

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

and

Corix Multi-Utility Services Inc.
Burnaby Mountain District Energy Utility
2020-2023 Revenue Requirement and Rates Application

VANCOUVER, B.C.
October 13th, 2020

WORKSHOP

BEFORE:

K.A. Keilty,	Panel Chair/Commissioner
C.M. Brewer,	Commissioner
B.A. Magnan,	Commissioner

VOLUME 1

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VANCOUVER, B.C.
October 13th, 2020

(PROCEEDINGS COMMENCED AT 10:01 A.M.)

MS. SPOONER: Okay, good morning. Welcome everyone.

This is the Burnaby Mountain District Energy Utility Workshop, 2020 to 2023 revenue requirement and rates application. My name is Nancy Spooner and I will be facilitating this workshop on behalf of Corix.

Corix will be presenting information from its application this morning, and I will ask the presenters to introduce his team shortly. But first, just a reminder about the procedure for asking questions during this workshop. To let us know that you have a question we ask that you raise your hand. And you will see on the slide that the way to do that is at the bottom of the screen. When it is your turn to speak, I will say your name, you will be given permission to ask your question, and then I will also ask you to unmute your microphone.

As a facilitator it is my job to make sure everyone has the opportunity to ask the questions, but also to ensure that we get through all the material in our allotted time. If we are getting sidetracked too long on a particular topic, I will move us along so that we can get through all the material. And then if we have time we will come back to that discussion.

1 This meeting is scheduled for two hours.
2 We will conclude at noon, and there will be a five
3 minute break at approximately halfway through that
4 allotted time. I do want to let you know that this
5 session is being recorded, and the presentation will
6 be made available online.

7 I will now ask Errol to introduce the Corix
8 team.

9 MR. SOUTH: Good morning everyone. So with me here
10 today, I will be doing the presentation, but I do have
11 my colleagues here with me today. On the call we have
12 Travis Hickford-Kulak, he is the president of Energy
13 Services Canada Corix. We have Paul Holt, he is a
14 general manager of Energy Services Canada. Ivana
15 Safar, director of district energy development. Hang
16 Dao, operations support manager of energy services.
17 And Tas Tsalamandris, senior financial planning
18 analyst. So we have essentially the full team here
19 today, and would you like me to jump right in, Nancy?
20 Or did you have anything else to say?

21 MS. SPOONER: Yes. Yes please, Errol.

22 MR. SOUTH: Okay, all right, so we will begin here
23 today, as Nancy said, it will be about two hours. The
24 agenda is right here. I will do an overview of CIIC
25 Corix Multi-Utility Services Inc. Burnaby Mountain and
26 UniverCity NUS. And then I will do a brief project

1 update on the central energy plant. We will talk
2 about buildout and capital cost, O&M costs. After
3 that we will have a break, and then we will get into
4 the revenue requirements and rates for both SFU and
5 UniverCity. And then I will have a one slide
6 conclusion that will wrap things up.

7 **Proceeding Time 10:04 a.m. T2**

8 I have been informed that the panel will
9 not be making an opening statement that normally I
10 would allow time for this at this point.

11 So to begin, Corix, as many of you know,
12 Corix Multi-Utility Services Inc., it's a wholly owned
13 subsidiary of CII, Corix Infrastructure Inc., which is
14 owned by BCIMC, the pension plan manager. And CII, as
15 the parent company, has approximately 2 billion in
16 assets with over 1300 utility systems in operation
17 across North America. The bulk of the business is in
18 the States and within B.C. Corix owns and operates
19 small stand-alone utilities. That point is important
20 because it becomes, as these utilities are separate
21 with separate rate base, customer bases and rates
22 unique to each need utility system.

23 So the BMDEU, the Burnaby Mountain District
24 Energy Utility, which is why we're here today, is just
25 one of the multiple utilities owned and operated by
26 Corix in British Columbia. And the BMDEU, when it's

1 up and running, it will provide low-carbon thermal
2 energy services to both SFU and UniverCity customers.

3 So in the grand scheme of things, I'll just
4 give you some relative size, Corix is a very small
5 utility and even CII, if you compare that to say BC
6 Hydro, BC Hydro has 4 million customers at the end of
7 2019 with 20 billion in assets. So you can see how
8 tiny Corix is relative to some of the big players
9 within British Columbia.

10 So to begin with, UniverCity, this is the
11 original utility up on Burnaby Mountain there. So
12 since 2011 UniverCity has been providing thermal
13 energy service to its customers. It was granted a
14 CPCN through C7-11. Since then the plan was always to
15 begin with two temporary energy centres powered by
16 natural gas boilers and upgrade essentially to a low-
17 carbon, a permanent low-carbon energy solution when it
18 became economically feasible. And here's a picture of
19 what one of the TECs look like, all the equipment is
20 inside this container. And TEC2 came a later date and
21 it was essentially connected to TEC1. So this is an
22 old picture of the TEC1 boiler.

23 And order, BCUC Order G-4-16(a), that was
24 the most recent rate application for this utility to
25 UniverCity, anyways. That approved -- that reduced
26 the previously approved levelized rates to a 15-year

1 levelized rates to end in 2026. However, in 2011 the
2 initially approved levelized rates ended in 2031 and
3 I'll get more into that discussion later in the
4 presentation.

5 So in 2017 Corix submitted a CPCN
6 application to the BCUC. There were two keys asks in
7 that presentation. The first of which was to
8 construct and operate a new biomass facility on
9 Burnaby Mountain and it would serve both SFU and
10 UniverCity customers. It would be a 13.5 megawatt
11 plant, include biomass plant as well as a PK9 and
12 backup natural gas facility. Everything would be host
13 within one central energy plant.

