

Suite 410, 900 Howe Street Vancouver, BC Canada V6Z 2N3 bcuc.com **P:** 604.660.4700 **TF:** 1.800.663.1385

### ORDER NUMBER G-94-24

IN THE MATTER OF the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

River District Energy Limited Partnership
2024 to 2025 Interim Rates

#### **BEFORE:**

E. B. Lockhart, Panel Chair W. E. Royle, Commissioner

on March 27, 2024

#### **ORDER**

#### **WHEREAS:**

- A. On October 6, 2023, River District Energy Limited Partnership (RDE) submitted an application (Application) to the British Columbia Utilities Commission (BCUC) for approval of a 3.94 percent annual rate increase to the Monthly Capacity Charge and the Thermal Energy Charge for all customers for each of 2024 and 2025;
- B. On December 19, 2011, by Order C-14-11, RDE was granted a Certificate of Public Convenience and Necessity (CPCN) to construct and operate temporary and permanent natural gas fuelled energy centres and related thermal distribution piping system and energy transfer stations for the River District Development (River District). The BCUC also approved a 20-year levelized rate structure and the establishment of a revenue deficiency deferral account (RDDA) in which RDE would defer a portion of its annual revenue requirement during the early years of the development;
- C. On June 27, 2023, by Order C-3-23, RDE was granted a CPCN for the second phase of the district energy utility system serving River District to construct and operate a community energy centre and related thermal energy distribution piping system, energy transfer stations and facilities as required by RDE to serve future customer buildings within River District;
- D. By Order G-66-21 dated March 8, 2021, the BCUC established a Generic Cost of Capital (GCOC) proceeding and on September 5, 2023, the BCUC issued the GCOC Stage 1 Decision and Order G-236-23. In the GCOC Stage 1 Decision, the BCUC established, among other things, interim rates, effective January 1, 2024, on a refundable or recoverable basis, for all other utilities, except FortisBC Inc., that currently use FortisBC Energy Inc. as a benchmark to set their capital structure and equity return pending the BCUC's final decision on Stage 2 of the GCOC proceeding;
- E. In the Application, RDE states that it anticipates submitting a revenue requirements application (RRA) in the summer of 2025 following the completion of the community energy centre and the BCUC's final decision on Stage 2 of the BCUC's current GCOC proceeding;

Final Order 1 of 2

- F. By Order G-304-23 dated November 9, 2023, the BCUC approved RDE's requested 3.94 percent rate increase on an interim basis and established a regulatory timetable for the review of the Application, which included public notice, one round of BCUC information requests to RDE, and a letters of comment deadline. The timetable also set a date for RDE's written reply to letters of comment and final argument;
- G. One letter of comment was received, from the Residential Consumer Intervener Association; and
- H. The BCUC has reviewed the Application, evidence and argument filed in the proceeding and makes the following determinations.

**NOW THEREFORE** pursuant to sections 59 to 61 and 89 of the *Utilities Commission Act*, for the reasons outlined in the decision accompanying this order, the BCUC orders as follows:

- 1. RDE is denied a 3.94 percent rate increase and is directed to implement a rate increase of 7.5 percent to the Monthly Capacity Charge and the Thermal Energy Charge for each of 2024 and 2025, effective January 1 of each year, on an interim and refundable/recoverable basis, pending the outcome of Stage 2 of the BCUC's current GCOC proceeding.
- 2. RDE is directed to recover the difference between the revenues collected under the updated interim rates as outlined in this order and the decision issued concurrently and the interim rates approved as of January 1, 2024 by Order G-304-23, by way of bill adjustments over a period not to exceed six months, with interest accruing at the average prime rate of RDE's principal bank for its most recent year, until this difference is fully recovered.
- 3. In accordance with Directive 2 of this order, RDE is directed to file, within 30 days of this order, a compliance filing with the BCUC that includes a schedule with the anticipated timing and amounts of the bill adjustments with interest applied.
- 4. RDE is directed to file revised tariff pages with the BCUC for endorsement within 30 days of this order, reflecting the determinations in the decision issued concurrently.
- 5. RDE is directed to include in its next RRA an analysis on the 20-year levelization period and the RDDA recovery period.

Division and the city of various very in the frontier of british columbia, this	<b>DATED</b> at the City	of Vancouver,	in the Province	of British Columbia	, this $2^{\circ}$	7 <sup>th</sup> da	y of March 2024
---	--------------------------	---------------	-----------------	---------------------	--------------------	--------------------	-----------------

BY ORDER

Original signed by:

E. B. Lockhart Commissioner

Final Order 2 of 2

# River District Energy Limited Partnership 2024 to 2025 Interim Rates

# **DECISION**

# **Table of Contents**

			Page no.
Execu	ıtive Sur	mmary	i
1.0	Introd	duction	1
	1.1	Background and History	1
	1.2	Application and Regulatory Process	2
	1.3	BCUC Jurisdiction	3
	1.4	BCUC Generic Cost of Capital Proceeding	3
2.0	Propo	osed 3.94% Rate Increase in Each of 2024 and 2025	4
3.0	Therm	mal Energy Rate Comparisons	10

### **APPENDICES**

APPENDIX A EXHIBIT LIST

## **Executive Summary**

On October 6, 2023, River District Energy Limited Partnership (RDE) filed an application with the British Columbia Utilities Commission (BCUC) for approval to increase its rates by 3.94 percent in each of 2024 and 2025 (Application).

