26 restarting various systems and returning to normal

1 operation and we're well along there as well, and
2 we're dealing with the impacts of the information that
3 was taken, and consequences for the business and
4 there's some impacts with third party customers with
5 BC Hydro and with individuals, personal information.
6 So we're dealing with all of that.

7 So it's been quite an experience and just a
8 real cautionary tale about the hazards that we face in
9 this world today.

10 MR. QUAIL: Q: You anticipated exactly where I was
11 going with the balance of my questions and
12 instructions about the breach of Powertech and
13 apparently employee personal information was
14 compromised. I don't know to what extent and possibly
15 not in the forum you can enlighten us about to what
16 extent this is potentially a portal into, or serious
17 strategic vulnerabilities of the grid?

18 **Proceeding Time 2:22 p.m. T61**

19 MR. SANDVE: Yeah, we probably want to avoid that
20 discussion, but we think we have managed that issue.
21 Maybe I'll just say that.

22 MR. QUAIL: Q: Okay, those are all my questions, thank
23 you very much.

24 MR. SANDVE: Thank you, Mr. Quail.

25 We had planned to take a break at 2:30.
26 We're running a bit ahead of that at the moment. What

1 I might suggest, if it works for you, Ms. Worth, is
2 that we go to you now to resume your questions, and
3 get started with that, and then take a break and
4 resume after the break if necessary. Does that work
5 for you, Ms. Worth?

6 MS. WORTH: Certainly, thank you.

7 MR. SANDVE: Okay, go ahead.

8 **QUESTIONS BY MS. WORTH (Continued):**

9 MS. WORTH: Q: I need to orient myself in my new and
10 shortened list of questions. Thank you.

11 Again, Leigha Worth, asking questions on
12 behalf of the residential ratepayer group known as
13 BCOAPO et al. And I'm going to be asking about the
14 residential load forecast. And basically I'm going to
15 start by noting that for Fiscal 2022, the COVID-19
16 scenario A returns to the March 2020 load forecast,
17 and then the table that BC Hydro provided in response
18 to our IR, BCOAPO IR 1.13.2 in Exhibit B-5, did a good
19 job of comparing the elements of the current Fiscal
20 2022 forecast with those from the previous
21 application, which was based on a March 2018 load
22 forecast. And the table shows the overall Fiscal 2022
23 residential load being projected higher than it was in
24 the previous forecast, and largely due to -- and
25 correct me if I'm wrong, according to this table, a
26 higher number of accounts, a higher EV loads, and

1 lower reductions in electricity use traceable to rate
2 impact. But also, because of a growth in the number
3 of forecast residential accounts. Is that a fair kind
4 of summary of this?

5 MS. DASCHUK: A: I'd like to ask Mr. John Rich to
6 answer that please.

7 MR. RICH: A: Yes, John Rich here. Yes, Ms. Worth,
8 that was a pretty good summary.

9 MS. WORTH: Q: Okay, and I wanted to just confirm with
10 you that the situation, because the last row of that,
11 expresses the percentage of deltas? So that's
12 basically -- that is the Fiscal 2022 delta between
13 COVID-19 scenario A and the October 2018, is that
14 right? (Inaudible) a lot of playing with a calculator
15 in order to figure out what a percentage of delta was.

16 MR. RICH: A: It's John. Yes, that's correct.

17 MS. WORTH: Q: Okay, and in places like in the rate
18 impacts with the percentage of deltas, where that
19 varies slightly from the figure that you might get
20 from what is expressed in that table, is that simply
21 due to rounding?

22 MR. RICH: A: Subject to check, it probably is.

23 MS. WORTH: Q: Okay.

24 MR. RICH: A: Yeah, sorry to interrupt, yeah, it
25 probably is, but I can check that.

26 MS. WORTH: Q: Well, I didn't do it for all of them,

1 but I noticed that when I did the percentage of deltas
2 for the rate impacts gigawatt hours, my figure varied
3 slightly from yours. So I was just wondering if there
4 were any other instances in there when I'm going
5 through it, where it does vary that it would be solely
6 do to kind of rounding in the figures that had been
7 presented in the first three rows where you've given
8 figures for the forecasts? If I could have a
9 confirmation of that, that would be great. I don't
10 anticipate there will be any significant differences,
11 but I just want to make sure that if there is a
12 difference, it is solely due to that.

13 MR. RICH: A: Sorry, I'm not sure what your question
14 is. Just to confirm that any differences with what
15 you have are due to rounding?

16 MS. WORTH: Q: Yes.

17 MR. RICH: A: Could you send me yours so I have
18 something to compare to?

19 MS. WORTH: Q: Okay, I'll give you a quick -- so the
20 percentage of deltas is basically you take the first
21 value, is you track the second value.

22 **Proceeding Time 2:27 p.m. T62**

23 Then you take the answer, divide that by the first
24 value and multiply it by a hundred and that gives you
25 a percentage expression of the difference between the
26 two numbers. Thank you, Google.

1 updated information into this subsequent March
2 2020 load forecast which is the basis for
3 developing the COVID-19 scenario A."

4 But when I'm looking at this table, the adjustment for
5 codes and standards impact in fiscal 2022 looks lower
6 than the current forecast than it was in the October
7 2018 load forecast, and I'm wondering can you either
8 show me why my read of that is wrong or explain why
9 that is the case?

10 MR. RICH: A: I'd have to take that to confirm, but I
11 suspect because it's relative to a smaller incremental
12 DSM assumings for that year relative to the October
13 2018 forecast.

14 MS. WORTH: Q: Okay, would you be able to provide a
15 full answer to that in an undertaking?

16 MR. RICH: A: Sure. So you're asking to confirm why
17 the estimated codes and standards overlap appears to
18 be lower notwithstanding our methodologies suggest
19 that there was a greater overlap between the two
20 forecast vintages.

21 **Information Request**

22 MS. WORTH: Q: Yes.

23 MR. RICH: A: Yes.

24 MS. WORTH: Q: Okay, thank you. I'm going to be moving
25 onto light industrial and in the application we've
26 seen that there's the light industrial model

1 projections which, you know, unsurprisingly are driven
2 by the GDP forecast, and the ones used in the
3 application were minus 7.3 percent for fiscal 2021 and
4 2 percent for fiscal 2022. And the negative 7.3
5 percent GDP forecast was based on a forecast that was
6 made at the start of the pandemic, while the 2 percent
7 is simply the GDP growth for fiscal 2022 that was used
8 in the March 2020 load forecast.

9 So I'm looking at BC Hydro's response to
10 Exhibit B-5 and that's our IR 1.15.7, where we ask for
11 more recent GDP forecasts, okay? And we have the BC
12 Hydro GDP COVID-19 Scenario A, so it's what was used
13 in that in the application. Then we've got the
14 Conference Board of Canada or the CBoC report from
15 August 2020, the CBoC Report from January 2021, the
16 Ministry of Finance update from July 2020. We've also
17 got another one from the -- an update for T1, which is
18 September 2020 and we've got the follow-up date which
19 was given in December 2020.

20 And I note across the board, not only are
21 they all less pessimistic about GDP decline for 2020,
22 but they are also more optimistic about the recovery
23 that will be experienced in the following year. And
24 the response that BC Hydro gave to BCOAPO IR 1.15.7
25 acknowledged that there's a bounce back expected.

26 **Proceeding Time 2:08 p.m. T63**

1 "Specifically it said Scenario A reverted to the
2 Ministry of Finance Q2 November 2019 forecast
3 for calendar year 2021 which was used for the
4 March 2020 load forecast. Scenario A is a more
5 conservative --"

6 or, sorry,

7 "...is more conservative in its GDP estimate for
8 calendar year 2021 than the CBoC or Ministry of
9 Finance reports because it does not account for
10 a post-pandemic recover effect. Generally sharp
11 declines in GDP are followed by stronger than
12 average recoveries."

13 So given BC Hydro's statement there, would
14 BC Hydro be willing to re-estimate the light
15 industrial load for fiscal 2021 and 2022 based on the
16 Ministry of Finance's December 2020 fall update?

17 MS. DASCHUK: A: Hi, this is Maureen Daschuk speaking.
18 We believe that the current scenario A is a reasonable
19 forecast on which to base a one-year revenue
20 requirement application. There are a number of
21 factors that go into creating a load forecast and this
22 particular scenario A has been tracking very well.
23 And in fact over the ten months we are within one
24 percent and slightly better.

25 Also, any differences between the load
26 forecast that we have and the actual revenue would be

1 caught in deferral accounts.

2 We're also in a period of very high
3 uncertainty and so for us to try and predict the
4 various levels of uncertainty, it's going to have very
5 limited to no value for -- we believe. Also, just as
6 a reminder, we're filing our next revenue requirements
7 application in the summer, likely in August. That
8 revenue requirements application is going to be based
9 off a new load forecast that we've just recently taken
10 to our board of directors. And we found that there's
11 very little difference between our forecasts.

12 So, you know, I think that it's not
13 something that we would consider would have any type
14 of an impact on this revenue requirements application.

15 MS. WORTH: Q: Would you then be willing to file in an
16 undertaking a document that shows the tracking that
17 you're talking -- that you've referenced, that within
18 the last, I think, ten months you said it's tracking
19 within one percent? Would you be willing to file that
20 on the record in this revenue requirement?

21 MS. DASCHUK: A: Yes, we can file that.

22 MS. WORTH: Q: Thank you.

23 MR. RICH: A: It's John. I think it's actually on the
24 record for the --

25 MS. WORTH: Q: Is it? My apologies if it is.

26 MR. RICH: A: Yeah, for ten months. I would have to

1 find the reference but I think it's there.

2 MR. WONG: A: I think, John, we have something in the
3 application out to a period, it may be about
4 September, but we can provide all the way out to
5 January.

6 MR. RICH: A: I think we do have an IR response that
7 goes right up to ten months but --

8 MS. DASCHUK: A: Irrespective, we'll commit to
9 providing it. Either it's already there and we'll
10 make reference to it or we'll provide it.

11 **Information Request**

12 MS. WORTH: Q: Thank you very much, I appreciate that.
13 And my apologies, I did somehow miss that.

14 MR. RICH: A: And Ms. Daschuk is right, it's tracking
15 to within 0.7 percent up to ten months. So with one
16 or two months left to go it's tracking very closely.

17 MS. WORTH: Q: All right, that's great. Okay, thank
18 you.

19 Now, I have a question about the large
20 industrial load forecast and I'm not going to be
21 asking any undertakings if anybody's worried about
22 that. So I know that for the large industrial sector
23 BC Hydro undertook an account by account assessment
24 for each of the two scenarios. And that's actually
25 something that we are quite pleased about. And then
26 they've provided a table, they compared scenario A in

1 the fiscal 2022 forecast with the March 2020 forecast.
2 And then also with that from the previous application
3 and they provided a workup for that in response to
4 BCUC IR 1.13.1 in Exhibit 4.

5 Now, I just have a question, it may not
6 require reference to that but I thought it important
7 to kind of let you know where I'm coming from here.