14 **Proceeding Time 10:08 a.m. T3**

15 So, and the second request was for approval
16 of a thermal energy services agreement between SFU and
17 Corix. So you will hear me, and many of us refer to
18 this as the TESA. So it sets out the terms and
19 conditions of Corix, or BMDEU providing service to
20 SFU, and it also deals with the allocation of costs to
21 SFU as well. So, this CPCN was granted approval back
22 in September 2017 to CE5-17.

23 So there are many benefits of this low-
24 carbon district energy system. I mean, the
25 alternative would be to just operate the TEC from now
26 until, until infinity, but the whole purpose of this

1 is to sort of achieve these benefits. The number one
2 benefit of moving to this BMDEU biomass facility, that
3 it fulfills low-carbon energy solution mandates for
4 SFU. So, SFU has this mandate to become carbon
5 neutral, and during the technical analysis, and
6 essentially the due diligence and preliminary research
7 spanning back to I think before 2011, the result of
8 that was biomass was the preferred solution, and that
9 will help SFU to achieve its mandate. And by joining
10 SFU and UniverCity, it made the whole system
11 economically feasible. In addition to that, it
12 reduces reliance on fossil fuels, reduces CO₂
13 emissions, and it also supports Metro Vancouver's
14 solid waste management plan by diverting wood wastes
15 away from Metro Vancouver's landfills, and reusing
16 them to provide this thermal energy service here.

17 It also has a very reliable thermal energy
18 supply because of biomass again, and the fuel prices
19 that are attached to biomass are relatively stable
20 when compared to natural gas commodity prices. The
21 plan also allows for potential for electricity
22 generation in the future.

23 So, after all that time and construction on
24 the plans, that leads us to this application. So this
25 is the application that we submitted to the BCUC a few
26 months ago. And the primary purpose of the

1 application is to address the costs associated with
2 this new central energy plans, as well as address
3 costs associated with ongoing UniverCity buildouts.

4 So, at a high level we are seeking revenue
5 requirements, approval of the revenue requirements and
6 rates for the two customer groups, as well as flow
7 through energy costs for UniverCity, and as well, you
8 know, we have interim rates until the final decision
9 is issued. It is -- this one is fairly tricky,
10 because it's one of the customer groups is essentially
11 a greenfield customer, so they have no rates in place,
12 which is why we had to submit this application for
13 interim rates because the service will start to be
14 provided very shortly, even though the final costs for
15 the central energy plant would be in until later this
16 year or early 2021.

17 **Proceeding Time 10:13 a.m. T4**

18 So that's why we had to do sort of interim rates with
19 evidentiary updates early next year. And the
20 evidentiary updates will capture all the final capital
21 costs. And this is just due to timing with the
22 invoices from the manufacturers.

23 So I'll go right into the CEP project
24 update. Here you can see a couple pictures of the
25 plant at various stages of development. So up at the
26 top right, that's the blue building, is the central

1 energy plant and the other brown building with the
2 sort of camo detail there, that's the fuel building.
3 And below that it's -- this picture was taken some
4 time ago, they were constructing the different piping
5 systems throughout the plant. So right now, as of
6 October 9, both buildings are complete, the first
7 delivery of biomass fuel has been received. All
8 static checks and tests are complete for the biomass
9 and hot (inaudible) equipment.

10 And the panel had raised a question about
11 COVID-19 protocols, so throughout Corix, throughout
12 the entire company CII, we've developed COVID-19
13 protocols and they are being implemented at all the
14 utilities. So, for example, these include a mask
15 policy, employee self-screening policy, multiple
16 employee self-task policy and even a -- and multiple
17 policies, and even a policy applicable to all
18 contractors and critical visitors at Corix facilities.
19 So the employees are being trained to operate the
20 plant within the sphere of COVID-19 protocols and that
21 is -- employee training is still ongoing.

22 So, as an update, we did experience some
23 delays in permitting. There were delays in receiving
24 the developing permit and the building permit as well
25 and there were also delays due to COVID-19's impact on
26 some of the foundation work and equipment supply.

1 and running and providing service to all customers.
2 After which the TEC1 boiler will be decommissioned and
3 moved to adopt a green energy as per the application
4 to the BCUC last year. This was approved through G-
5 220-19, and the UniverCity customers will receive the
6 benefit of this disposition of the TEC1 assets.

7 So, and here you can see a picture of a
8 truck backing into the fuel bin building, and some of
9 the wood waste in one of the bays.

10 So that concludes the updates. I haven't
11 heard of any questions, so I will just keep going. So
12 from here on out, I have a lot of information that's
13 in the application. You will -- some of you will have
14 seen some of these tables before, and I will be
15 skimming through the slides. Feel free to stop me if
16 you have any questions. Otherwise, I will just
17 essentially scroll through the slides to save some
18 time. So I will go through the various, essentially,
19 steps of coming to the final customer rates.

20 So right here, we have the UniverCity
21 Buildout Schedule. And in the application we did a
22 comparison, which is what you are seeing here, between
23 the 2017 CPCN forecast and the actual and updated
24 forecasts from this application. And by actual, I am
25 talking the incorporate actual fill-out data into this
26 table here. So, essentially from 2012 to 2019 all of

1 those would be actuals, and then forecast would be
2 from 2020 onwards.

3 And so what you can see is that even though
4 there has been a delay by a few (audio drops) the
5 total floor area hasn't really changed. There hasn't
6 been any material changes, it's .1 percent change.
7 However, there has been a decrease in the total load
8 demand by about 14 and a half percent, or 1,300
9 kilowatts. And this is primarily due to a reforecast
10 of the load demand intensities based on data that we
11 have observed from the buildings that have been
12 receiving service since 2012. So as you can see on
13 the slide, it's 7,000 versus the 9,000.