The River District Development (River District) is a large, mixed-use waterfront community located on former industrial lands along the Fraser River in southeast Vancouver, BC. RDE is developing a community-wide heating system known as a District Energy Utility System (DEU) to serve River District. RDE has completed Phase 1 of the DEU and has connected 20 buildings and installed three temporary energy centres to provide thermal energy to River District. The BCUC approved Phase 2 of the DEU in 2023, including the construction and commissioning of a permanent community energy centre (Energy Centre) that will serve as the permanent source of thermal energy. Construction of the Energy Centre is now underway. RDE anticipates its completion in March 2025, at which point it intends to submit a comprehensive revenue requirements application (RRA).

RDE's rates, which comprise a monthly capacity charge (Monthly Capacity Charge) and a thermal energy charge (Thermal Energy Charge), are currently set based on a 20-year levelized rate structure, whereby it underrecovers its cost of service during the early years of operation and over-recovers its cost of service in the later years as River District develops. The initial revenue shortfall is captured in a revenue deficiency deferral account (RDDA) that is subsequently drawn down, and which RDE forecast would be fully recovered by the 20<sup>th</sup> year of operation in 2031, assuming a straight-line annual rate escalation of 3.94 percent over the full 20 years.

RDE notes that as at the end of 2023, the RDDA balance had grown by more than what was originally forecast, for a number of reasons including slower than anticipated development at River District. The Application does not provide an analysis of whether changes to the current 20-year levelization period or the RDDA recovery term are necessary. RDE explains, however, that the continuity of annual rate increases is the primary reason why it proposes an annual rate increase of 3.94 percent for the next two years.

The Panel rejects RDE's requested rate increase and directs RDE to implement a rate increase of 7.5 percent to the Monthly Capacity Charge and the Thermal Energy Charge for each of 2024 and 2025, effective January 1 of each year, on an interim and refundable/recoverable basis, pending the outcome of Stage 2 of the BCUC's current Generic Cost of Capital proceeding. The Panel is not persuaded that the continuity of annual rate increases is a good reason to maintain a rate that RDE acknowledges is no longer sufficient to manage its costs and growing RDDA balance. The 3.94 percent rate increase is based on a 20-year levelized rate structure in which the RDDA would be fully recovered by 2031. RDE acknowledges that this recovery period is no longer feasible due to the higher than anticipated growth in its RDDA and that it anticipates rate increases higher than 3.94 percent once the Energy Centre is in service. Based on the other rate increases considered during the proceeding, the Panel finds that an annual 7.5 percent rate increase achieves a more meaningful impact on the RDDA balance, without resulting in rate shock. The RDDA recovery period is reduced by at least two years with a 7.5 percent annual rate increase as compared to the proposed 3.94 percent.

The Panel directs RDE to recover the difference between the revenues collected under the updated interim rates as outlined in this Decision and the interim rates approved as of January 1, 2024 by Order G-304-23, by way of bill adjustments over a period not to exceed six months, with interest accruing at the average prime rate of RDE's principal bank for its most recent year, until fully recovered.

The Panel also directs RDE to include an analysis on the 20-year levelization period and RDDA recovery period in its next RRA.

Order G-94-24

#### 1.0 Introduction

On October 6, 2023, River District Energy Limited Partnership (RDE) filed an application with the British Columbia Utilities Commission (BCUC) for approval to increase its rates by 3.94 percent in each of 2024 and 2025 (Application). This decision addresses the Panel's final determinations on the Application.

### 1.1 Background and History

The River District Development (River District) is a large, mixed-use waterfront community located on former industrial lands along the Fraser River in southeast Vancouver, BC.<sup>1</sup> In 2011, RDE proposed a phased approach for the development of a district energy utility system (DEU) for River District. A DEU is a community wide heating system that includes thermal generating facilities and the associated distribution piping and energy transfer stations.<sup>2</sup>

In 2011, the BCUC approved RDE's Phase 1 plan to provide thermal energy to serve River District's initial development parcels using temporary energy centres, until the construction of the permanent energy centre (Phase 1 CPCN Decision),<sup>3</sup> which RDE expected to complete in 2016.<sup>4</sup> The BCUC also approved a 20-year levelized rate structure, a rate design consisting of a monthly capacity charge (Monthly Capacity Charge) and a thermal energy charge (Thermal Energy Charge), and the establishment of a revenue deficiency deferral account (RDDA).<sup>5</sup>

RDE proposed a levelized rate structure in order to distribute the costs of developing the DEU over a 20-year period, which corresponded roughly to the anticipated duration of the development build-out.<sup>6</sup> Under a levelized rate approach, RDE under-recovers its cost of service during the early years of operation and over-recovers its cost of service in the later years as River District develops.<sup>7</sup> The initial revenue shortfall is captured in the RDDA and then subsequently drawn down and fully recovered by the 20th year of operation, which RDE forecast would be 2031.<sup>8</sup>

In 2012, the BCUC approved RDE's initial effective thermal energy rate of \$92.37 per megawatt hour (MWh) and an annual escalation rate of 3.94 percent for the period of 2013 through 2016. RDE forecast that an annual escalation rate of 3.94 percent would eliminate the RDDA balance over the 20-year levelization period, if applied on a straight-line basis over the full 20 years. 10

Subsequently, the development of River District was slower than anticipated and RDE responded to this market change by postponing the construction of the permanent energy centre.<sup>11</sup> In July 2017, RDE requested the

Order G-94-24 1 of 13

<sup>&</sup>lt;sup>1</sup> RDE Certificate of Public Convenience and Necessity (CPCN) for the Second Phase of the District Energy Utility System (Phase 2 CPCN proceeding), Decision and Order C-3-23 (Phase 2 CPCN Decision), p. 3.