8 **Proceeding Time 2:36 p.m. T64**

9 In BC Hydro's view, would a stronger than
10 average recovery lead to a higher Fiscal 2022 load
11 forecast for the large industrial sector under
12 scenario A?

13 MR. RICH: A: So, your question is, all other things
14 being equal, a faster than expected economic recovery
15 would lead to a larger -- a higher large industrial
16 load than what's currently reflected in scenario A?

17 MS. WORTH: Q: Yes, that is my question.

18 MR. RICH: A: Yes, all other things being equal,
19 recognizing that we are still in a significant period
20 of uncertainty.

21 MS. WORTH: Q: Okay, thank you.

22 MR. SANDVE: Ms. Worth, can we all interject here --
23 sorry, I apologize, I am wondering if this might be a
24 good time to take a break? If not, and there is a few
25 more connected questions, maybe once you're done that
26 set if we could take a break? Following that, I'll

1 leave it in your hands.

2 MS. WORTH: No, absolutely, I was moving on to another
3 subject, so this is a perfect time, thank you.

4 MR. SANDVE: Great, thank you. We'll take a break here
5 then. It's 2:37 p.m., I'll suggest that we resume at
6 2:50, 2:50 p.m., for about a 12 minute break.

7 **(PROCEEDINGS ADJOURNED AT 2:37 P.M.)**

8 **(PROCEEDINGS RESUMED AT 2:50 P.M.)** **T65/66**

9 MR. SANDVE: We'll get going again. John Rich, are you
10 back, or D17 in general?

11 MR. ANDERSON: Chris, it's Keith. He just stepped away
12 for a minute.

13 MR. SANDVE: Okay, no problem. And Ms. Worth, are you
14 back and ready to resume?

15 MS. WORTH: Yes, I am.

16 MR. SANDVE: Okay, and are you still on load forecasting?

17 MS. WORTH: No, I've moved off --

18 THE CHAIRPERSON: Hold on. Hold on. Hold on a minute.

19 MR. SANDVE: Sorry, Mr. Chair.

20 THE CHAIRPERSON: Sorry, the panel was not all here. We
21 are now, thank you.

22 MR. SANDVE: I apologize. Sorry, I should have checked
23 that.

24 Okay, Ms. Worth, if you're going to a
25 different topic besides load forecasting, I'd heard
26 that Mr. Rich wasn't quite back yet, but if you're on

1 a different topic that might not matter. So over to
2 you.

3 MS. WORTH: Q: I am actually moving on to the issue of
4 Heritage energy, and basically I was looking at the
5 application, Exhibit B-2, page 4-6 and there's a table
6 there, Table 4-2, and it describes the cost of
7 Heritage energy and breaking out the cost of water
8 rentals and natural gas for thermal generation,
9 domestic transmission and other, then Columbia River
10 treaty and related agreements and remissions.

11 So my question is to do with the natural
12 gas for thermal generation costs. And basically my
13 understanding was that the increase of natural gas for
14 thermal generation was driven by a higher volume of
15 thermal generation at the Fort Nelson generating
16 station, is that correct?

17 MR. O'RILEY: A: This is Chris O'Riley. I believe
18 that's the case. We don't really have a witness here
19 for operations, so I'll do the best I can.

20 MS. WORTH: Q: Okay, I appreciate that, Mr. O'Riley.
21 The way that I came to that was that in response to
22 our IR, BCOAPO 1.23.2 in Exhibit B-5, BC Hydro's
23 response was the Fort Nelson generating station
24 experienced capacity deratings, as well as planned and
25 forced outages in fiscal 2021 that led to reduced
26 generation. Similar reductions were not included in

1 the fiscal 2022 forecast, and that was in response to
2 our question about the increased cost of gas that was
3 provided in the application. So.

4 My follow-up though is, in Exhibit B-2-2,
5 Schedule 4, line 2 of Appendix A, there's a table that
6 shows the thermal generation for fiscal 2022 as being
7 significantly higher than the actuals for either
8 fiscal 2019 or fiscal 2020 as well.

9 MR. O'RILEY: A: So you're asking to rationalize that
10 or explain that?

11 MS. WORTH: Q: Yes, I'm wondering what is the reason
12 for the increase over those years as well?

13 MR. O'RILEY: A: We would have to undertake to respond
14 to that. I couldn't possibly answer that.

15 **Information Request**

16 MS. WORTH: Q: Okay.

17 MR. O'RILEY: A: Yeah, there is a difference between
18 thermal generation for the company as a whole versus
19 the Heritage because you know, we have two Heritage
20 plants, Prince Rupert and Fort Nelson and then thermal
21 generation for the company includes the Independent
22 Power Producers, Island Generation and McMahon. So
23 Island Generation does vary from year to year based on
24 marketing gas prices and system. Fort Nelson varies
25 from year to year based on the same things. And then
26 Prince Rupert could vary based on outage

1 or at least not to my knowledge, the circumstances
2 that led to -- you know, they had planned forced
3 outages and capacity deratings that were referred to
4 in BC Hydro's response to our IR 1.23.2.

5 So I was asking BC Hydro to explain any
6 differences between the experience in Fiscal 2019 and
7 Fiscal 2020 and what we're looking at as the Fiscal
8 2022, whether that is, you know, Fort Nelson being
9 derated during those years or an increase, solely an
10 increase in generation, or something else.

11 MR. WONG: A: Okay.

12 MS. WORTH: Q So if you could provide whatever
13 clarification that is in an undertaking, that would be
14 helpful.

15 **Information Request**

16 MR. WONG: A: Sure. And your question is about there's
17 Heritage generation which just applies to Prince
18 Rupert and Fort Nelson, and there's our thermal
19 generation which applies to Island generation at
20 McMahon in addition to the other two. So I think
21 we'll go look at that and I think we can answer your
22 question.

23 MS. WORTH: Q Yeah, it's solely to do with the cost of
24 Heritage energy, because that what was referenced in
25 Table 4-2.

26 MR. WONG: A: Okay, okay, so just -- okay.

1 MR. O'RILEY: A: Just Fort Nelson.

2 MR. WONG: A: It should be just Fort Nelson, so we can
3 explain that.

4 MS. WORTH: Q Okay. Okay, great, thank you. I have
5 some quick questions about MRS. I'm pretty sure I got
6 rid of anything that had been covered by others, but
7 if I'm plowing the same fields, please just let me
8 know and we can move on quickly.

9 Has BC Hydro undertaken any internal audits
10 of its MRS activities to determine if they're being
11 carried out efficiently? Not whether BC Hydro is
12 complaint, because of course you'll be doing that on
13 an ongoing basis, but rather whether it's achieving
14 compliance in the most cost effective manner or in a
15 reasonably cost effective manner?

16 MS. PECK: A: Yes, it's Kirsten Peck here. We've only
17 had one internal audit historically that we're aware
18 of which was in 2013. What we're doing right now is,
19 I'd say it's fair to say is inefficient. And we
20 talked a little bit about that in the application as
21 we wanted to improve our approach to be more
22 systematic and to make sure that were efficient and
23 effective. So we are looking at technology to help
24 provide some automation to some very manual processes,
25 for example, to improve our efficiency. And we will
26 be looking for and are working towards being more

1 late March to April, early April, and so there will be
2 another one in three years, which I would look towards
3 seeing the results in that as well.

4 MS. WORTH: Q Wouldn't that be a compliance audit
5 rather than a cost effective and efficiency audit?

6 MS. PECK: A: And so, yes --

7 MS. WORTH: Q And sort of how BC --

8 MS. PECK: A: Yeah, it's a compliance audit but it
9 would show us the effectiveness of our programs. So
10 not necessarily the efficiency, but definitely the
11 effectiveness.

12 MS. WORTH: Q Okay, but effectiveness is different that
13 cost effective and efficiency. So while I actually
14 appreciate the additional information, it's more sort
15 from a ratepayer perspective we want to make sure that
16 BC Hydro is not only being compliant but also that
17 it's ensuring that it's doing so in an efficient and
18 cost-effective manner. So that was the gist of my
19 question, I'm sorry if it wasn't completely clear.

20 So, now, when you referenced the
21 requirement at BC Hydro to engage in these internal
22 audits every five years, is that for compliance or is
23 that for efficiency and cost effectiveness?

24 MS. PECK: A: Well, it's first and foremost it's for
25 compliance and it's, do you have a framework set up, a
26 governance framework set up, that you're applying and

1 you're doing what you said you were going to do. So,
2 are you complaint and are you governing MRS through
3 your organization as you indicated that you would.

4 In order to look at efficiency of processes
5 you would have to look at your level of efficiency
6 today versus our future goals, say, in three years.
7 And you'd have to do a comparison to see if we're
8 producing the same outcome in a better way, in a more
9 efficient way.

10 MS. WORTH: Q And presumably you could do a backwards
11 looking evaluation as well to provide you with some
12 information upon which to formulate a preliminary
13 analysis as well, right? So it wouldn't be
14 necessarily just what you're doing at the moment, but
15 you could look at previous periods of time and say,
16 you know, during this period of time this is sort of
17 the efficiency and cost effectiveness evaluation and
18 then you could compare that to the present and then
19 use that as a measuring stick, I guess, against which
20 you could measure what's happening at BC Hydro going
21 forward.

22 MR. O'RILEY: A: It's Chris O'Riley here. I think what
23 we're coming to realize here is that efficiency and
24 effectiveness go hand in hand with this. So I think
25 you're picking up that the WECC audit, the tri-annual
26 audit, is going to focus on effectiveness and

1 compliance. We have flexibility with our internal
2 audit to define it more broadly and we could certainly
3 commit to when we do the internal audit, and I think
4 we have to give ourselves a bit of runway here to
5 focus on both aspects, efficiency and effectiveness.
6 And I think that would be a reasonable thing for us
7 all to be pursuing.

8 MS. WORTH: Q Okay. And by "effectiveness" do you mean
9 cost effectiveness?

10 MR. O'RILEY: A: No, I mean compliance. Like, do we do
11 the -- are we doing the job? I think efficiency gets
12 at the cost effectiveness, bigger aspect of it. So if
13 efficiency, you know, are we doing it in a -- you
14 know, are we spending the right amount of money, the
15 right amount of resources. Effectiveness, are we
16 achieving the goal of compliance, right?

17 MS. WORTH: Q Okay, all right. Well, if that's how BC
18 Hydro is defining effectiveness then that addresses
19 the ratepayer concern.

20 **Proceeding Time 3:05 p.m. T69**

21 But what I want to do then is, I notice Ms. Peck had
22 mentioned that the last one was done in 2013, and here
23 we are in 2021, and there has not been one done in the
24 meantime. And I can't for the life of me recall
25 whether in the materials on the record right now,
26 explain why there was this period of time where the

1 five year requirement that BC Hydro has was not
2 followed.

3 So I was wondering if you could either
4 refer me to where in the materials that is, or explain
5 why that was not done.

6 MS. PECK: A: Sure, I'd have to explain why it hasn't
7 been done.

8 So, as part of the improvements that we've
9 been talking about, through the application, through
10 the public part of the application, we have revised
11 the governance framework. And I'm referring to a
12 framework that is approximately a year old, June of
13 2020, that has that requirement in it. So that
14 requirement didn't exist prior to June of 2020, as far
15 as I know.