14 So, this table here now shows a diversified
15 load demand and the annual energy demand. So these
16 two are key. Essentially the load demand is what is
17 used to plan capacity requirements of the plants, the
18 system, the ETSS and DPS, everything. And this is
19 quite important for that. And the annual energy
20 demand, that is what is used to calculate the fuel
21 requirements, as well as determine customer rates for
22 fuel costs.

23 **Proceeding Time 10:20 a.m. T6**

24 So, as you can see there, the annual energy
25 demand is calculated using the build-out schedule and
26 energy use intensities. And the diversified load

1 demand includes the build-out schedule, peak load
2 demand and a diversification factor. So the
3 diversification factor is what differentiates, makes
4 it different from an undiversified load demand and
5 that's the load demand if all customers were peaking
6 at the same time. So Corix uses a factor of 85
7 percent and this is what Corix typically uses in its
8 district energy utility forecast.

9 So the BMDEU energy forecast, as you can
10 see often was split between UniverCity and SFU to keep
11 them separate. As you can see, SFU, they are 43.7
12 thousand [sic] megawatt hours per year, essentially
13 from the first full year onwards. This is because
14 we're providing SFU base load demand so we both -- we
15 use 10 megawatts for capacity planning, for base load
16 demand and the annual energy consumption stays flat
17 throughout the years. SFU has their own peaking and
18 backup natural gas system and that's what they use for
19 their own peaking and backup, which is why we had to
20 construct a peaking and backup natural gas module for
21 UniverCity itself. And one thing to note is that the
22 SFU load demand and energy demand, that was determined
23 from actual observed data on SFU's system.

24 One thing to note is that you'll see the
25 tables have up to 2025 but the test period for the
26 rates that we're applying for ends at the end of 2023.

1 We show 2024 and 2025 mainly because that shows what
2 will happen at the end of the buildout for UniverCity
3 and that. So it's more contextual information but
4 those, 2024 and 2025, is not being requested at this
5 time.

6 So, as a comparison to what was provided in
7 the CPCN, in terms of energy demand forecasts there's
8 pretty much no updates to the annual energy demand
9 forecast. It's not material. This slide shows here
10 the difference between UniverCity annual demand at
11 buildout in this application verses the CPCN. And as
12 you can, see both cases it's 25,000 megawatt hours per
13 annual demand. The only difference is the timing of
14 the buildout. So it reaches full buildout at a later
15 day.

16 So this slide presents new information, so
17 this is not in the application but it's been added to
18 the evidentiary record through this medium here. And
19 essentially it breaks down the biomass demand
20 forecasts for both customer groups. So what you'll
21 see here is first we start with a total annual energy
22 demand, then we break it down into the biomass demand
23 for SFU, UniverCity and the natural gas demand for
24 UniverCity. And as you can see here the biomass
25 demand at full buildout it will take up about 92
26 percent of the total demand and then when that 92

1 percent is broken down into SFU and UniverCity, SFU
2 gets 69 percent and UniverCity will get 31 percent.

3 These figures have not materially changed
4 since the CPCN application as well. I think they're
5 about a percent or two off, but for the most part they
6 are essentially the same. For 2020 those figures were
7 prorated for a September 1 start of the CEP, but that
8 will have to be updated in the evidentiary update next
9 February. Because that's, you can see, we didn't
10 start at September 1.

11 **Proceeding Time 10:26 a.m. T7**

12 It's important to note that Corix actually
13 calculates biomass demand in tonnes, and bone dry
14 tonnes. That's how we deal with the fuel supplier.
15 However, the bone dry tonne information is
16 confidential to Corix, especially the price. And
17 that's why we are presenting the data here in megawatt
18 hours.

19 We convert this to bone dry tonnes based on
20 plant efficiency and moisture content, and higher
21 heating value specifications of the biomass supply, as
22 agreed to in the biomass supply improvements.

23 And so, this will finish up this energy
24 demand forecast section. Next I will move on to
25 capital costs for the central energy plant. So this,
26 as I said before, this rate application is primarily

1 about recovering the costs associated with this new
2 plant, and the capital costs, they are a key driver of
3 these revenue requirements. There is significant
4 capital cost for this plant relative to, for example,
5 what was there for UniverCity before in terms of rate
6 base. As you can see here, it's about 38.1 million in
7 capital cost for the CEP project, prior to AFUDC, CIAC
8 and capitalized overhead.

9 So, in the application we provided
10 extensive information on this. There was lots of
11 tables showing lots of breakdowns in different
12 approaches, tables with AFUDC, CIAC, capitalized
13 overhead, and then how it all falls together. So, now
14 that this slide here is talking about the central
15 energy plant only, but there are additional capital
16 costs for UniverCity only, that is associated with the
17 UniverCity buildout. So that is what DPS, ETS is.

18 And this slide here incorporates that. So
19 if you look on this table here, you will see 2021 to
20 2024. All those costs are associated with the
21 UniverCity ETS and DPSs. And by DPS I mean
22 distribution pipe and system. And ETS is energy
23 transfer station. So, prior to that it is primarily
24 CEP capital costs. And then from 2021 onwards, it's
25 primarily for UniverCity. And you can see the AFUDC,
26 the UniverCity capitalized overhead and CIACs. So

1 after CIACs, and after all capital costs included to
2 the buildout, we are looking at about 40 million
3 dollars, 40.4 million dollars after everything has
4 been included and incorporated.

5 So, we did a comparison -- and again, this
6 is in the application. We did a comparison with the
7 45.7 million that you are seeing there as total
8 capital costs before AFUDC, CIAC and capitalized
9 overhead with what was in the CPCN application. And
10 it is 16.6 percent higher than originally forecast,
11 and this was primarily due to increases in the
12 building and site preparation costs. It was about
13 almost \$5 million higher than anticipated.