<sup>&</sup>lt;sup>2</sup> Phase 2 CPCN Decision, p. 4.

<sup>&</sup>lt;sup>3</sup> RDE Application for a Certificate of Public Convenience and Necessity to Construct and Operate a District Energy System for the River District Development in Southeast Vancouver and the Proposed Revenue Requirement, Rate Design, Levelized Rates and Revenue Deficiency Deferral Account for the First Five Years of Operation (Phase 1 CPCN proceeding), Order C-14-11 and Decision dated December 19, 2011 (Phase 1 CPCN Decision); RDE Phase 2 CPCN proceeding, Exhibit B-1, p. 2.

<sup>&</sup>lt;sup>4</sup> Phase 1 CPCN Decision, p. 10.

<sup>&</sup>lt;sup>5</sup> Phase 1 CPCN Decision, p. 49.

<sup>&</sup>lt;sup>6</sup> Phase 1 CPCN Decision, p. 23.

<sup>&</sup>lt;sup>7</sup> Phase 1 CPCN Decision, p. 23; RDE 2020-2023 Rates Application, Order G-271-19 and Reasons for Decision dated November 4, 2019 (2019 Decision), p. 4.

<sup>&</sup>lt;sup>8</sup> Phase 1 CPCN Decision, p. 23; RDE Phase 2 CPCN proceeding, Exhibit B-1, p. 48.

<sup>&</sup>lt;sup>9</sup> Order G-2-12.

<sup>&</sup>lt;sup>10</sup> Order G-2-12, p. 2; Appendix A, p. 1.

<sup>&</sup>lt;sup>11</sup> RDE Phase 2 CPCN proceeding, Exhibit B-1, p. 2.

BCUC's approval to keep the existing rates unchanged, because of the slower-than-anticipated development and because of changes in 2016 and 2017 to the City of Vancouver building code and policies that affected RDE's business model.<sup>12</sup> The BCUC approved RDE's request and the rates at River District remained unchanged from the approved 2016 rate until December 31, 2019.<sup>13</sup>

In 2019, the BCUC approved RDE's request to increase rates by 3.94 percent per year from 2020 to 2023. ARDE explained the rate escalation would allow for balanced recovery of the RDDA while it continued to work to secure a low carbon energy source, following which RDE would propose a new RDDA term. River District's slower-than-anticipated development and the City of Vancouver's low-carbon requirement had shifted RDE's business plan such that the RDDA balance was no longer forecast to be fully recovered by 2031 (i.e. the end of the 20-year levelization period).

In 2023, the BCUC approved Phase 2 of the DEU, consisting of the permanent community energy centre (Energy Centre), as well as distribution piping and energy transfer stations required to serve RDE's current and future customer buildings (Phase 2 CPCN Decision).<sup>17</sup> RDE explained that it expected the Energy Centre to be in service by 2024 and the remaining distribution piping and energy transfer stations would be installed as River District develops to full build-out in 2047.<sup>18</sup>

As of the date of the Application, RDE has connected 20 buildings and installed three temporary energy centres to provide thermal energy ahead of the construction and commissioning of the Energy Centre that will be RDE's permanent source of thermal energy.<sup>19</sup>

## 1.2 Application and Regulatory Process

RDE requests BCUC approval to increase rates, specifically the Monthly Capacity Charge and Thermal Energy Charge, by 3.94 percent per year, effective January 1 for each of 2024 and 2025. The proposed rates are a continuation of the 3.94 percent annual rate increases that the BCUC approved in 2019 for 2020 to 2023. The proposed rates are a continuation of the 3.94 percent annual rate increases that the BCUC approved in 2019 for 2020 to 2023.

The Application does not contain an analysis of whether changes to the 20-year levelization period or the RDDA recovery term are necessary. RDE states that it anticipates filing of what it describes as a "comprehensive Revenue Requirements Application" (RRA) in the summer of 2025, following the completion of the Energy Centre and the BCUC's Generic Cost of Capital (GCOC) Stage 2 proceeding (see Section 1.4 below).<sup>22</sup> RDE explains that the development of a comprehensive RRA is a significant undertaking and due to its limited staff, developing a comprehensive RRA for the 2024 to 2025 period (Test Period) and another one for the 2026 calendar year forward would not be efficient.<sup>23</sup>

The BCUC approved RDE's requested 3.94 percent rate increase on an interim basis, effective January 1, 2024.<sup>24</sup> The BCUC noted it will determine the manner by which any difference in rates between approved interim rates

Order G-94-24 2 of 13

<sup>&</sup>lt;sup>12</sup> 2019 Decision, p. 3.; Order G-2-12.