16 MS. WORTH: Q: Ah, okay.

17 MS. PECK: A: Yeah, so sorry, I was more forward
18 looking.

19 MS. WORTH: Q: No, I appreciate that, and that's good
20 information going forward, thank you.

21 MS. PECK: A: Okay.

22 MS. WORTH: Q: Okay, and so that addresses the rest of
23 my questions that I have on that subject.

24 The next set of questions that I have are
25 about labour costs and full time equivalents. In the
26 application and various other places, there are

1 obviously going to be lots of questions and pieces of
2 information that have been provided about this. It's
3 always something that is of great concern to
4 ratepayers, not only residential.

5 But I note that at page 5-89 in Exhibit B-2
6 of the application, BC Hydro states that labour -- or
7 sorry, operating labour costs are increasing by 38.8
8 million to 33.6 million due to the increase in its
9 current service costs, and 5.2 million due primarily
10 to the 2 percent wage increase. And I am wondering
11 where in this breakdown the 9.9 million associated
12 with the additional 78 operating FTEs is included?

13 MR. LAYTON: A: Yeah, hi, Ms. Worth, this is Ryan
14 Layton speaking. In that table here, where we just
15 outlined those two items, the costs related to the
16 FTEs are included in our other Chapter 5 tables within
17 the functions to which they relate, whether that be
18 cyber, whether that be MRS, whether that be
19 vegetation.

20 MS. WORTH: Q: Okay, all right, thank you. I'll move
21 on from that. I've got a question about trade income.
22 The response to BCOAPO IR 1.62.1, in Exhibit B-5
23 explains that the \$55.7 million difference between the
24 6.7 million recorded as an addition to the trade
25 income variance account in Appendix A, and that's
26 schedule 2.1, line 17, and the 13 million referenced

1 in the current application is due to the impact of
2 Directive 53 of the BCUC's decision on the previous
3 application. And that required BC Hydro to update its
4 planned trade income for Fiscal 2020 and Fiscal 2021,
5 using a five-year average of actual results from
6 Fiscal 2015 to Fiscal 2019, rather than using the
7 Fiscal 2014 to Fiscal 2018 actuals, as had been done
8 in the previous application.

9 And I'm just going to, as an aside here,
10 apologize on behalf of my cat which seemed to be
11 making a lot of noise at the moment, if anybody is
12 distracted by the racket going on in the background.

13 As a result of this change, the planned
14 trade income increased from 120.6 million to 176.3
15 million for each Fiscal 2020 and Fiscal 2021, and that
16 added up to the 55.7 million for each year of the test
17 period.

18 So, because BC Hydro's Fiscal 2020 audited
19 financial statements were finalized prior to the
20 BCUC's decision on the previous application, the
21 adjustments related to fiscal 2020 were made in Fiscal
22 2021, and therefore the Fiscal 2020 actual column of
23 Appendix A in the application was not updated for the
24 impacts of BCUC's decision. Instead in this
25 application BC Hydro has included this amount in the
26 Fiscal 2021 forecast column as part of the adjustment

1 to the opening balance shown on Appendix A, schedule
2 2.1, line 16.

3 I feel that should be something there that
4 should be a requirement for pronunciation purposes.

5 **Proceeding Time 3:10 p.m. T70**

6 So however -- I note that the value line 16 is 51.9
7 million there and not 55.7 million and I'm just
8 wondering if you can just clarify why that is the
9 case.

10 MR. WONG: A: We just want to grab Appendix A first.

11 MS. WORTH: Q: Absolutely, take all the time you need.

12 MR. LAYTON: A: Hi, Ms. Worth. Thank you for the time
13 there. We were just looking at Appendix A. This is
14 Ryan Layton speaking by the way.

15 I'm not sure of the answer to your
16 question. I understand your question. I will
17 undertake to give you an answer. And for the record,
18 to make sure I'm understanding what you're looking
19 for, we're referencing BCOAPO IR 1.62.1 and we're
20 comparing that to Appendix A, Schedule 1, page 3, row
21 16, the F21 difference column which shows \$51.9
22 million and your question is to reconcile why those
23 are not the same amount. Is that a fair summary?

24 **Information Request**

25 MS. WORTH: Q: That is, thank you.

26 MR. LAYTON: A: Okay, we'll undertake to provide that.

1 MS. WORTH: Q: Okay, thank you very much.

2 I will move on from that and go to return
3 on equity and basically until a return on equity is
4 set going forward, because it's no longer prescribed
5 by Direction Number 8, it's apparent that BC Hydro
6 continues to forecast its return on equity to collect
7 sufficient revenue to achieve an annual rate of return
8 on deemed equity to yield a distributable surplus of
9 712 million and that's being done for fiscal 2022
10 based on a 30 percent deemed equity as was prescribed
11 by Section 3 of Direction Number 8 for fiscals 2020
12 and 2021.

13 So I'm wondering since we have not seen BC
14 Hydro's cost of capital application, it's not evident
15 from the application itself -- or sorry, it isn't
16 evident from the application -- that the application
17 itself will address what the appropriate cost of
18 capital in the ROE and capital structures would be for
19 fiscal 2022. So I'm wondering if BC Hydro is
20 committing to ensure that their study addresses
21 whether -- sorry, addresses a certain point such as --
22 let's see here. Yeah, the ROE and capital structure
23 and then the -- let's see. And I seem to have lost my
24 thought here, sorry.

25 Yeah, so if BC Hydro would commit to
26 ensuring that the study addresses the appropriate cost

1 of capital, ROE and capital structure would be for
2 fiscal 2022. I apologize.

3 MR. WONG: A: It's David Wong here. As I mentioned in
4 my opening comments, we anticipate the application
5 will cover the return percentage capital structure and
6 rate base.

7 MS. WORTH: Q: Okay. All right. Can you please
8 confirm what the 712 million would mean in terms of
9 the ROE percent based on your actual forecast equity
10 for fiscal 2022?

11 MR. LAYTON: A: Ms. Worth, I don't have that at my
12 fingertips and I'm not quite that good at math, so
13 I'll be happy to undertake to provide that for you.
14 But what you are looking for is what the \$712 million
15 would provide based on forecast actual equity in terms
16 of a return on equity percentage, is that correct?

17 MS. WORTH: Q: Yes. Because based on the information
18 we've got, the forecast equity component for its
19 capital structure in fiscal 2022 that you've provided
20 in BCUC IR 11.60.3 was 21.3 percent and based on BC
21 Hydro's actual equity percent, that works out to an
22 ROE of over 14 percent, although that's not math that
23 I would go to the bank with. So I was just wondering
24 if BC Hydro could confirm that.

25 **Proceeding Time 3:16 p.m. T71**

26 What the 712 million means in terms of the ROE.

1 MR. LAYTON: A: Yeah, so just clarifying, if we use 712
2 on a -- in reference to actual equity, what ROE
3 percentage that would be in Fiscal '22?

4 MS. WORTH: Q: Yes.

5 MR. LAYTON: A: Okay, yeah, we'll undertake to do
6 that, sure.

7 **Information Request**

8 MS. WORTH: Q: Thank you. And then I'm wondering if
9 you could also confirm what the average cost of debt
10 is for Fiscal 2022? And that's the average cost of
11 debt, sorry. I think I might have said actual. Of
12 course that's not --

13 MR. WONG: A: Ms. Worth, I think it's about 3 percent,
14 subject to check.

15 MS. WORTH: Q: Okay, thank you. I've got a few more
16 questions. I've gone through a lot of my subject
17 matter, so, so I've got a question about the point-to-
18 point revenues and Powerex. It is my understanding
19 from Exhibit B-2, figure 9-1, that PTP revenues for
20 Fiscal 2022 are 86.3 million, and when I looked at
21 BCUC IR 1.66.5 there is confirmation that the cost
22 associated with the use of BC Hydro's transmission
23 system for system export, pursuant to the OATT, the
24 Open Access Transmission Tariff, is 27.5 million.

25 So, I'm wondering if you can confirm
26 whether that means that the cost to Powerex for the

1 use of the transmission system is 47.7 million?

2 MR. WONG: A: Yeah, we don't have all the material in
3 front of us. Perhaps we will take that as an
4 undertaking and confirm.

5 **Information Request**

6 MS. WORTH: Q: Okay. Just to add to that, if that is
7 not the case, I was just wondering if BC Hydro could
8 breakdown the use PTP revenues as between those that
9 are attributed to BC Hydro versus Powerex, or other
10 OATT customers?

11 MR. WONG: A: Yeah, I believe we can get that
12 information.

13 **Information Request**

14 MS. WORTH: Q: Great, thank you. I just wanted to
15 confirm, because PTP revenues -- or sorry, the
16 variance of PTP revenues from forecast are captured in
17 a regulatory account for either refund or recovery
18 from BC Hydro's domestic customers, whether each of
19 the customers, whether it's BC Hydro, Powerex, or
20 another external customer, is given the same treatment
21 in that particular circumstance?

22 MR. WONG: A: Well, as it relates to Powerex, if there
23 is any inter-company, the one side would be captured
24 on the Heritage accounts. Well, I should say not the
25 Heritage. The deferral accounts on BC Hydro's side
26 versus the trade income deferral accounts for the

1 Powerex side. Of course if the external customer
2 takes more or less transmission, that solely is the
3 ratepayer adjustment, because that is something that
4 we would get from outside.

5 MS. WORTH: Q: Okay. I've been able to kind of defer a
6 bunch of my other questions, so those are everything I
7 have for today. Thank you very much everybody for
8 your patience, particularly since I was the last
9 person to ask questions before lunch, and I am here
10 during the dreaded mid-afternoon period as well, thank
11 you..

12 MR. SANDVE: Great, thank you very much, Ms. Worth.

13 We'll then move to Clean Energy B.C., Mr.
14 Austin.

15 **QUESTIONS BY MR. AUSTIN:**

16 MR. AUSTIN: Q: Good afternoon panel and
17 representatives of BC Hydro. I thank the
18 representatives of BC Hydro in advance for being
19 patient in answering Clean Energy Association of
20 B.C.'s questions.

21 Cover a number of areas, the areas that I'd
22 like to cover in questions are the electrification
23 plan, CleanBC industrial electrification rates, non-
24 treaty storage agreement, weighted average cost of
25 capital, the Northmont May transmission project,
26 point-to-point transmission costs as they relate to

1 exports, Bridge River (inaudible) facility, carbon
2 credits and Powerex. Finally electric vehicles.

3 **Proceeding Time 3:21 p.m. T72**

4 So the first question is, in part a follow-
5 up to an area that Mr. Andrews was asking a question
6 about this morning and it's with respect to Exhibit B-
7 5 and from the Clean Energy Association of B.C.'s
8 perspective, it asked Information Request Number 1.1.6
9 and the representatives of BC Hydro don't have to look
10 at that response to answer the question that's coming.