14 So essentially what happened, after
15 detailed geotechnical assessment, it resulted in
16 significantly more excavation and subsequent fill
17 import than expected. There was increased cost of
18 material, for example, due to steel and aluminum
19 tariffs. And there was increased costs due to code
20 requirements for the firewall insulation, and just
21 increase foundation and building concrete and wall
22 requirements as well. So this increased the building
23 and site preparation costs by about 70 percent more
24 than what was forecast. And this isn't a rare
25 occurrence, it's not uncommon for these kind of things
26 to happen after the detailed geotechnical assessment

1 is completed.

2 So from there, we will go on to the capital
3 costs allocation methodology. This in particular was
4 requested by the BCUC in its letter prior to the
5 workshop. So I have a few slides on this here.

6 **Proceeding Time 10:31 a.m. T8**

7 So, this table, again this table is in the
8 application. We look at the cost allocation
9 methodologies as two separate things. So you have
10 capital cost allocation methodology and operating cost
11 allocation methodology. What you'll notice is that
12 the methodologies vary, so you have different
13 methodologies for different line items. And the idea
14 was to focus on cost causality and the implicit
15 benefit to each customer group. So, for example, all
16 the biomass portions of the CEP equipment are
17 allocated based on each customer group's share of the
18 biomass capacity.

19 And so, if you'll recall, it's a 13.5
20 megawatt plant with 10 megawatt capacity allocated to
21 SFU and 3.5 megawatt allocated to UniverCity and so
22 that's how those costs are split. So, you get the 74
23 percent, 26 percent split to SFU and UniverCity
24 respectively.

25 And these are useful for several items:
26 the biomass fuel bin allocations, fuel bin costs, fuel

1 bin buildings' foundation and site preparation and,
2 again, the biomass module within the CEP.

3 And the idea is that those are specifically
4 for biomass. Those costs are incurred for biomass,
5 it's allocated based on biomass capacity. So the CEP
6 building, that makes it a bit tricky because there's
7 things inside the CEP building that are not being used
8 by SFU or they are not receiving any benefit from it.
9 So that one takes an additional factor into play. So
10 what happens is first it's allocated -- a ratio is
11 determined based on floor area and then once that
12 ratio is determined a second allocation is determined,
13 or the actual final allocation is determined, by
14 applying the capacity requirements correctly there.
15 So essentially it's saying that within the CEP there
16 is the natural gas module which shouldn't be allocated
17 to SFU at all.

18 And so because of that, the CEP building
19 costs, these are the allocations that SFU are bit
20 lower and a bit higher to UniverCity than the biomass
21 costs. So you'll have the 62 percent and 38 percent
22 to SFU and UniverCity respectively.

23 The architectural enhancements, that one is
24 much more complicated and I won't get into the details
25 here but, just to tell you, it takes into account the
26 footprint of the fuel bin building, the biomass

1 module, the biomass capacity and the entire CEP
2 building footprint. And there's a special formula for
3 this and it was explained in the application.

4 And otherwise there are costs specific to
5 each customer group, those are allocated 100 percent
6 to each customer group. So, for example, the
7 UniverCity interface with the plant, that's 100
8 percent a UniverCity cost expense. And lastly, we
9 have project development and project management costs.
10 Those are split 50-50 in recognition that they don't
11 change with the capacity of the plant or with anything
12 having to do with the plant. They're incurred for the
13 development of the plant and they should be shared
14 equally.

15 So these were all presented to the previous
16 panel in the 2017 CPCN. The panel approved the
17 methodologies, each methodology, and I have a quote
18 here. I won't read the whole quote, but essentially
19 the panel found that it appropriately represents the
20 interests of UniverCity residents as well as SFU. And
21 so all the methodologies were approved and we have not
22 changed any of these methodologies in this
23 application, so we're all using the same
24 methodologies. There may be some updates to some of
25 the allocation percentages based on updated, like
26 floorspace information for example, and there will be

1 further updates in the evidentiary update as well.
2 And that's because at this point we still have to wait
3 on the final floorspace, the as-built drawings, to
4 determine the final allocations to each customer.

5 **Proceeding Time 10:37 a.m. T9**

6 So onto the O&M costs allocation
7 methodology and after this I'll touch on the O&M
8 costs. So essentially the O&M costs are done in a
9 similar manner. It looks at each item as line item
10 and it looks at the reason why the costs were
11 incurred, cost causality, and who is receiving the
12 implicit benefit of the costs. So, again, in cases
13 where it's UniverCity only they'll get 100 percent of
14 the allocations and in cases where it's SFU only,
15 they'll get 100 percent of the allocations. We do
16 have a few 100 percents throughout the list here.

17 So for stuff like shared costs, like
18 biomass plant operators, again, it will be allocated
19 based on share of biomass capacity and that's the same
20 allocation percentage as discussed a couple of slides
21 back. And we also have, again, building maintenance
22 is allocated using the same methodology as the CEP and
23 fuel bin building floor area and that also was
24 described a couple slides back and that is the same as
25 the architectural enhancements.

26 So the CEP output capacity refers to each

1 customer group's share of CEP output capacity, so it
2 includes the natural gas module and that's what makes
3 it different from the biomass capacity, which excludes
4 the natural gas module.

5 So there have been two changes here and it
6 is the composite allocator and the CAM model for
7 regional and corporate services respectively. So
8 these methodologies were changed due to an internal
9 change in the way the corporate costs were allocated
10 to utilities. Now they're being allocated directly to
11 each customer group from CII and this methodology is
12 the subject of an ongoing BCUC proceeding, we're in
13 the argument phase right now. So the corporate -- and
14 that's the Corix corporate costs allocation
15 methodology proceeding and the composite allocator is
16 driven from the CAM model and so both those two are
17 linked together. And then for liability insurance
18 there's annual revenue and forecast as by below for
19 property insurance.