<sup>&</sup>lt;sup>13</sup> 2019 Decision, pp. 3–4; RDE 2020-2023 Rates Application, Exhibit B-1, p. iii; Compliance Filing pursuant to Order G-188-12 dated July 25, 2017.

<sup>&</sup>lt;sup>14</sup> Order G-271-19.

 $<sup>^{\</sup>rm 15}$  RDE 2020-2023 Rates Application, Exhibit B-1, p. 15.

<sup>&</sup>lt;sup>16</sup> RDE 2020-2023 Rates Application, Exhibit B-1, p. 15.

<sup>&</sup>lt;sup>17</sup> Phase 2 CPCN Decision, p. 1; RDE Phase 2 CPCN proceeding, Exhibit B-1, p. 1.

<sup>&</sup>lt;sup>18</sup> Phase 2 CPCN Decision, p.1.

<sup>&</sup>lt;sup>19</sup> Exhibit B-1, p. 4; Phase 2 CPCN Decision, p. 1.

<sup>&</sup>lt;sup>20</sup> Exhibit B-1, p. 13.

<sup>&</sup>lt;sup>21</sup> RDE Final Argument, p. 1; Order G-271-19.

<sup>&</sup>lt;sup>22</sup> Exhibit B-1, p. 1; Exhibit B-3, BCUC IR 5.1.

<sup>&</sup>lt;sup>23</sup> Exhibit B-3, BCUC IR 5.1.

<sup>&</sup>lt;sup>24</sup> Order G-304-23 dated November 9, 2023.

and updated interim rates, including interest if any, will be refundable to or recoverable from customers at the time the BCUC renders its final decision on the Application.<sup>25</sup>

The BCUC established a regulatory timetable<sup>26</sup> for the review of the Application which included public notice, one round of BCUC information requests (IRs), and a letters of comment deadline. The timetable also set a date for RDE's written reply to letters of comment and final argument.

The Residential Consumer Intervener Association (RCIA) submitted a letter of comment, <sup>27</sup> in which it states that it does not object to RDE's proposed rate increase of 3.94 percent for each of 2024 and 2025. <sup>28</sup>

### 1.3 BCUC Jurisdiction

The BCUC's Thermal Energy System (TES) Framework Guidelines (TES Guidelines)<sup>29</sup> provide a scaled approach to the regulation of thermal energy services, where the regulatory oversight increases as the size and scope of the TES increases. RDE is classified as a Stream B TES public utility<sup>30</sup> for which the approval of rates is governed by sections 59–61 of the *Utilities Commission Act* (UCA).<sup>31</sup>

The TES Guidelines state that applicants (Stream B TES utilities, such as RDE) are required to consider the following rate setting principles:<sup>32</sup>

- 1. provide an equitable balance of risk and cost (such as forecast load and cost risk) between the utility and the ratepayer or generation of ratepayers;
- 2. use the [fewest] deferral mechanisms possible;
- 3. restrict the ability of the utility to pass controllable costs onto ratepayers;
- 4. use the least amount of regulatory oversight to protect the ratepayer (minimize the regulatory burden and costs on the utility, ratepayers and the Commission); and
- 5. avoid rate shock (>10 percent change in rates per annum is generally considered "Rate Shock").

### 1.4 BCUC Generic Cost of Capital Proceeding

In January 2021, the BCUC initiated a GCOC proceeding. The purpose of the GCOC proceeding is to establish a method to determine the appropriate cost of capital for regulated utilities in BC, as well as to review the appropriateness of continuing to use a benchmark utility (Benchmark Utility). 33 The BCUC established a two-staged review process for the GCOC proceeding. Stage 1 determined the deemed capital structure and allowed return on equity (ROE) of FortisBC Energy Inc. (FEI) and FortisBC Inc. (FBC). Stage 2, currently underway, 34 will determine matters related to the Benchmark Utility, including whether the current approach of using a Benchmark Utility remains appropriate and, if so, whether one or both or neither of these utilities should serve as a benchmark for establishing the cost of capital for most other utilities in BC.

Order G-94-24 3 of 13

<sup>&</sup>lt;sup>25</sup> Order G-304-23 dated November 9, 2023.

<sup>&</sup>lt;sup>26</sup> Order G-304-23 dated November 9, 2023.

<sup>&</sup>lt;sup>27</sup> Exhibit D-1.

<sup>&</sup>lt;sup>28</sup> RDE Final Argument, p. 1.

<sup>&</sup>lt;sup>29</sup> Appendix A to Order G-27-15, BCUC Thermal Energy Systems Regulatory Framework Guidelines (TES Guidelines), p. 22.

<sup>&</sup>lt;sup>30</sup> BCUC Generic Cost of Capital Proceeding (Stage 2) Decision dated March 25, 2014, p. 116.

<sup>&</sup>lt;sup>31</sup> Utilities Commission Act, RSBC 1996, c. 473.

<sup>32</sup> TES Guidelines, p. 22.