11 The question I have is, it's the Clean
12 Energy of B.C.'s understanding that the
13 electrification plan is going to be filed as part of
14 the next revenue requirements application, and this
15 afternoon Ms. Daschuk said that revenue requirements
16 application is expected to be filed in August.

17 So the question is what's the relationship
18 going to be between the electrification plan as filed
19 in the revenue requirements application and BC Hydro's
20 integrated resource plan that's expected to be filed
21 in December.

22 MR. O'RILEY: A: It's Chris O'Riley. I can answer
23 that. So the IRP is looking at different scenarios of
24 bode, including different amounts of electrification.
25 So there are scenarios there that represent different
26 success rates, if you will, about electrification.

1 And that is over the long-term because the IRP has a
2 long-term focus. The electrification plan that we are
3 working on is a five-year plan that will describe the
4 efforts we have in different sectors and will include
5 metrics and targets to measure our targets and success
6 and then resources required to do that. So that's why
7 we thought, because of the link to resources, that's
8 why it's appropriate to bring forward as part of the
9 revenue requirement.

10 MR. AUSTIN: Q: I'm a little bit confused because I
11 thought the integrated resource plan would set out the
12 roadmap for BC Hydro's supply, demand and the need to
13 acquire electricity from the date that it was filed.
14 It seems that, at least for the first five years of
15 the electrification plan, which is the length of the
16 plan, it should be fully melded into the integrated
17 resource plan. Is that correct or do I not understand
18 the link between the two?

19 MR. O'RILEY: A: No, I don't think that's correct. I
20 think it's as I described, which was different.

21 MR. AUSTIN: Q: Why wouldn't the electrification plan
22 be fully melded into the integrated resource plan?

23 MR. O'RILEY: A: Well, because we're choosing to put it
24 in the RRA because we think what it represents is a
25 series of actions which require resources which have
26 to be incorporated into budgets, that it makes most

1 sense to put it in the RRA.

2 MR. AUSTIN: Q: The next question that I have is in
3 relation to Exhibit B-5, BC Hydro's response to Clean
4 Energy Association Information Request 1.4.1. There's
5 no need to look up the response because I'm going to
6 read it into the record. And what the Clean Energy
7 Association was asking about is what efforts is BC
8 Hydro going to dedicate to the institution of the
9 Clean B.C. industrial electrification rates in the
10 test period. So the response is:

11 "Please refer to BC Hydro's response to BCUC IR
12 1.8.1 where we discuss how impacts of the clean
13 B.C. industrial electrification rates will be
14 discussed in BC Hydro's next revenue
15 requirements application."

16 The Clean Energy Association of B.C. would like to
17 know what efforts that BC Hydro is going to undertake
18 in the test period to essentially bring to industrial
19 customers' potential knowledge the CleanBC industrial
20 electrification rates, whether that's through customer
21 representatives, promotion, advertising.

22 **Proceeding Time 3:21 p.m. T73**

23

24

25 What is BC Hydro going to do with respect to the clean
26 industrial electrification rates in the test period?

1 MR. O'RILEY: A: Could Mr. Anderson respond to that
2 question, please.

3 MR. ANDERSON: A: Yes. Thanks, Chris. Yeah, so we've
4 been doing a lot, I'd say, already and will continue
5 to promote those rates. And so those -- as those were
6 announced by government, almost immediately thereafter
7 we started taking inquiries from customers about their
8 eligibility for those rates. We're actively involved
9 with our industrial customer group regularly through
10 our key account management group and where we've got
11 opportunities for electrification of new sites, new
12 projects that's they're bringing forward, we're now
13 talking to them about these rates and the eligibility
14 requirements associated with them.

15 And that really, you know, largely, talks
16 to the fuel switching ones that might be appropriate
17 for, you know, an upstream gas customer or a mining
18 customer looking at something like trolley assist.

19 For the industrial electrification rate
20 focused on new clean industry, we also have plans to
21 do just what you said in terms of broader marketing of
22 that through marketing efforts to ensure that, you
23 know, it's not just reaching out to our existing
24 customers but to new perspective customers as well.

25 MR. AUSTIN: Q: Is BC Hydro dedicating through the
26 budgetary process any additional amounts to do the

1 marketing, either in relation to advertising or hiring
2 of additional staff to do the marketing?

3 MR. ANDERSON: A: Yeah, so all of that will come about
4 through our electrification plan and what we bring
5 forward in the next revenue requirement application.
6 So, as I mentioned earlier, we're pulling together
7 that plan that outlines, you know what we're already
8 doing but also now focuses on, you know, the different
9 opportunities and barriers that exist for us to do
10 more. And, you know, we expect that there'll be
11 additional, kind of, tools provided through comp
12 review actions when those come out, but then
13 additional beyond that what can BC Hydro do. And so
14 as part of all of that we'll have a business case that
15 sets for us what additional, you know, costs and
16 resources we would need to meet those electrification
17 plan targets.

18 MR. AUSTIN: Q: Wouldn't that be for the fiscal 2023
19 period and beyond and not the fiscal 2022 period that
20 is the test period?

21 MR. ANDERSON: A: Yeah, that's correct. So you asked
22 about, you know, when we would -- we'd set our
23 electrification plan, which will be filed as part of
24 the next revenue requirement, so that's the process
25 for that. In terms of the current test period, you've
26 got in front of you what we're intending to spend on

1 low carbon electrification and there's other
2 activities that I spoke to that are captured through
3 our regular budgeting process, so my group as well as
4 the interconnections and marketing.

5 MR. AUSTIN: Q: So for the purposes of the fiscal 2022
6 rate application there's no budget for additional
7 resources, additional resources would be included in
8 the budget for fiscal 2023, is that correct?

9 MR. ANDERS: A: Yeah, to the extent that we, after
10 completing the plan, determine that additional -- you
11 know, if additional resources or additional funding's
12 needed then that will be included in the fiscal '23
13 revenue requirements application, that's correct.

14 MR. AUSTIN: Q: Is there any concern on your part that
15 you might need additional resources for the F22, F2022
16 period to really get this program moving as quickly as
17 possible?

18 **Proceeding Time 3:31 a.m. T74**

19 MR. ANDERSON: A: Yeah, we've looked at that. I mean
20 in part, you know, when we're looking at
21 electrification so much of it is still new and, you
22 know, whether it's, you know, technology changes that
23 are occurring, you know, customers just getting, you
24 know, now accustomed to what electrification might
25 mean and what opportunities there are. So at this
26 point we feel we've got significant or appropriate,

1 yeah, resources that we can dedicate to that. We've
2 got the ability to shift as we, you know, demonstrated
3 through kinda COVID times that we've got an ability to
4 shift within our existing resource base where needed
5 to prioritize as well.

6 So at least at the point in time where we
7 are today I feel that we, you know, we've got the
8 momentum, yeah, we've got the momentum that we would
9 hope for and have kind of the people that can start
10 this off. And, again, as we finalize our plan we'll
11 know where there's additional resources and budget
12 required.

13 MR. AUSTIN: Q Thank you. Go ahead.

14 MR. O'RILEY: A: Oh, Mr. Austin, I was just going to
15 add to that. There is a substantial effort going on
16 today with our base resources. So we have a very
17 large pipeline of projects in the hopper in the
18 province pipeline, if you will, and they include
19 traditional economic development projects like mines
20 and such, oil and gas projects, there's a number of
21 electrification projects including expansions at
22 existing facilitates, and then greenfield projects,
23 and then there's a number of clean tech projects that
24 are a little, you know, newer for B.C.

25 And our key account management team that
26 Keith is leading is really active in those discussions

1 and doing whatever we can to remove barriers and
2 provide information and get these things over the
3 line. And we do lots of coordination with government
4 to, you know, bring in the resources that they have on
5 the attracting people to B.C. and the like.

6 This new -- these new rates just came out
7 and they're really important tools, but we're not
8 starting from scratch. And just as an indication,
9 I've joined Keith and his key account managers in 10
10 meetings this year with customers related to either
11 new, brand new loads or significant electrification
12 loads in the province and those aren't the first
13 meeting in the door, those are meetings after, you
14 know, we've had substantial discussion.

15 So I want to assure you there is a lot of
16 activity underway today and we're not waiting for the
17 electrification plan or Fiscal '23 to get going and
18 really quite excited by the prospects here.

19 MR. AUSTIN: Q Thank you very much for the answer. And
20 my apologies for interrupting, but there's six people
21 on the screen and I'm trying to see whose lips are
22 moving first and to know whether I'm supposed to
23 proceed to the next area or not. So, again, my
24 apologies.

25 The next area that I'd like to ask a
26 question about is in relation to B-5, Clean Energy

1 Association Information Request 1.12.4. And BC Hydro
2 responded in part by saying "storage and release
3 decisions of water from the coordination agreement are
4 made by mutual agreement between BC Hydro and the
5 Bonneville Power Administration." And I'd like some
6 clarification as to what "mutual agreement" means,
7 because I would have thought that the coordination
8 agreement, with an "S" on the end of it because there
9 are two of them, would allow BC Hydro to make
10 independent decisions with respect to whether to store
11 or release water. Can anybody help me out on this
12 point?

13 MR. O'RILEY: A: I can help you, Mr. Austin. It's
14 Chris O'Riley. So the Non-Treaty Storage Agreement is
15 really a river coordination, a flow coordination
16 agreement for the Columbia River between Bonneville
17 Power and BC Hydro. So, and it relates to using the
18 additional storage in Mica Dam that was built beyond
19 the treaty requirements and we've had the agreement
20 with them for many years. There are rights that both
21 parties have and there are unilateral rights and
22 there's rights that have to be exercised by agreement,
23 but it is part of a larger coordination and there is
24 -- we do work together to manage impacts and maximize
25 benefits on the river.

26

Proceeding Time 3:36 p.m. T75

1 And you're correct, there's multiple agreements in
2 place. There's an agreement related to Libby Dam as
3 well, and all of those things are managed by our
4 planning engineers.

5 MR. AUSTIN: Q: If BC Hydro sees that mid-C prices are
6 high, can BC Hydro unilaterally decide to release
7 water from the non-treaty storage agreement, use the
8 generating facilities at Mica and Revelstoke to
9 produce that electricity and sell it into the United
10 States without Bonneville's consent?

11 MR. O'RILEY: A: I think BC Hydro has some unilateral
12 rights and some rights that require consent of the
13 other party, Bonneville. There's a number of
14 constraints and volume limits and such on the
15 agreement, but it's very much a coordination
16 agreement. It's not about what we can do versus what
17 they can do. It's about coordinating the flows on the
18 river for the benefit of both parties.

19 MR. AUSTIN: Q: So similarly if BC Hydro decided that
20 the mid-C prices were low, and wanted to store water
21 under the non-treaty storage agreement, could it make
22 a unilateral decision to do that?

23 MR. O'RILEY: A: Yes, I believe we have more rights to
24 store water unilaterally, as does the other party,
25 Bonneville.