20 And these -- so everything else remains as
21 is with the CPCN. And, again, they were approved in
22 the CPCN except for the corporate services and
23 regional services costs. The corporate services
24 costs, that's the subject of a separate BCUC
25 proceeding.

26 So for the O&M costs we -- this is just a

1 table, again, from the application. We divide it into
2 direct operating expenses for each customer group and
3 then shared operating expenses. So the direct ones
4 are allocated 100 percent to that customer group and
5 then the shared ones are allocated based on the
6 factors that we discussed in the previous slide. For
7 this utility, because the biomass facility is new,
8 some of the O&M costs are based on reasonable
9 estimates at this time but we have no historical data.
10 For the costs where we do have historical data we use
11 that historical data to develop the O&M forecast. And
12 so, again, 2020 costs were prorated for a September 1st
13 start, so this will have to be updated in the
14 evidentiary update for a later start.

15 And then last -- well, we have -- this is
16 the last slide before the break, just to give you a
17 heads up, we have energy costs. So we have biomass
18 costs, natural gas costs, electricity costs. The
19 natural gas costs are incurred only for UniverCity and
20 then the biomass and electricity are for both customer
21 groups. This table is from the application. As you
22 can see, just in energy costs alone we're looking at
23 1.8 million approaching full buildout. So biomass
24 costs also has its own allocation principle, so it's
25 allocated based on respective share of biomass energy.

26

Proceeding Time 10:41 a.m. T10

1 It is subject to confidential risk sharing
2 mechanism outlined in the TESA, but that is after the
3 costs have been allocated to each customer group. So
4 there is no cross-subsidization.

5 And electricity costs, they are forecasted
6 based on consumption and peak load, and BC Hydro
7 electricity rates. We do use a 2 percent escalator
8 beyond the BC Hydro immediate forecast period, and the
9 forecast consumption and peak loads are determined,
10 have been determined by a third party engineering
11 firm, and that was an independent of the forecast
12 needs. And those electricity costs, they are
13 allocated based on the share of the total energy
14 demand.

15 And I will just touch on natural gas costs,
16 they are forecasted based on Fortis' energy rates
17 Sproule forecast for the commodity forecast, and 2
18 percent escalator for the deliver costs, the deliver
19 rates.

20 So, I will just ask if anyone has any
21 questions before we go to the break?

22 MS. SPOONER: Thanks, Errol, I don't see any questions.
23 It is 10:43 and I will begin the timer for a five
24 minute break, and we will reconvene in five minutes
25 exactly. Thank you.

26 **(PROCEEDINGS ADJOURNED AT 10:43 A.M.)**

1 essentially 3 percent. So SFU, they're applied to the
2 biomass plant and in general for the UniverCity we
3 apply a 3 percent CIS amortization rate.

4 So this is all consistent with what had
5 been previously present to the BCUC. And one thing to
6 note is that -- and this is in the application, the
7 SFU -- pursuant to the TESA SFU's interest rates would
8 be reset at the end of the first 10 years from the
9 service commencement date.

10 So for now we've applied the same interest
11 rate to both SFU and UniverCity. However, because of
12 this essentially locked-in interest rate for SFU, the
13 interest rates may vary when we come in for next
14 application, which would be say 2023 to 2024 for 2024
15 rates. At that time the interest rate would
16 presumably be different from now and it would apply to
17 UniverCity only.

18 So also to note the capital cost
19 categories, they're not always identical to asset
20 categories for depreciation. So in the application we
21 do go through how we map the capital cost categories,
22 so the asset categories that we see here. The asset
23 categories are then what's used in determining the
24 rate based for the utility.

25 So I'll go through SFU first, completely,
26 and then I'll jump to UniverCity.

1 captures the difference between the forecast and
2 actual energy costs of both biomass and electricity,
3 and the recovery or refund of that difference is
4 through the capacity charge to ensure recovery or
5 refund over 12 months.

6 This also is subject to a confidential
7 adjustment based on the actual biomass plant
8 efficiency, and this was negotiated and approved
9 through the TESA. And so this fuel cost deferral
10 account is already approved by the BCUC from the CPCN,
11 and the same for the property tax deferral account.

12 That one is a little bit trickier.
13 Essentially there has been no property tax assessment
14 as yet, but at this point it's difficult to figure out
15 what the property tax assessment would be if one
16 occurs, if SFU is actually eligible to pay property
17 tax. So at this point, it's excluded from the revenue
18 requirements. And there is this deferral account set
19 up. And essentially it will be the difference between
20 the forecast and actual property tax for SFU between
21 the service commencement date, the date we start
22 providing service to SFU, and the receipt of the first
23 property tax assessment for the infrastructure.

24 So back in 2017 the thinking is it would
25 have been said by now something would have happened,
26 but at this time nothing has happened as yet, so we

1 are still waiting. And I do believe we do have an
2 upcoming call with B.C. Assessment to check on the
3 progress of their determination. They have the
4 information they need, it's just a matter of when they
5 will make a determination.

6 So, in this application the proposals
7 related to SFU deferral accounts all deal with
8 addressing the recovery/refund mechanism, and fillings
9 to the BCUC. So it's more about how these deferral
10 accounts work, as opposed to the actual approval of
11 the deferral account.

12 So, the one thing to note, the TESA does
13 not permit adjustments to the availability charge, and
14 the idea back in 2017 was that the capacity charge
15 would be used to address deferral balances.

16 So, for both of them, we are looking for a
17 12 months amortization period through a rate rider.
18 It would be separate rate riders using the same units,
19 but the separation would allow for easy identification
20 of where the costs are coming from, whether it's fuel
21 costs or property tax costs. And it would be the same
22 units as the capacity charge. So we have proposed to
23 submit the filing by June 1st of each year, for the
24 approval of the rate rider to be in effect as of July
25 1st.