<sup>&</sup>lt;sup>33</sup> BCUC Generic Cost of Capital Stage 1 (GCOC Stage 1), Decision and Order G-236-23 dated September 5, 2023 (GCOC Stage 1 Decision), p. 1.

<sup>&</sup>lt;sup>34</sup> BCUC Generic Cost of Capital Stage 2. Proceeding's record available at <a href="https://www.bcuc.com/OurWork/ViewProceeding?applicationid=1148">https://www.bcuc.com/OurWork/ViewProceeding?applicationid=1148</a>.

On September 5, 2023, the BCUC issued its decision on Stage 1 of the GCOC proceeding.<sup>35</sup> The BCUC directed, among other things, that all other utilities using the Benchmark Utility to set their rates (which includes RDE) will have interim rates, effective January 1, 2024, on a refundable or recoverable basis, pending the BCUC's final decision on Stage 2 of the GCOC proceeding.<sup>36</sup>

RDE registered as a participant in the GCOC proceeding.<sup>37</sup>

#### 2.0 Proposed 3.94% Rate Increase in Each of 2024 and 2025

RDE proposes to increase the Monthly Capacity Charge and Thermal Energy Charge by 3.94 percent effective January 1 for each of 2024 and 2025, which is consistent with the annual rate increase previously approved for RDE's 2020 to 2023 rates.<sup>38</sup> The resulting rates are shown in Table 1 below.

Table 1: Proposed	Rates for 202	.4 and 2025 <sup>39</sup>
-------------------	---------------	---------------------------

PROPOSED ENERGY RATES	2024	2025
Monthly Capacity Charge (\$/m²)	0.67	0.70
Thermal Energy Charge (\$/MWh)	43.48	45.19
Effective Date	January 1 <sup>st</sup> , 2024	January 1st, 2025

RDE explains that the continuity of annual rate increases is the primary reason for the proposed 3.94 percent increase.<sup>40</sup> This amount was first approved for the period of 2013 through 2016, when RDE determined that it was the annual rate escalation required to eliminate the RDDA balance over the 20-year levelization period.<sup>41</sup> RDE explains that it considered whether an annual rate increase other than 3.94 percent would be appropriate and submits that any other rate increase would be somewhat arbitrary and difficult to justify to its customers in the absence of a comprehensive RRA, without substantial completion of the Energy Centre, and in the absence of a final decision in the GCOC Stage 2 proceeding.<sup>42</sup>

## **Levelization Period and RDDA Recovery**

As noted above, in the Phase 1 CPCN Decision the BCUC approved a 20-year levelized rate structure and the establishment of an RDDA, which RDE expected to fully recover over 20 years, by 2031.<sup>43</sup> However, as RDE explained during the proceeding to review RDE's Phase 2 CPCN Application, because of the delays in the development of buildings in River District and the corresponding delay in the construction of the Energy Centre, it intended in a future rate application to request that the RDDA be recovered over a longer term.<sup>44</sup> The Phase 2 CPCN Application assumed recovery of the RDDA by 2047, which corresponds to the expected timing of full build-out of River District.<sup>45</sup> By way of example, RDE provided a set of indicative future rate changes, reproduced in Table 2 below, if the RDDA is paid down by 2047.

Order G-94-24 4 of 13

<sup>35</sup> GCOC Stage 1 Decision, Executive Summary, p. i.

<sup>&</sup>lt;sup>36</sup> GCOC Stage 1 Decision, p. 142.

 $<sup>^{</sup>m 37}$  BCUC GCOC Stage 1, Exhibit B8-1.

<sup>&</sup>lt;sup>38</sup> Exhibit B-1, p. 13.

<sup>&</sup>lt;sup>39</sup> Exhibit B-1, Table 3.1, p. 13.

<sup>&</sup>lt;sup>40</sup> Exhibit B-3, BCUC IR 5.1.

<sup>&</sup>lt;sup>41</sup> Order G-2-12, pp. 1–2.

<sup>&</sup>lt;sup>42</sup> Exhibit B-3, BCUC IR 5.1.

<sup>&</sup>lt;sup>43</sup> RDE Phase 2 CPCN proceeding, Exhibit B-1, p. 48.

<sup>&</sup>lt;sup>44</sup> RDE Phase 2 CPCN proceeding, Exhibit B-1, p. 48.

<sup>&</sup>lt;sup>45</sup> RDE Phase 2 CPCN proceeding, Exhibit B-1, p. 48.

Table 2 – Summary of Indicative Rate Escalation to Eliminate the RDDA Balance by 2047<sup>46</sup>

	2024-29	2030-34	2035-39	2040-47
Annual Rate Escalation	7.5%	4.0%	2.5%	-2.2%

RDE explains that the indicative rates provided as part of the proceeding for the Phase 2 CPCN Application were based on substantial completion of the Energy Centre. During the current proceeding, RDE confirmed that as it articulated in the indicative rate analysis, provided above as Table 2, RDE anticipates that annual rate increases greater than 3.94 percent will be necessary once the Energy Centre is in service. <sup>47</sup> In addition, RDE confirms that a rate increase of higher than 3.94 percent would reduce the incremental rate increase once the Energy Centre enters service and potentially limit the extent of future rate increases, but considers that the impact would only be modest given the short duration that RDE anticipates the applied for rates to be in effect. <sup>48</sup> RDE states that it intends to seek a future rate increase directly informed by an updated rate base, allowed ROE, and capital structure. <sup>49</sup>