26 MR. AUSTIN: Q: I'd like to refer you to Exhibit B-5,

1 BC Hydro's response to Clean Energy Association
2 information request 1.12.3 and the answer to the
3 question says:

4 "Domestic energy cost for the three months ended
5 September 30th, 2020 were 459 million, 6 million
6 or 1 percent lower than the same period in the
7 prior fiscal year. The decrease was primarily
8 due to lower non-treaty and coordination
9 agreement costs due to higher net water storage
10 in the prior year. Under the non-treaty and
11 coordination agreements storage of water in the
12 Kinbasket reservoir results in costs or releases
13 of water downstream to the United States results
14 in recoveries to BC Hydro."

15 And the question that I have, it's more trying to get
16 a better understanding of this, is that if BC Hydro
17 releases water and generates electricity through that
18 release of water, then when that water arrives in the
19 United States, the United States through the
20 Bonneville Power Administration gets to produce
21 additional amounts of electricity, and as a result of
22 that there is a benefit to the United States.

23 And the question that I have is: Does the
24 United States compensate BC Hydro for that additional
25 water when BC Hydro releases or is no compensation
26 payable because the water was going to arrive in the

1 United States sooner or later anyway?
2 MR. O'RILEY: A: Well, Mr. Austin, you're quickly
3 exhausting my knowledge of non-treaty storage and we
4 don't have an operational witness here based on the
5 nature of the questions, but there is a sharing of the
6 benefits. So when we release water there's benefits
7 to BC Hydro and there's benefits to the U.S. entities
8 and there's a formula for sharing that. And it's
9 meant to be an agreement that maximizes and shares
10 benefits. It's a very beneficial agreement for BC
11 Hydro. It's a very beneficial agreement for the
12 parties.

13 And it's not always about the money. Often
14 it's used to managed a physical constraint or an
15 environmental constraint. It happens that we do do
16 very well financially for it, and that benefit shows
17 up as a reduction or a netting off as a cost of
18 energy. So you'll often see a variance. It's quite
19 variable, the gains we make from non-treaty storage.
20 Generally it's a positive revenue but it is possible
21 there's a net cost if we're filling in the period.

22 **Proceeding Time 3:41 p.m. T76**

23 So, we would have to have a different
24 witness here, I think, to get beyond that in terms of
25 detail about how it works.

26 MR. AUSTIN: Q: Thank you, and I appreciate that, I

1 just have one question in addition to the questions
2 I've asked about the non-treaty storage agreements,
3 and it will probably be something that is subject of
4 an undertaking. And the question that I have is, how
5 do you translate KSFDS to acre feet of storage? I
6 didn't expect anybody would be able to answer it, but
7 in certain documents there is references to acre feet
8 of storage, but in response to the B.C. Utilities
9 Commission IR 1.14.1 in Exhibit B-14, the concept of
10 KSFDS is raised.

11 MR. O'RILEY: A: Well, if I had my phone, I'd Google
12 it, but we weren't allowed to bring our phones to
13 this, so I am technology-less. We'll get you back,
14 Mr. Austin, a definition of both -- or reconciliation
15 of a term KSFDS against acre feet of storage.

Information Request

16
17 MR. AUSTIN: Q: Thank you. I'd like to move on to the
18 next area, which is weighted average cost of capital,
19 and in Exhibit B-5, the Clean Energy Association of
20 B.C. asked a question about weighted average cost of
21 capital, and BC Hydro replied in response to the Clean
22 Energy Association of B.C.'s Information Request
23 1.11.1, and try and summarize this, with people who
24 don't have access to that IR, but in the past when BC
25 Hydro calculated its weighted average cost of capital,
26 it took Fortis' post-tax return on equity and grossed

1 it up, to come up with BC Hydro's return on equity.
2 And in the response to CEABC IR 1.11.1, it seems as if
3 BC Hydro is no longer doing this gross-up. Is that
4 correct?

5 MR. WONG: A: Yes, it is David Wong here, that is
6 correct. We are not doing the tax gross-up anymore,
7 we are using after tax rates, consistent with Fortis.

8 MR. AUSTIN: Q: So is the effect of using the after tax
9 Fortis return on equity rate, that BC Hydro's weighted
10 average cost of capital is now lower than what it
11 would have been historically?

12 MR. WONG: A: Yes.

13 MR. AUSTIN: Q: And as a result of that lower average
14 weighted average cost of capital, when BC Hydro does a
15 comparison, for example with IPP alternatives, BC
16 Hydro's projects would look solely on the basis of
17 this adjustment to the weighted average cost of
18 capital more attractive than the IPP alternatives?

19 MR. WONG: A: Well, I don't want to presuppose what the
20 outcome will be. What I say is that if ours is post
21 tax, and an IPP I assume would be post tax as well.
22 And so we would be on the same basis, apples-to-apples
23 there. My understanding is that many IPP projects are
24 falling within the weighted average cost of capital
25 similar to what we would have.

26 MR. AUSTIN: Q: But it's also true that BC Hydro

1 Then the project comes into service and
2 then, for the purposes of requesting a return on
3 equity, BC Hydro then says, "No, the calculation that
4 was used to advance the project on the basis of 100
5 percent debt is no longer applicable for the purposes
6 of calculating the return on equity, the return on
7 equity would be based on a 60:40 debt to equity
8 ratio." And in my particular example BC Hydro would
9 be allowed to earn its rate of return on \$40 million.

10 Is that how it's supposed to work or do I
11 not understand this very well?

12 MR. WONG: A: Well, what I'll just say is that in order
13 to do the investments we use weighted average cost of
14 capital, which uses our target debt to equity rate of
15 60:40. Those are what's incorporated, that's what we
16 used when you see the integrated resource plan, the
17 IRP, in determining what the evaluation of different
18 resources are. And so that's -- it's not at 100
19 percent debt when we do that calculation.

20 I'd say you have the -- it's separate from
21 the fact that, and we will be going through the
22 proceeding, as I have spoke to earlier, for the
23 development of how we get to our return on equity and
24 what net income will be will be determined based on a
25 proceeding related to what rate base will be, capital
26 structure and then what the return is. And that is

1 all subject to the determination of the Commission
2 once we get to that application.

3 Prior to that, it was a determination by
4 government that the number would be fixed. And so,
5 really, it was back calculated to determine what the
6 return on equity was. So, anyhow, I think I just want
7 to conclude this by saying the WAC, or the weighted
8 average cost of capital is the basis when we do the
9 investment analysis. And I would say that more of
10 this analysis or discussion should be discussed in the
11 IRP context.

12 MR. AUSTIN: Q: Just one quick follow-up question on
13 that. Wasn't Site C advanced on the basis of 100
14 percent debt evaluation?

15 MR. O'RILEY: A: The Site C historically used a
16 debt/equity ratio and weighted average cost of capital
17 when there were efforts to calculate what the cost of
18 that would be to ratepayers, it used the actual cost
19 to customers was used, which was effectively 100
20 percent debt given the prevailing regime that was in
21 place and still is in place.

22 **Proceeding Time 3:51 p.m. T78**

23 So it was for the purpose of saying what is
24 the cost of this resource to ratepayers that the 100
25 percent debt was used.

26 MR. AUSTIN: Q: I'd like to move on to another area and

1 I believe, Ms. Daschuk, you might be able to answer my
2 questions. And this is in relation to the North
3 Montney transmission project. And in response to BCUC
4 IR 1.43.3 in Exhibit B-4, BC Hydro said, "BC Hydro is
5 launching an expression of interest process in 2021 to
6 assess the interest in electrification and the
7 potential incremental load from existing and planned
8 industrial operations in the North Montney region."

9 Ms. Daschuk, could you give us more details
10 about this?

11 MS. DASCHUK: A: I'd actually like to ask Keith
12 Anderson, can you give us an update on it please?

13 MR. ANDERSON: A: Yeah, certainly. So we've actually
14 started our prelaunch for the North Montney expression
15 of interest, if you will, which is really just making
16 sure that customers, land holders, associations, are
17 aware that we will be running an expression of
18 interest process and expect that sometime -- we're
19 hoping anyway that sometime later in March, early
20 April we'll be able to move into our expression of
21 interest. And so that initial step is conceived as
22 kind of one of three steps where we would be going out
23 and initially assessing, you know, interest from
24 customers if BC Hydro were to build that line.

25 This first expression of interest stage, if
26 we see that there is sufficient interest, then we

1 would continue moving forward with work on -- you
2 know, the technical work on the line as well as our
3 work with the province and the federal government to
4 see if we can secure up to 50 percent funding for that
5 line, and ultimately move then into what we're calling
6 a phase 2 and a phase 3 where we would get continued
7 and increased level of commitment from those customers
8 to building a line.

9 MR. AUSTIN: Q: In terms of the earliest in-service
10 date that can be achieved for this project, can you
11 give me an estimate of when that might be?

12 MR. ANDERSON: A: Yeah, I think it's a little too early
13 in the project to give an end-state estimate. We know
14 that customers are asking for 2026 if they had their
15 druthers. Sometime in 2026 is the initial information
16 that we have from them. But again, as we move through
17 our expression of interest and additional phases of
18 our open season, we'll get a better sense from
19 customers when they would need that in-service date,
20 and we'll have a better sense as we work through the
21 project whether or not that's something that we can
22 meet.

23 MR. AUSTIN: Q: In the last revenue requirements review
24 process BC Hydro indicated that there may be some ways
25 that it could actually expedite the delivery of
26 electricity to customers in North Montney and I think

1 come along with grid power to replace that. And so we
2 are actively working on those, and again that's all
3 within what we consider the North Montney region.

4 MR. AUSTIN: Q: I'd like to move to the next area, and
5 this is more of a point of clarification than a
6 correction of memory, and it's something that Ms.
7 Worth touched on in her cross-examination, and it's in
8 relation to the point-to-point transmission costs that
9 are recorded with respect to exports. It's Clean
10 Energy Association of B.C.'s understanding that for
11 the purposes of transactions between Powerex and BC
12 Hydro, no transmission costs are recorded because the
13 delivery of electricity from BC Hydro is at the
14 border.

15 With the new transfer pricing agreement,
16 has anything changed? Or is it that the Clean Energy
17 Association of B.C. didn't properly understand the
18 recording of transmission costs as between BC Hydro
19 and Powerex?

20 MR. O'RILEY: A: Yeah, we're just going to caucus here
21 for a moment here, Mr. Austin. Just standby please.

22 Here we go.

23 MR. WONG: A: Mr. Austin, I think I should take you to
24 table 8-7 of the application, intersegment revenues?
25 And you'll see there is a line called Powerex P2P
26 charges, and so we are charge -- BC Hydro is charging

1 Bridge River system, does BC Hydro take into account
2 the cost of refurbishment versus the contracting for
3 new sources of generation from IPPs if the IPP cost is
4 more attractive than the refurbishment cost?

5 MR. O'RILEY: A: I can start that, Mr. Austin. I think
6 the most important thing this is that all the French
7 names in that part of the province has be anglicized,
8 so it's LeJoie, just so we're all --

9 MR. AUSTIN: Q: Good, okay. So we've got a joyous
10 project here.

11 MR. O'RILEY: A: Yes. LaJoie is a joyous project. So
12 you may recall that when we did the Ruskin
13 redevelopment and the John Hart redevelopment, both of
14 those came before the Commission, we evaluated both
15 options to proceed with the redevelopment and
16 decommissioning. And we compared the cost -- included
17 in the decommissioning we accounted for the cost of
18 replacement power. And so if we're looking at a major
19 decision like that, we would evaluate the full suite
20 of options.