26 We did provide a hypothetical example in

1 the application in section 9.3, and that essentially
2 just runs through the timing of how these proposals --
3 of how these adjustments to the rate riders would play
4 out.

5 It's a simple approach, it promotes
6 transparency and efficiency, it reduces regulatory
7 administrative costs and again, we tried to amortize
8 the balance over 12 months so that we're not carrying
9 deferral accounts for a long period of time.

10 **Proceeding Time 10:58 a.m. T14**

11 With SFU the idea is to recover the full
12 costs of service in the year that it occurs. So there
13 is no levelized rates for SFU, only for UniverCity.

14 So these are the proposed rates for SFU.
15 You have the effective date there as September 1,
16 January 1. And this is a table in the application.
17 At this point we don't know what the rate riders will
18 be because those -- we have to incur the costs first,
19 so that is to be determined. And this slide just
20 shows what each of the rates are.

21 And this three-part rate structure was
22 discussed previously and it is included in the test
23 year. So it is approved with the capacity charge,
24 consumption charge and availability charge. The
25 availability charge is calculated as how it was in the
26 CPCN and then the other two are the same approach as

1 well.

2 So this slide just gives an estimate of the
3 bill impact to SFU because they are a customer. So,
4 again, we're looking for the full recovery of the
5 revenue requirements for each year and that is why the
6 annual change in revenue is quite small. Again, their
7 energy demand is steady from year to year. The costs,
8 all their costs, are associated with the CEP so
9 there's no ongoing capital costs forecasted at this
10 time, and the rates essentially adjust for operating
11 cost and changes in operation costs. So we're looking
12 at less than half a percent increase for the first
13 couple years of the operation of the BMDEU.

14 So UniverCity, they are a little bit more
15 tricky. There's a lot more going on with UniverCity.
16 They are existing customers. So we look at their
17 revenue requirements here. One thing to note is that
18 they did have about 5.3 million in rate base prior to
19 the plant going into service and that's going to jump
20 up to about 21 million once the plant goes into
21 service in -- well, in 2021 because of the timing of
22 additions through rate base. And due to the ongoing
23 buildout there will be additions each year to
24 UniverCity's rate base. So even though it will be
25 depreciating there'll be constant additions each year
26 until full buildout. And so rate base grows to about

1 21.7 million in 2024.

2 We calculate all the capital financing
3 costs as discussed previously with the deemed interest
4 rates, deemed capital structure and the ROE approved
5 by the BCUC. And so we're looking at almost 3.6
6 million by 2023 in terms of revenue requirements.
7 However, UniverCity is on levelized rates for the time
8 being.

9 So with levelized rates we use a deferral
10 account. So essentially levelized rates recognizes
11 that -- they're used primarily for greenfield
12 utilities where the customer base isn't quite built-
13 out as of yet, so you're starting with one or two
14 buildings but a plant, a full -- well, in this case,
15 stage sized plants, but there is still significant
16 capital costs in the initial phase. So the idea is to
17 levelize or to essentially spread out the recovery of
18 all those costs over a certain time period.

19 **Proceeding Time 11:02 a.m. T15**

20 Initially in 2011 we had asked for 20
21 years, that was approved, so it would have been --
22 2031 would be the completion of the use of the revenue
23 deficiency deferral accounts. So the idea was that
24 this deferral account will reach zero, be fully
25 depleted by the 2031. Back in 2015 we submitted the
26 rate application to reduce this deferral account here

1 to 2026. It was reduced to 15 years and in this
2 application now we're asking for it to be extended
3 back out to 2031, so back to the original deadline.
4 And that's primarily due to the CEP construction and
5 the significant costs and addition to UniverCity's
6 rate base.

7 So I believe the question came up about --
8 in the letter to Corix about how we'll reduce the
9 impacts of the costs to the UniverCity customers. So
10 this is the tool that's used to reduce the costs, the
11 annual rate increase or the annual bill impact to
12 UniverCity customers.

13 So by levelizing -- by having levelized
14 rates we charge customers less upfront, increasing the
15 balance in the deferral accounts, and that's why
16 you'll see this comment here, in 2023 I believe is
17 when it's peaking at just under the 6 million, which
18 might sound like a significant number, but if you look
19 at the graph below, it shows that as a percentage of
20 rate base it's actually less than it previously was.
21 It's actually down to 28 percent of rate base, whereas
22 in the past the deferral accounts, though smaller, was
23 up to as much as 50 percent of rate base. And this is
24 important because there are financing costs to the
25 RDDA.

26 So these graphs here or these charts here

1 that are also in the application, they show when we
2 expect the RDDA to be fully depleted and just give you
3 an idea of the percentage of rate base that the RDDA
4 is worth.

5 One thing to note is that because of our
6 proposals regarding the flow-through energy costs for
7 UniverCity, we have excluded energy costs and revenue
8 associated with energy costs from the RDDA from 2020
9 onwards. And there, in terms of the treatment of the
10 RDDA, there's been no changes since the previous
11 approvals. We're still just applying financing costs
12 and at the approved deemed weighted average costs of
13 capital. So with the RDDA it does get impacted by the
14 build-out schedule. So if there are delays in the
15 build-out schedule, it could lead to a larger balance
16 or a shifting of the peak to a later time.

17 So in this application we are proposing an
18 energy cost reconciliation account for UniverCity.
19 And it stems from the overarching proposal, and that
20 is we want to flow-through energy costs. So
21 essentially the customers will pay exactly what we pay
22 for energy costs and that's it. And then the energy
23 cost reconciliation account and the associated
24 variable energy charge, those are the tools that allow
25 us to achieve the flow-through of energy costs.