RDE's focus for the Test Period will be the construction and commissioning of the Energy Centre and the connection of three new customer buildings with approximately 42,524 square metres (m²) of total floorspace.<sup>50</sup> RDE states that construction of the Energy Centre is underway and it anticipates completion in March 2025.<sup>51</sup>

#### Test Period Costs and RDDA Balance

Table 3 below provides the forecast operating costs and RDDA balance with the proposed 3.94 percent annual rate increases for the Test Period. With the proposed 3.94 percent rate increases in effect, the RDDA increases by \$441,000 in 2024, and \$2,258,000 in 2025 due to the construction of the Energy Centre, to total \$8,863,000 by the end of 2025.<sup>52</sup>

Table 3 – Operating Costs and RDDA Balance for 2024 and 2025 with 3.94% Rate Increases<sup>53</sup>

RDDA (\$000s) - REVISED PLAN	2024	2025
Operating costs	2,446	4,494
Deemed interest expense	575	680
Deemed return on equity	735	867
Amortization	486	599
Revenue requirements	4,242	6,640
Less: Revenues	(3,801)	(4,382)
RDDA (annual)	441	2,258
RDDA (cumulative)	6,605	8,863

For comparison, RDE also provides the forecast RDDA balance that would result from no rate increases during the Test Period.<sup>54</sup> In such a scenario, the RDDA would increase by \$584,000 in 2024 and \$2,592,000 in 2025, to

Order G-94-24 5 of 13

<sup>&</sup>lt;sup>46</sup> RDE Phase 2 CPCN proceeding, Exhibit B-1, Table 8-16, p. 48.

<sup>&</sup>lt;sup>47</sup> Exhibit B-3, BCUC IR 5.3.

<sup>&</sup>lt;sup>48</sup> Exhibit B-3, BCUC IR 5.3.

<sup>&</sup>lt;sup>49</sup> Exhibit B-3, BCUC IR 5.3.

<sup>&</sup>lt;sup>50</sup> Exhibit B-1, p. 7.

<sup>&</sup>lt;sup>51</sup> Exhibit B-3, BCUC IR 1.2.

<sup>&</sup>lt;sup>52</sup> Exhibit B-1, p. 14.

<sup>&</sup>lt;sup>53</sup> Exhibit B-1, Table 3.2, p. 15.

<sup>&</sup>lt;sup>54</sup> Exhibit B-1, Table 3.3, p. 15.

total \$9,340,000 by the end of 2025.<sup>55</sup> RDE states that the higher RDDA balance, resulting from no rate increases as compared to 3.94 percent, would not be in the long-term interest of its customers and that the growth of the RDDA balance may be mitigated with the modest rate increases proposed.<sup>56</sup> RDE states, "[t]he proposed rate increases the need to manage the growth of the RDDA balance with the recognition that RDE is entering into a significant period of change as it constructs the [Energy Centre], and the [GCOC] proceeding establishes new capital structures and equity returns."<sup>57</sup>

### **Alternative Rate Increases**

During the proceeding, RDE provided information regarding scenarios whereby rates would increase by 5.0, 7.5, or 10.0 percent in each of 2024 and 2025. The resulting Thermal Energy Charge and Capacity Charge for these scenarios are provided in Table 4 below.

Table 4 – Customer Rates for 2024 and 2025 Under Difference Rate Increase Scenarios<sup>58</sup>

	5% Annua	al Increase	7.5% Annu	al Increase	10% Annual Increase		
	2024	2025	2024	2025	2024	2025	
Thermal Energy Charge (\$/MWh)	43.92	46.12	44.97	48.34	46.01	50.61	
Capacity Charge (\$/m2)	0.67	0.70	0.69	0.74	0.70	0.77	

RDE also provided an analysis of the impact that annual rate increases of 5.0, 7.5 or 10.0 percent would have on the RDDA balance for the Test Period, as provided in Tables 5 to 7 below.

Table 5 – Operating Costs and RDDA Balance for 2024 and 2025 with 5.0% Rate Increases<sup>59</sup>

RDDA BALANCE (000's)	2024	2025
Operating costs	2,446	4,495
Deemed interest expense	575	678
Deemed return on equity	735	866
Amortization	486	599
Revenue requirements	4,242	6,639
Less: Revenues	(3,840)	(4,472)
RDDA (annual)	402	2167
RDDA (cumulative)	6,567	8,733

Order G-94-24 6 of 13

<sup>&</sup>lt;sup>55</sup> Exhibit B-1, p. 14.

<sup>&</sup>lt;sup>56</sup> Exhibit B-1, p. 15.

<sup>&</sup>lt;sup>57</sup> Exhibit B-1, p. 15.

<sup>&</sup>lt;sup>58</sup> Exhibit B-3, BCUC IR 5.5, Table 5.

<sup>&</sup>lt;sup>59</sup> Exhibit B-3, BCUC IR 5.5, Table 7.