21 Another small version of that that we
22 expect to bring forward is the Wilsey Dam on the
23 Shuswap River, which we're expecting to decommission.
24 It's not currently generating and it's an end of life
25 and there's an opportunity for fish passage there, so
26 -- and we don't believe it would be economic to

1 replace.

2 The decision we're facing on Bridge River
3 is different. We have an operating system, we have
4 multiple plants. The storage at LaJoie supports local
5 generation at LaJoie, it's a relatively small plant,
6 but it also supports the downstream generation at
7 Bridge River and Seton and, you know, we're going to
8 -- you know, we need to make a reinvestment in the
9 dam, it needs to be modernized and upgraded and that
10 decision will be a multi-factoral decision looking at
11 public safety, environmental impacts and seismic
12 withstand and the generation.

13 I'm not anticipating that, you know,
14 decommissioning removal of that dam would be viable
15 but if it is, we would consider that. And of course
16 that kind of investment would be subject to a BCUC
17 review and all of those issues would be canvased.

18 MR. AUSTIN: Q: I'd like to move to another area and
19 I'll admit in advance this is an odd question, even by
20 my standards. And it's in relation to Exhibit B-5,
21 BCOAPO IR 1.67.1 in BC Hydro's response. And the
22 question, for those who don't have it to hand, is:

23 "Does BC Hydro receive carbon credits related to
24 its ownership/operation of electric vehicle
25 charging stations?"

26 "Yes, BC Hydro received 137 low carbon fuel

1 credits related to the ownership/operation of
2 its electric vehicle charging stations for the
3 2018 calendar year. BC Hydro continues to work
4 with government on the allocation of the
5 calendar 2019 and 2020 credits related to
6 electrical vehicle charging stations."

7 And in response to BCOAPO 1.67.1.3 in
8 Exhibit B-5, BC Hydro said,

9 "By Hydro transferred the 137 carbon credits for
10 the calendar year 2018 to Powerex and these were
11 monetized in fiscal 2020 included in Powerex's
12 fiscal 2020 trade income, which is included in
13 BC Hydro's revenue requirement."

14 And the question that I have is, how was
15 that transferred accomplished between BC Hydro and
16 Powerex? Was it accomplished under the new transfer
17 pricing agreement or was it a completely separate
18 agreement? Any help you could give me in this
19 respect, I'd greatly appreciate.

20 MR. LAYTON: A: Hi, Mr. Austin. This is Ryan Layton
21 speaking. They're not transferred under the transfer
22 pricing agreement or any other agreement, I don't
23 believe. They're transferred at zero cost and
24 therefore all the revenues generated by Powerex stay
25 in Powerex and then are reflected in their trade
26 income and are therefore provided to ratepayers via

1 the trade income deferral account.

2 MR. AUSTIN: Q: But by doing it that way instead of BC
3 Hydro marketing those credits directly, doesn't
4 Powerex's overhead attach to the revenues associate
5 with those credit sales?

6

7 **Proceeding Time 4:06 p.m. T81**

8 MR. LAYTON: A: Well, certainly Powerex has costs that
9 it incurs in respect of those sales, but the expertise
10 that they bring to the table far outweigh any such
11 costs I would submit to you. In the case of BC Hydro
12 we don't have the expertise to effectively market
13 those credits, that's something that Powerex does and
14 generates significant revenues from that activity that
15 go to the benefit of ratepayers.

16 MR. AUSTIN: Q: Moving to the next area I'd like to
17 refer you to Exhibit B-5, BC Hydro's response to Clean
18 Energy Association of B.C. IR 1.7.6. And in the
19 response reference is made to the electric vehicle
20 costs regulatory account and reference is also made to
21 BC Hydro's cost of energy variance account. And
22 correct me if I'm wrong, but it would appear that
23 certain amounts in relation to the electric vehicle
24 program end up in the cost of energy variance account
25 and certain costs end up -- and revenues end up in the
26 electric vehicle costs regulatory account.

1 Could you please explain why revenue seems
2 to be going into one account, and explain what account
3 that is, and cost of energy variances are going into
4 another account?

5 MR. LAYTON: A: Sure, Mr. Austin. This is Ryan Layton
6 speaking. I'll try and explain this to you. So as it
7 relates to Fiscal '20 and Fiscal 2021 we have proposed
8 to recover those via the new regulatory account, the
9 electric vehicle costs regulatory account, because of
10 the issue that arose in the last application where the
11 Commission pointed out that we hadn't shown that those
12 were prescribed undertakings, and therefore requested
13 that we pull those out of that application and
14 therefore we're seeking recovery for those today.

15 When I think -- so those are past costs.
16 There's no revenue in those years because as we talked
17 about earlier today there's no rate yet for that. As
18 Mr. Anderson pointed out earlier we've now applied for
19 a rate.

20 So I'm going to talk about it on a go-
21 forward basis now, so suppose the Commission approves
22 the rate going forward, on a go-forward basis starting
23 in Fiscal '22 all of our costs related to this
24 infrastructure is in our revenue requirement in the
25 form in which it takes, so whether that's operating
26 costs, whether that's cost of energy, whether that's

1 amortization. And the revenues, we haven't forecast
2 any revenues because we don't have an approved rate
3 yet, but if we did we would have forecast revenues and
4 the variances would have gone into regulatory account
5 which is the load forecast variance account.

6 And so because we forecast zero, if a rate
7 is approved in Fiscal '22 and if revenues are received
8 in Fiscal 2022, all else equal, that variance will go
9 into the load forecast variance account and will be to
10 the benefit of ratepayers though the normal mechanisms
11 of that account.

12 And so as I said, on a go-forward basis
13 everything resides in the revenue requirement sort of
14 where it normally would. The difference that you're
15 identifying is in respect of these two past years,
16 Fiscal '20 and Fiscal '21, where we're using the
17 regulatory account to recover those past costs to the
18 extent the Commission agrees that those are prescribed
19 undertakings.

20 MR. AUSTIN: Q: May I just have a moment here?

21 MR. LAYTON: A: Sure.

22 MR. AUSTIN: Q: It would appear that the revenues are
23 going into one account and the costs are going into
24 another account. And the question is, how could BC
25 Hydro put together a complete picture of profitability
26 if that's happening?

1 MR. LAYTON: A: Well, there may be a few facets to
2 that, Mr. Austin. What I'll relay again is that the
3 regulatory account called the electric vehicles --
4 electric vehicle costs regulatory account only relates
5 to Fiscal '20 and Fiscal 2021 costs that BC Hydro
6 submits are prescribed undertakings. We were not able
7 to recover those though the previous application,
8 therefore we're proposing to do so in this
9 application. There are no revenues related to that,
10 to those years because there's been no approved tariff
11 under which we could charge them. And so as it
12 relates to Fiscal '20 and Fiscal '21, there are only
13 costs definitely -- there are only costs involved and
14 they're going into that regulatory account.

15 **Proceeding Time 4:11 p.m. T82**

16 Going forward, we've not proposed the
17 continued use of that regulatory account, and again
18 the reason is we're embedding those costs in the
19 revenue requirement in the place where they belong,
20 for lack of a better word. So the operating costs are
21 part of operating costs. The cost of energy is part
22 of the cost of energy and the revenues will be part of
23 revenues. And therefore those variances, all of those
24 variances, actually more than two regulatory counts
25 involved there potentially because those variances
26 will go wherever they relate. So if there's a revenue

1 variance, it goes in the load variance regulatory
2 count; if there's an amortization variance it would go
3 in the total capital editions regulatory account
4 variance. The only place where there's no such a
5 variance would be with respect to operating costs.
6 With cost of energy it will go into one of the cost of
7 energy variance accounts.

8 So there's actually multiple accounts at
9 play when we look on a go-forward basis starting in
10 fiscal 2022.

11 MR. AUSTIN: Q: So about all I've been able to achieve
12 for these questions is that the electric vehicle cost
13 regulatory account is going to be closed down.

14 MR. LAYTON: A: Yes, and we've stated that in our
15 evidence that once the costs have been recovered
16 related to fiscal '20 and fiscal 2021, we expected
17 that account would be ready to be closed.

18 MR. AUSTIN: Q: Thank you. My final question is just
19 more of a housekeeping question. It's in relation to
20 BCUC IR 1.3.3. in Exhibit B-4 and BC Hydro's response,
21 and there's a large attached table to the response to
22 BCUC IR 1.3.3 and it's very difficult, if not
23 impossible, to read and the Clean Energy Association
24 of B.C. is wondering whether that table could be
25 provided in a working Excel version.

26 MR. LAYTON: A: Hi, Mr. Austin, it's Ryan Layton

1 MR. SANDVE: Great, thank you. Please go ahead.

2 **QUESTIONS BY MR. BRYENTON:**

3 MR. BRYENTON: Q: I'm just trying to get the video up
4 here too.

5 Okay, thank you very much for the opportunity.
6 I would also like to acknowledge that I'm on the
7 unceded territories of Musqueam, Squamish and Tsleil-
8 Waututh First Nations, and we've had an interesting
9 opportunity here. I did put in a submission
10 hopefully as a representative of the BC Hydro
11 Ratepayers Group which was denied and then allowed,
12 and I think what I would like to do is have a
13 perspective rather than an representation.

14 So coming back to the topics I have a couple of
15 high-level topics and then focusing on DSM and low
16 carbon.

17 In terms of the high-level topics, I'd like to
18 kind of address this pretty much to Mr. O'Riley, on
19 affordability, following on from Leigha Worth's
20 earlier statement.

21 **Proceeding Time 4:16 p.m. T83**

22 That I see the budgeting for BC Hydro as a formality,
23 rather than an iron clad requirement, and in this
24 case, affordability affects some people quite
25 substantially. We haven't sorted it out yet how in
26 the community of generation and delivery and use, we

1 are going to apportion this in a truly fair mechanism.

2 And so one of the questions I have I son
3 the budgeting, we are working with a budget overall,
4 BC Hydro in the order of \$5 billion, and we have a
5 shortfall here on a budgeting that has been put
6 together by BC Hydro, which shows a shortfall of
7 approximately 60 million, which is .1 percent. So if
8 you were to go to a store and buy something for \$100,
9 you'd be asking -- you'd be having a discussion over
10 about 10 cents worth of that transaction. And it
11 seems to me that where we've got a community that's
12 facing COVID, particular to this time, it gives us an
13 opportunity to explore further flexibility. So, what
14 I'd like to do is, rather than go through a series of
15 submission questions and responses, I'd like to make
16 some comments with a couple of questions.

17 Maureen Daschuk, I hope I have your name
18 approximately correct, mentioned that they were able
19 to reallocate some expenses on vegetation management,
20 as in resources, and I'd like BC Hydro and BCUC to
21 consider whether or not there is some flexibility
22 within the overall proposed budget to somehow
23 reallocate resources on that \$60 million.