26 So, and there's a few reasons why we do

1 that, and this slide lists them here. Energy costs
2 are 15 to 23 percent of total annual revenue
3 requirements for UniverCity. They are completely
4 outside of Corix's control.

5 **Proceeding Time 11:07 a.m. T16**

6 They vary with customer consumption and energy prices.
7 Our proposal would essentially promote transparency
8 within the rates, and send the appropriate price
9 signal to customers. So if commodity costs are
10 increasing, and it is flowed through to customers,
11 they would in turn reduce their consumption to save on
12 commodity usage.

13 Another thing, another rationale is that
14 it's consistent with what we are doing for SFU. So
15 they were approved, their fuel cost deferral account,
16 so this would be the equivalent to treat both
17 customers, UniverCity and SFU, the same way. And it
18 has been done at other Corix utilities, mainly
19 Dockside Green Energy. So the BCUC recently approved
20 flow-through energy costs with an ECRA in G-248-19.
21 And Corix's proposal is to not to switch over to a
22 variable energy charge at this time, but to do it
23 January 1st, 2021. And the establishment of the ECRA.
24 And right now we charge a variable charge to
25 UniverCity customers. This will become a variable
26 energy charge, and you will see the difference in a

1 couple slides. Similar to SFU, we would amortize this
2 over a one-year period, the balancing the ECRA, and
3 that's consistent with the Dockside Green as well.
4 And we would recover the balance of the ECRA through
5 the variable energy charge for UniverCity customers.

6 And so in this application we have also
7 included a rate setting mechanism for the variable
8 energy charge, and some of you may be familiar with
9 this type of approach, its used for some of the
10 natural gas utilities within B.C. So essentially
11 there is an ECRA ratio, and as you can see here, it's
12 a 12-month forecast variable energy charge revenue,
13 based on the current existing rates, and divided by
14 the 12-month forecast energy cost, plus the ECRA
15 balance at the beginning of the 12-month forecast
16 period. And if that ratio is outside predetermined,
17 or predefined deadband range, then we would seek a
18 change to the variable energy charge. So the range
19 we've used, a commonly used range of 0.95 and 1.05.

20 So, essentially it puts, in other words, if
21 the ratio is .90, it means that the revenue over the
22 next 12 months is only going to recover 90 percent of
23 the energy costs, plus the outstanding deferral
24 account balance. And if it's only recovering 90
25 percent, then that means it's too low, and it needs to
26 be increased so that it can recover at least 95

1 of the biomass plant. The timing was convenient but
2 essentially the purpose was to smooth out the impact
3 of the CEP going into service. Instead of having a
4 significant jump January 1st, 2021, the rates would
5 start increasing now and that smoothens the impact
6 over several years.

7 It also serves an important purpose to
8 transition UniverCity customers to flow-through energy
9 costs effective January 1st, 2021 with the variable
10 energy charge. And it helps to reduce the current
11 deficit in the RDDA, which is 2.7 million. Any
12 reduction would be helpful at this time just because
13 of the significant increase in rate base and costs
14 that's about to come online for UniverCity customers.

15 So other than that the 2020 rates, other
16 than the four-month rate rider, there aren't any other
17 changes. The rates stay as is. And for UniverCity it
18 used a simpler two-part rate structure, so it will be
19 one fixed basic charge per square footage per month --
20 or per square metre per month floor area and the other
21 would be the variable energy charge dollar per
22 kilowatt hour.

23 So when you look at the estimated bill
24 impact one thing to note is that Corix, the customers
25 of Corix's utility is primarily strata corporations.
26 So they aren't end users or units or suite owners.

1 Corix sells to the strata and then the strata recovers
2 their costs from each suite owner, unit owner, through
3 their means. Typically it's a fixed -- through the
4 fixed monthly strata fee, but it's really up to the
5 strata corporation to determine how they recover the
6 costs from their unit owners.

7 But what we've tried to do is try to
8 estimate what it would be, the bill impact, what the
9 bill impact would be, if a unit owner was an actual
10 customer and that's what we've put in the application.
11 And we've designed the rates in a way that the total
12 annual bill impact is less than 10 percent per year.
13 And so we've tried to smoothen out the rate increases
14 each year to result in lower changes in the overall
15 annual bill. And so that's what you're seeing here,
16 the highlighted row.

17 In 2020 it would have been a 9 percent
18 increase and that's due to the four-month rate rider
19 and that's 9 percent for the whole year, for 2020
20 there. And looking at the size of the units for a
21 1,000 square-foot condo the annual bill would be about
22 \$1400; for a 600 square-foot condo the annual bill
23 would be about \$850 for 2020 and then the increase
24 would be 6.91 percent in the following year.

25 So our proposed rates essentially do not
26 result in rate shock for the average end user at

1 UniverCity. Again, it's we bill to customers which
2 are stratas and this is what I was talking about where
3 we use 2022 and 2023 variable energy charge forecast,
4 even though we're not requesting those at this time.

5 **Proceeding Time 11:17 a.m. T18**

6 Because say, for example, if our forecasts are
7 accurate then this cost would stay the -- this rate
8 would stay the same for 2022, there is no change. So
9 in the application we do show the impact to a 800
10 square-foot residential user as well. So there's more
11 -- there's a larger table in the application. It was
12 too big to fit here.

13 And basically for the change in annual
14 bill, the percentage change, is the same for each
15 customer because we use the same residential energy
16 use intensity. So we calculate the energy use by
17 applying the energy use intensity to the floor area
18 and that's how we come up with the energy use for each
19 year for each customer or each end user unit size.