Table 6 – Operating Costs and RDDA Balance for 2024 and 2025 with 7.5% Rate Increases<sup>60</sup>

RDDA BALANCE (000's)	2024	2025
Operating costs	2,447	4,497
Deemed interest expense	575	675
Deemed return on equity	735	862
Amortization	487	599
Revenue requirements	4,243	6,634
Less: Revenues	(3,931)	(4,688)
RDDA (annual)	311	1946
RDDA (cumulative)	6,476	8,422

Table 7 – Operating Costs and RDDA Balance for 2024 and 2025 with 10.0% Rate Increases<sup>61</sup>

RDDA BALANCE (000's)	2024	2025
Operating costs	2,448	4,499
Deemed interest expense	575	673
Deemed return on equity	735	859
Amortization	486	599
Revenue requirements	4,243	6,629
Less: Revenues	(4,023)	(4,908)
RDDA (annual)	221	1,721
RDDA (cumulative)	6,385	8,106

RDE states that an annual rate increase for the Test Period greater than 3.94 percent but of a similar magnitude, will not materially affect its financial position because that rate increase would only be in effect for two years. With rate increases of 5.0, 7.5, or 10.0 percent, the cumulative RDDA balance at the end of 2025 would be reduced by approximately \$130,000, \$441,000, and \$757,000, \$63 respectively, as compared to the proposed 3.94 percent rate increases. Further, under a scenario where the annual rate increase for the Test Period is set at either 5.0 or 10.0 percent, RDE estimates that the RDDA recovery period is reduced by approximately two and six years, respectively, due to the significant compounding of the rate increases, as compared to the proposed 3.94 percent annual rate increase. In calculating the reduction to the RDDA recovery period, RDE applied the respective rate increase (i.e. 5 percent or 10 percent) in the Test Period, and then applied rate increases consistent with the indicative increases included in the Phase 2 CPCN Application, as presented in Table 2 above, from 2026 onward.

RDE explains the impact that rate increases higher than the proposed 3.94 percent would have on forecast demand. RDE states that building occupancy, which is affected initially by the extent to which a developer is successful in selling or leasing the units in a particular building, is the most significant determinant of building demand.<sup>66</sup> The higher the rate increase, the greater the impact to strata fees, which will impede sales, and

Order G-94-24 7 of 13

<sup>&</sup>lt;sup>60</sup> Exhibit B-3, BCUC IR 5.5, Table 9.

<sup>&</sup>lt;sup>61</sup> Exhibit B-3, BCUC IR 5.5, Table 11.

<sup>62</sup> Exhibit B-3, BCUC IR 5.1.

<sup>&</sup>lt;sup>63</sup> Calculated as: 8,863-8,733=130, 8,863-8,422=441, and 8,863-8,106=757.

<sup>64</sup> Exhibit B-3, BCUC IR 5.3.

<sup>65</sup> Exhibit B-3, BCUC IR 5.5.

<sup>66</sup> Exhibit B-3, BCUC IR 5.4.

ultimately building occupancy.<sup>67</sup> RDE states, "[i]t is in RDE's interest to support Wesgroup Properties (the developer at River District) to achieve optimal sales volumes, so that new buildings are brought to market and connected to the utility and that connected buildings are occupied."<sup>68</sup> RDE notes, however, that the impact of rates and rate increases on demand for small thermal energy utilities is exceptionally difficult to quantify.<sup>69</sup>

RDE cites slower than anticipated development and completion of customer buildings, higher than anticipated inflation and general cost increases for materials and labour, and costs to design, build and commission an additional temporary energy centre that was required to maintain service in 2022, as some of the key drivers of the higher than anticipated RDDA balance as at the end of 2023.<sup>70</sup> Ultimately, the RDDA balance has grown more than RDE anticipated.<sup>71</sup> The 3.94 percent rate increase RDE proposes in this Application is tied to the original 20-year levelized rate structure that the BCUC approved in 2011.<sup>72</sup> RDE is entering into a significant period of change as it constructs and commissions the Energy Centre, further increasing the RDDA balance in the current Test Period.<sup>73</sup>

#### Panel Determination

The Panel rejects RDE's requested rate increase of 3.94 percent and directs RDE to implement a rate increase of 7.5 percent to the Monthly Capacity Charge and the Thermal Energy Charge for each of 2024 and 2025, effective on January 1 of each year, on an interim and refundable/recoverable basis, pending the outcome of Stage 2 of the BCUC's current GCOC proceeding. We acknowledge that this rate increase is essentially a "bridge" until RDE files its comprehensive RRA in 2025, where we expect that RDE will propose changes to the 20-year levelization period and the RDDA recovery term.

RDE submits that the primary reason why it proposes 3.94 percent is for the continuity of annual rate increases. RDE also submits that any rate increases other than 3.94 percent would be difficult to justify without a comprehensive RRA, which it intends to submit in 2025. By that time, RDE expects that the Energy Centre will be substantially complete and RDE will be able to implement the final decision of the GCOC Stage 2 proceeding.