24 One that comes to mind in particular is the
25 depreciation rates. And if it would take some
26 flexibility by BCUC to adjust a capital cost

1 allowance, or depreciation rate in a minor way, but
2 that might be an appropriate directive to avoid,
3 actually, a rate increase at this time.

4 Another opportunity would be to delay some
5 of the capital expenditures. And I think what we're
6 after here is a community approach to this. We've had
7 a very formal approach in the past, and I think we're
8 moving more now into a new business model where BC
9 Hydro will be providing comfort and convenience rather
10 than electricity at a meter. And I think DSM is a
11 very good example of this, where you are now able to
12 invest and gain a return as, I think Fortis will be,
13 on things like insulation and windows.

14 This leads us, a segue into the DSM
15 question and concerns here, as to how do we address
16 the climate emergency. I think this is a very
17 pertinent question at this point in time. We need a
18 major concerted effort to decarbonize our economy.
19 And I don't think we really fully recognize what is
20 going to be involved in that. The low carbon
21 electrification initiatives are leading, as are many
22 of the DSM results and benefits. I think the use of
23 mid-C as an arbitrary but effective proxy for -- is
24 DSM viable, probably means that we should accelerate
25 DSM wherever the cost of it is less than what we could
26 sell it for at mid-C --

1 THE CHAIRPERSON: Mr. Bryenton, Mr. Bryenton, excuse
2 me, I apologize for interrupting, but you've talked
3 for quite a while here, but there hasn't been a
4 question. Now, a lot of what you've said would be
5 appropriate to make in your final submission. But at
6 this point what we are looking for is to ask BC Hydro
7 questions on the evidence that they have already put
8 forward and if any of that requires clarification.
9 So, I wonder if I could ask you to please focus your
10 -- well, first of all ask some questions, but focus
11 those questions on that.

12 MR. BRYENTON: Q: I think then in deference to
13 supplying perhaps 15 or 20 questions, you are correct
14 that this might be appropriately in the final
15 submission. But some of these are major concerns, and
16 I hope BCUC will respect and understand that the high
17 cost of building retrofits, I don't think has been
18 built into a DSM budget, or a low carbon budget. And
19 I think to ask questions at this point in time as to
20 specifics, it's probably a little bit early but I
21 think we need that framework and hence more of a
22 discussion here than specific questions, if that's
23 understandable.

24 **Proceeding Time 4:21 p.m. T84**

25 THE CHAIRPERSON: Well, Mr. Bryenton, this forum is not
26 really structured for a discussion and that's not what

1 the parties came expecting or were asked to prepare
2 for.

3 MR. BRYENTON: Well, I can give some specific questions,
4 if you wish. One would be on vegetation management.

5 THE CHAIRPERSON: Thank you.

6 MR. BRYENTON: Q: Which herbicides are being used? Are
7 we using any nicotinyze or Glyphosate in those? If
8 there's no immediate information it could be taken as
9 an undertaking.

10 MR. O'RILEY: A: Mr. Bryenton we have the answer. Mr.
11 Kumar will give the answer.

12 MR. KUMAR: A: This is Ajay Kumar. We do use
13 Glyphosate as part of our herbicide application. As I
14 mentioned we have about \$2.5 million of spending on
15 herbicides. So that would be one herbicide that we do
16 use are part of our vegetation program.

17 MR. BRYENTON: Q: And what about – sorry.

18 MS. DASCHUK: A: Sorry, this is Maureen Daschuk. I
19 just want to add on to that that the use of Glyphsate
20 is primarily used in our substations to control weeds
21 underneath the equipment in the substations and those
22 substations are inaccessible to the general public.
23 That's not a herbicide that we would use broadly.

24 MR. KUMAR: A: Yeah, and just to add to what Ms.
25 Daschuk was saying, all our herbicide use actually is
26 in accordance with the *Integrated Pest Management Act*

1 as well as the Integrated Pest Management Regulations.
2 And all herbicides are actually federally approved.

3 MR. BRYENTON: Q: Yes, I realize they are federally
4 approved, and I'm thinking here in terms of 2 and half
5 million dollars is quite an investment and I would
6 encourage BC Hydro to look at alternatives and I think
7 in terms of specific questions thank you very much. I
8 appreciate your -- the opportunity.

9 MR. O'RILEY: A: Thank you.

10 MR.SANDVE: Thank you, Mr. Bryenton.

11 Mr. Chair, I would seek your guidance at
12 this point, perhaps, but what I might suggest is that
13 we have a break now and perhaps come back in 15
14 minutes time at 4:40 and perhaps go to Zone II at that
15 time and maybe during the break I can confirm with BC
16 Hydro representatives, but I think as Mr. Ghikas
17 spoken to earlier, on BC Hydro's side I think we're
18 prepared to keep going past five o'clock in order to
19 try to conclude public session today, but certainly
20 will seek your guidance in terms if you'd like to
21 spend some time on that topic when we return from the
22 break.

23 THE CHAIRPERSON: Yes, thank you, Mr. Sandve. Just to
24 give you a heads up then, we're happy with coming back
25 after the break to do the next intervener. However,
26 we may have some challenges here at the Commission

1 with continuing too late. We have people with some
2 prior commitments. So it looks like we -- and I will
3 confirm or deny that after the break. But it looks
4 like we're coming back tomorrow, as I understand it
5 anyway, for the confidential session. Is that
6 correct?

7 MR. SANDVE: I think that's correct. I've been
8 corresponding with Yolanda and it's looking like nine
9 o'clock in the morning would work for BC Hydro and the
10 Commission on that.

11 THE CHAIRPERSON: Great, okay. So I just want to give
12 you a heads up there's a possibility we may be coming
13 back for the non-confidential and the confidential
14 session for our questions. But I'll get back to you
15 after the break on that.

16 Mr. SANDVE: Okay. Great. Thank you, Mr. Chair, and
17 thank you everyone. We'll see you back in 15 minutes.

18 THE CHAIRPERSON: Okay, thanks.

19 **(PROCEEDINGS ADJOURNED AT 4:25 P.M.)**

20 **(PROCEEDINGS RESUMED AT 4:39 P.M.)** **T85/86**

21 THE CHAIRPERSON: Let me just make sure the panel is all
22 here. It looks like they are. Yeah, I think we are
23 all here. Okay.

24 So to follow up on what I was saying
25 earlier, under the circumstances and looking where we
26 are in the schedule, we're happy to hear Mr. Fox's

1 questions and Hydro's responses, but it would be the
2 panel's preference to wrap it up today after that
3 because there are people that are unable to continue
4 beyond that time. And then we can finish the staff
5 non-confidential questions and confidential questions
6 tomorrow beginning at 9 o'clock.

7 I appreciate there may be some people in
8 this room now that would like to be there for staff's
9 non-confidential questions and to that extent they are
10 welcome to attend in the morning for the non-
11 confidential session, but I would alternately point
12 out that this is being -- is this being streamed? I'm
13 not sure if it's being streamed but there will be a
14 transcript in any event. And since we're not
15 accommodating any follow-up questions there would be
16 no prejudice if someone read the transcript as opposed
17 to attending in the morning. But they do have the
18 option of doing that.

19 So that's what the panel proposes at this
20 point. If that works.

21 MR. SANDVE: Thank you, Mr. Chair. Yes, I think that
22 works fine for us. And so just a quick logistical
23 point for everyone that's participating. I expect
24 that we will have to set up a separate Webex link to
25 resume tomorrow at 9:00 a.m. and so I'll make sure I
26 circulate that by email to everyone this evening, the

1 Webex link for resuming at 9:00 a.m. if that works for
2 you, Mr. Chair.

3 THE CHAIRPERSON: Yes, and actually would there be two
4 Webex links, one for the confidential and one for the
5 nonconfidential?

6 MR. SANDVE: Right. Makes sense.

7 THE CHAIRPERSON: Thank you. That's great. Thank you
8 very much.

9 MR. SANDVE: Thank you, and with that, I think we're
10 ready to go to you, Mr. Fox. Please proceed.

11 **QUESTIONS BY MR. FOX:**

12 MR. FOX: Q: Thank you. So I'll just make sure that
13 everyone can hear me before I begin. I know there was
14 an issue. I'm getting lots of thumbs up on the screen
15 so that's good.

16 For the record, it's Michael Fox. I'm with
17 Iris Legal Law Corporation. I'm appearing on behalf
18 of Jana McLean. She's council for Zone II Ratepayers
19 and on the line as well, who I neglected to introduce
20 this morning, is Linda Dong from Dong Associates also
21 on behalf of the Zone II Ratepayers. And I can
22 indicate I hope to move through my questions fairly
23 efficiently. I've got one question on demand side
24 management, a number of questions on diesel reduction
25 and then one question about electric vehicle charging
26 stations.

1 to try and incorporate some of the other secondary
2 fuels into the modeling? Or is that something that BC
3 Hydro does not intend to do at this point?

4 MR. HOBSON: A I think it's our intention, and you've
5 asked also questions about capacity, and they tend to
6 be community specific. So as a general program, we
7 didn't have the time or the information to put in to
8 weight it, I suppose in terms of how we would
9 represent it. But going forward, those are two areas
10 that we would still be interested in.

11 MR. FOX: Q: And one more brief follow up, I'm not sure
12 if you are able to give me any kind of a timeline on
13 when that might occur? Would that be something you
14 might expect in Fiscal 2023 rate review application?

15 MR. HOBSON: A I think it's something that we would
16 look towards for the Fiscal 2023 application, and it
17 will be somewhat dependent, as I say, about the
18 information we're able to obtain. And then the
19 specific communities that would be represented within
20 that test period.

21 MR. FOX: Q: Thank you. That is the only question I
22 have on demand-side management. Next I've got a
23 number of questions about diesel reduction. And I'd
24 just like to begin by referencing the CleanBC plan,
25 and that plan has targeted what it refers to as
26 "remote communities for diesel consumption reduction."

1 And I'm just wondering whether BC Hydro can confirm if
2 there are any communities in the non-integrated area
3 that are not included in that "remote communities" as
4 described in the CleanBC plan? And if so, which
5 communities are not included?

6 MS. DASCHUK: A: BC Hydro has 14 communities that are
7 part of the non-integrated area. And all of the non-
8 integrated area would be included in the objectives
9 that were outlined in the CleanBC plan.

10 MR. FOX: Q: Thank you. My next question is about
11 those objectives. And I can take the panel to an IR
12 reference if needed, but BC Hydro has said that it
13 supports those targets set out in the CleanBC plan,
14 which aim to reduce diesel use for the production of
15 their electricity in remote communities by 80 percent
16 by 2030. And so my question is, with respect to the
17 BC Hydro operated diesel generating stations that are
18 subject to those targets, can BC Hydro clarify whether
19 those stations will actually see an 80 percent
20 reduction in diesel consumption by 2030? Or will
21 there simply be plans in place by 2030 to reduce
22 diesel consumption by the target amount, and then that
23 actual reduction would occur beyond 2030?

24 MR. SANDVE: Mr. O'Riley, I believe your mic might be
25 muted.

26 MR. O'RILEY: A: Yes, I've got two buttons here, and I

1 have to make both of them work, so. There I go.