20 So I'm about to wrap up here, I just have a
21 couple more slides. This was asked in the letter to
22 Corix regarding this proceeding. So, essentially
23 assess the rate design principles for the proposed
24 rates for UniverCity and so we looked at James C.
25 Bonbright. Bonbright's rate design principles is
26 often referred to by utilities when designing rates.

1 And these are things that we do consider. Essentially
2 all the time when we're designing rates we consider a
3 number of these rate design principles. So, right
4 here, this slide shows that all proposals are all
5 aligned with the Bonbright rate design principles.
6 And by proposals we're talking about the flow-through
7 energy, the flow-through energy costs, so the ECRA and
8 the variable energy charge combined with the basic or
9 the fixed charge.

10 So essentially it's a two-part rate, it's
11 pretty practical. There is a high degree of
12 understandability. Everybody knows the fixed charge
13 that's per square metre and the other one, the
14 variable energy charge, will vary depending on your
15 consumption. So it's easily understandable by all
16 parties. There's no confusion or controversy in
17 trying to interpret the rate, it's not a complicated
18 rate structure as we know some can get. The flow
19 through rates will effectively yield the total revenue
20 requirements for the energy costs. The RDDA is still
21 being used to levelized rates for the fixed charge but
22 that's not something we can avoid, just due to the
23 greenfield nature of the buildout and it's still being
24 built out and the significant capital costs. It will
25 provide revenue stability from year to year and it
26 will provide rate stability as well through the use of

1 the ECRA and the RDDA.

2 And for the ECRA we don't anticipate major
3 rate changes for customers for the variable energy
4 charge mainly because it is a fixed price agreement
5 for the biomass supply, which is supplying the vast
6 majority of the energy consumption to customers. It's
7 fair among customer classes, it's applied equally to
8 all customers, within UniverCity we don't have
9 different customer classes with the UniverCity
10 customer group.

11 **Proceeding Time 11:21 a.m. T19**

12 And so there is no discrimination because it's the
13 variable energy charge, it's charging customers by
14 energy usage. And because of its price transparency,
15 it provides the appropriate pricing to customers. So
16 with that, we are in alignment with the Bonbright rate
17 design principles with our proposal for the UniverCity
18 rates.

19 And so to conclude, there is many benefits
20 for this biomass central energy plant. Some of the
21 main ones, but this is by far not the entire list, is
22 that it reduces fossil fuel reliance, CO₂ emissions,
23 and it diverts wood waste from landfills.

24 And also, old SFU and UniverCity rates,
25 they have been designed to be consistent with what was
26 approved in the TESA, and they are aligned to rate

1 design principles.

2 So with that, we conclude by just saying
3 that the proposals result in rates that are not
4 unjust, unreasonable, or unduly discriminatory, or
5 unduly preferential. And we are seeking approval of
6 these rates. And that is the last slide for me.

7 MS. SPOONER: Thank you very much, Errol.

8 So I have seen no hands raised during the
9 presentation, and I will just ask now the participants
10 on this call, if you do have questions, a reminder to
11 just raise your hand by clicking on the raise your
12 hand at the bottom of the screen. And then we will be
13 calling on you for your question and you will just
14 have to unmute yourself to ask the question. So I
15 will just give some time to see if there are going to
16 be any questions from the attendees.

17 Okay, Leon Cheung has a question.

18 MR. CHEUNG: Hi, this is Leon Cheung here at the BCUC
19 Staff. Thank you, Errol, for the presentation. A
20 simple question here. I noticed that the energy costs
21 rate change is July 1st for SFU and for UniverCity is
22 April 1st. Can you explain why the difference in
23 dates, and is there a significance to it?

24 MR. SOUTH: Hi, Leon. So there is a significance to
25 it. I believe, I can't remember it off the top of my
26 head right now, I do believe it was discussed in the

1 application, but essentially one key difference is
2 that the SFU, that one is being changed through a rate
3 rider, so it's not the same rate that is changing,
4 it's not the energy cost rate that's changing, it will
5 be changed through our rate rider, which is applied
6 using different units, the capacity charge units,
7 whereas for UniverCity, it's the variable energy
8 charge that will be changing each time.

9 So that one is -- think of that one as
10 being a constant change, constantly changing each
11 year. So I think -- so they are actually different,
12 and the way they are changed and reset is actually
13 different as well. So the timing, they don't have to
14 be related. It was more important to tie the timing
15 of the property tax and energy cost rates for SFU
16 together than it was to tie the UniverCity variable
17 energy charge to the SFU energy charge rates together.
18 And I believe you should find more on the timing in
19 the body of the application.

20 MS. SPOONER: Leon, any follow up question?

21 MR. CHEUNG: No, I'm fine, thank you.

22 MS. SPOONER: Thank you. Any other questions for
23 Errol? Karen Keilty has a question.

24 Karen, have you unmuted yourself?

25 THE CHAIRPERSON: Thank you.

26 MS. SPOONER: There you go.

1 THE CHAIRPERSON: This is Karen Keilty, the panel
2 chair. I'd like to thank Ms. Spooner and Mr. South
3 for the overview of the application, and for
4 addressing the panel's requests regarding the items to
5 be discussed in this workshop. I don't have any
6 specific questions, thank you.

7 MS. SPOONER: Thank you very much.

8 MR. SOUTH: Thank you, Karen.

9 MS. SPOONER: I will do one last call for questions?
10 And seeing none, I will just thank everyone
11 for participating in the call this morning. Thank
12 you, Errol, and the Corix team for being here to
13 respond to questions and to provide the information.
14 And I will now conclude the meeting.

15 **(PROCEEDINGS ADJOURNED AT 11:27 A.M.)**

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I HEREBY CERTIFY THAT THE FORGOING
is a true and accurate transcript
of the proceedings herein, to the
best of my skill and ability.

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A.B. Lanigan, Court Reporter

October 13th, 2020