2 Thank you, Mr. Fox. We are working to
3 achieve the diesel reductions in the non-integrated
4 areas. Currently 50 percent of the energy in the
5 diesel in the remote areas comes from renewable power,
6 so that is mainly hydro where there is a hydro
7 resource. And the balance is diesel. We have been
8 working through the government phase 2 review to find
9 funding mechanisms to achieve that.

10 **Proceeding Time 4:44 p.m. T87**

11 To provide the resources to achieve that and we're
12 anticipating that that will be a result of a
13 government review and that will trigger actual
14 investments and -- a portfolio of investments, really,
15 including conservation, alternative fuel sources and
16 other resources, net metering and the like, to drive
17 that reduction.

18 We're also looking -- we're not
19 anticipating eliminating the diesel so one option
20 we're considering is using renewable diesel for a
21 portion of the supply. We are working and have worked
22 with several individual communities, and those are --
23 one of them in particular that I've been most involved
24 with is confidential because of the non-disclosure
25 agreements. And we're working on a biomass project
26 where the -- which would produce energy to displace

1 our diesel. It's a challenging project but we think
2 there's a good development plan in place to get to the
3 point where we can see if it's going to bear fruit.
4 So we're in the midst of that process now but we are
5 anticipating, based on what comes out of the
6 government review, to have a more substantial
7 resources and more of a substantial plan in our fiscal
8 '23 RRA. Does that all make sense?

9 MR. FOX: Q: Yes, that all makes sense. So I guess, if
10 I could paraphrase your answer, are you saying that
11 you're not yet sure you need to come out of Phase 2
12 before you can say whether you'll actually meet the
13 actual reduction targets by 2030 or whether you'll
14 have projects committed by 2030 and meet the reduction
15 targets beyond 2030.

16 MR. O'RILEY: A: Our goal is to meet the target by
17 2030, to have plans in place. We're not going to
18 propose a plan that starts in 2030. What I want say
19 is this is a really difficult problem because these
20 are small communities and there's typically limited
21 resource availability in the area surrounding them.
22 So, you know, where there are hydro resources, that's
23 a great option. These biomass projects have some
24 positive attributes but they're quite expensive and
25 challenging. So this is not an easy problem and
26 that's why we do need some help financially, which is

1 what we're hoping will come out of the review.

2 MR. FOX: Q: Thank you for that. My next question has
3 to do with how the reduction is actually being
4 determined. And so the CleanBC plan calls for an 80
5 percent reduction in diesel consumption and my
6 question is, what is the baseline that's being used to
7 calculate what actually constitutes an 80 percent
8 reduction? For example, are we talking about an 80
9 percent reduction from 2005 diesel consumption levels
10 or from 2015 diesel consumption levels or what exactly
11 is the baseline that's being used to determine what's
12 going to constitute an 80 percent reduction.

13 MS. DASCHUK: A: Hi, it's Maureen Daschuk. I believe
14 the base is 2007 greenhouse gas emissions, subject to
15 check.

16 MR. SANDVE: Did you hear that?

17 MR. FOX: Q: Yes. Sorry, did you say that you just
18 needed to check?

19 MS. DASCHUK: A: No, I -- so I believe it's 2007.
20 "Subject to check" meaning that offline I will double-
21 check and I will have to get back to you on whether it
22 was 2007 or not.

23 MR. FOX: Q: Thank you. My next question is whether BC
24 Hydro is on track for meeting those diesel reduction
25 targets and can BC Hydro undertake to provide some
26 form of data, either a graph or a spreadsheet to show

1 progress to date in terms of meeting those targets?
2 MR. O'RILEY: A: It's Chris O'Riley again. I would say
3 we're at the initial stages of this. So we have one
4 project that went into service a few years ago that I
5 was involved with with one of the northern First
6 Nations and we've got some experience with that
7 project and understand the plusses and minuses of it
8 for working on another project with another northern
9 First Nation.

10 **Proceeding Time 4:54 p.m. T89**

11 We've got some ongoing discussions in Haida
12 Gwaii but we don't have a year-by-year plan to get to
13 2030 that we can say, yeah, we're on track with that.
14 So that is to come similar, as I said, from the
15 electrification plan.

16 MR. FOX: Q: Thank you. BC Hydro has said and again I
17 can take you to the IR reference if it assists, but BC
18 Hydro has stated that it's working with provincial and
19 federal agencies to provide funding and support for
20 remote communities in B.C. and BC Hydro stated that
21 the timeline for implementing clean and renewable
22 resources includes the availability of funding to
23 support these renewable projects. And so my question
24 is does BC Hydro require funding to be in place prior
25 to announcing its diesel reduction strategy? And in a
26 similar vein, can BC Hydro confirm whether any funding

1 has been committed thus far that has informed the
2 development of the strategy to date?

3 MR. O'RILEY: A: So, Mr. Fox, there's a number thing.
4 So the communities have initiatives and they have the
5 opportunity to access funding, particularly from the
6 federal government and we are partnering with one
7 community in particular on -- they've got an
8 allocation of federal funding and we're working with
9 them to make the project successful such that they
10 could tap into that funding.

11 What we don't have is a broader -- we don't
12 actually have a broader framework with binding targets
13 for us that the utility can take and take the to the
14 Utilities Commission and say, "We have to expend this
15 amount of money to achieve this target of 80 percent."
16 So our intent through the government review is to get
17 either a source of money that we can draw on to add to
18 the resources we have or a binding target that allows
19 us to use broader ratepayer money. And so that is one
20 of the things that is holding us up here, and
21 hopefully before the F23 RRA we will have those
22 arrangements in place.

23 MR. FOX: Q: Thank you. My next question is about LED
24 street lighting, and I can take you again to the IR
25 reference if it assists, but I can indicate that BC
26 Hydro has stated that some of the areas in the north

1 interior, in the NIA, are scheduled to have their
2 streetlights replaced with LED lighting last and that
3 was the subject of an IR. And BC Hydro indicated that
4 that deployment schedule is not a final deployment
5 schedule and that BC Hydro was going to evaluate
6 opportunities to replace streetlights with LED lights
7 earlier in the deployment period in those areas.

8 **Proceeding Time 4:58 p.m. T90**

9 And so my question is, firstly, does BC
10 Hydro agree that replacing street lights with LED
11 bulbs would reduce diesel consumption in the NIA? And
12 then if so, can BC Hydro expand on the criteria that
13 it has used to evaluate whether there are any
14 opportunities to install those lights earlier in any
15 of the NIA communities?

16 MS. DASCHUK: A: Yes, Mr. Fox, it's Maureen Daschuk
17 speaking and I just want to say, I thought that was
18 actually a really good idea that came out from the
19 information requests. And you are absolutely right,
20 we do have an opportunity to reduce diesel reduction.
21 The original roll-out plan for the street light
22 program was going to be regionally based because we
23 are using largely contractors and as you can imagine,
24 it is very cost effective for us to roll contractors
25 out in a particular area and move through. But we are
26 reflecting very seriously on your suggestion. We

1 think it is a valid one. And while I can't confirm
2 what the schedule for NIA street light replacements
3 is, we will be looking at finding ways to accelerate
4 it.

5 MR. KUMAR: A Mr. Fox, it is Ajay Kumar here, just to
6 add what Ms. Daschuk was mentioning, one of the things
7 that we are looking from a customer's perspective is
8 to make the choice of which street light they would
9 like to go for. So if that can be put forward from
10 the customer, because there is a number of different
11 Kelvin temperatures that you can choose. So once the
12 choice is made, then we can move forward it the
13 deployment. So I think that is something that we
14 would be actively looking at, as Ms. Daschuk said.

15 MR. O'RILEY: A: Just to confirm that all the street
16 lights in the province, the non-LED lights, are going
17 to be replaced, the ones that BC Hydro owns. And it's
18 a three-year program. So we've already started, we
19 started in the north. The Hudson Hope lights were
20 switch out, and we're going around the province. So,
21 there is no suggestion that the NIA street lights
22 won't be taken out, we just haven't confirmed the
23 schedule, and we appreciate the suggestion around
24 factoring in the diesel reductions.

25 MR. FOX: Q: Thank you. And just as a very brief
26 follow up to that, can BC Hydro indicate when they

1 might have that schedule in place?

2 MS. DASCHUK: A: I don't have that information at hand,
3 but I can undertake to let you know when the schedule
4 will be ready.

5 MR. FOX: Q: Thank you. And then my final questions
6 about electric vehicle charging stations, and I'm just
7 wondering if BC Hydro can explain or discuss the
8 rationale for installing an EV vehicle charging
9 station in Haida Gwaii given that that is an NIA area
10 powered by diesel generation?

11 MR. ANDERSON: A: Sure. Keith Anderson here. I can
12 take that. So, when we -- as part of our deployment
13 process for looking at where we are placing stations,
14 we are looking at kind of highway driving routes, and
15 one of the factors that as we explored up Highway 16
16 into Prince Rupert was the consideration of Prince
17 Rupert, and then, you know, destination is -- can
18 often be Haida Gwaii, and then as well down to the
19 northern end of Vancouver Island. So, that was where
20 Haida Gwaii came into our consideration was just
21 considering the extension of the highway corridor that
22 we were actively looking to build out at the time.

23 MR. FOX: Q: Thank you. Those are all my questions. I
24 thank everyone for their time for sitting late as
25 well.

26 MR. O'RILEY: A: You're welcome, thank you for the

1 questions.

2 MR. SANDVE: Great, and thank you very much, Mr. Fox.
3 And thank you to the Commission panel, staff, and all
4 of the intervenors today, for a very productive
5 session. But we will create the WebEx links for the
6 sessions tomorrow, both the public and the
7 confidential, and circulate the public link to the
8 distribution list that received this link for today
9 and plan to resume at 9 A.M. tomorrow morning.

10 And Mr. Chair, maybe I will turn it to you,
11 if you have any closing remarks?

12 THE CHAIRPERSON: No, Mr. Sandve, I don't have any
13 prepared or following remarks, but I would also like
14 to extend my thanks to everyone who attended today,
15 including my fellow panel members and my staff, and
16 all of the intervenors and I have to thank them for
17 all of their questions. And I'd also like to thank BC
18 Hydro for not only setting this up, and providing the
19 link and so on, but also for the for the attendance of
20 so many people from BC Hydro.

21 **Proceeding Time 5:04 p.m. T91**

22 I know that it can't be easy for this many
23 people to take this kind of time away from your day
24 job so to speak, so we really appreciate your
25 engagement here and your presence and we appreciate
26 the thoughtful responses you've provided.

1 So I will invite everyone back here at nine
2 o'clock tomorrow morning. If you can't come, there
3 will be a transcript and we'll look forward to be BCUC
4 staff's questions. So I hope everyone has a good
5 evening. I won't say have a safe journey home --
6 well, I will say have a safe journey home because I
7 see there are some people in an office. So have a
8 safe journey home and see you in the morning. Thank
9 you.

10 **(PROCEEDINGS ADJOURNED AT 5:05 P.M.)**

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