The Panel is not persuaded that the continuity of annual rate increases is a good reason to maintain a rate that RDE acknowledges is no longer sufficient to manage its costs and growing RDDA balance. RDE states that it anticipates rate increases higher than both those now in place and those it has applied for once the Energy Centre is in service. As RDE observes, in the Phase 2 CPCN Application it had assumed the recovery of the RDDA by 2047, which now corresponds to the expected timing of the full build-out of River District as compared to the originally forecast full build-out by 2031. The Panel notes that RDE indicated in the Phase 2 CPCN proceeding its intent to request that the RDDA be recovered over a longer term in a future rate application, and we make no determination on that issue here. However, having said that, the Panel cannot overlook the fact that the 3.94 percent rate is based on a levelized rate structure in which RDE forecast it would recover the RDDA balance over a 20-year period by implementing an annual escalation of this percentage on a straight-line basis over the full 20 years. Given that RDE has acknowledged that this 20-year recovery period is no longer feasible due to the higher than anticipated growth in its RDDA, the Panel considers that continuing the 3.94 percent rate increase for another two years is unreasonable. In the absence of RDE requesting a longer recovery period for the RDDA, the Panel is not persuaded that 3.94 percent is a sufficient rate for RDE to manage both its current costs and the resulting RDDA growth.

Order G-94-24 8 of 13

<sup>&</sup>lt;sup>67</sup> Exhibit B-3, BCUC IR 5.4.

<sup>68</sup> Exhibit B-3, BCUC IR 5.4.

<sup>&</sup>lt;sup>69</sup> Exhibit B-3, BCUC IR 5.4.

<sup>&</sup>lt;sup>70</sup> Exhibit B-1, p. 7; Exhibit B-3, BCUC IR 3.1, Appendix A, Tables A.1–A.3.

<sup>&</sup>lt;sup>71</sup> RDE Final Argument, p. 2.

<sup>&</sup>lt;sup>72</sup> Order C-14-11.

<sup>&</sup>lt;sup>73</sup> Exhibit B-1, pp. 14–15.

The Panel considers that a 7.5 percent rate increase better mitigates the risk borne by current and future RDE customers as they are ultimately responsible for the RDDA. While the Panel recognizes that the two-year Test Period is arguably "short," we consider that the implications to future ratepayers of higher balances accumulating and compounding in the RDDA are significant. If RDE can limit the extent of future rate increases by implementing a rate increase higher than 3.94 percent in the short term, it should.

Instead of the forecast RDDA balance increasing by \$441,000 in 2024 and \$2,258,000 in 2025 under the proposed rates, RDE estimates that the RDDA balance will increase by \$311,000 in 2024 and \$1,946,000 in 2025 with a 7.5 percent annual rate increase. Based on RDE's estimates, the RDDA recovery period would be reduced by at least two years with a 7.5 percent annual rate increase, as compared to the proposed 3.94 percent rate increases. The balance in the RDDA is important because of the impact to ratepayers - it represents more money to be recovered. The recovery period for the RDDA also has implications for ratepayers: extending the recovery period means more compound interest accumulates. A good analogy is pushing out the amortization period for a mortgage. Both the ratepayer and mortgage holder will pay more overall (in absolute dollars) because the interest on the RDDA and the mortgage, respectively, will accumulate over a longer term, holding all else constant.

The Panel finds that an annual 7.5 percent rate increase achieves a more meaningful impact on managing the RDDA balance when RDE is under-recovering its cost of service, than the lower rate increases considered during the proceeding. In other words, while the Panel accepts that the under-recovery of its cost of service in the early years of greenfield projects such as River District are intended features of levelized rate structures, we are concerned that the period of under-recovery has extended far beyond initial forecasts in the Phase 1 CPCN proceeding and should be mitigated if possible. Although a rate increase of 10 percent would have a greater impact on slowing the growth of the RDDA, it would typically be considered "rate shock", and as such the Panel is satisfied it is not warranted.

RDE makes the point that a 3.94 percent rate increase, as compared to higher rate increases, will help the developer achieve optimal sales volumes by keeping strata fees low and we should therefore preserve the existing annual rate increase. On the contrary, however, the Panel considers that an annual 3.94 percent increase would be unfair, and possibly misleading, to new customers given the fact that RDE is aware that the completion of the Energy Centre will have a significant impact on future rates. The Panel considers that new customers' decision to purchase are more likely to be motivated by transparent, rather than artificially low costs in the short term that are destined to increase.

We are also not persuaded that it will be difficult to justify a different rate increase, in this case 7.5 percent. Development has not materialized as originally forecast, and costs have increased more than anticipated. Therefore, we are satisfied that the absence of a comprehensive RRA, which we acknowledge is a significant undertaking for RDE's limited staff, does not preclude RDE from acknowledging that the assumptions on which the 3.94 percent rate increase was based are no longer valid and that 3.94 percent is inadequate. It is for this reason that the Panel also directs RDE to include in its next RRA an analysis on whether any changes to the 20-year levelization period and RDDA recovery period are necessary.

Finally, the Panel recognizes that the GCOC proceeding will establish new capital structures and equity returns for RDE and therefore we are persuaded that the rate increase should be interim pending the GCOC Stage 2 decision, given the previous BCUC direction in the GCOC Stage 1 Decision.

With this decision, the Panel acknowledges that RDE will have to recover from its customers the difference between the revenue collected under the updated interim rates as outlined in this Decision and the interim rates approved as of January 1, 2024, as contemplated in Directive 1 of Order G-304-23, which may bear an administrative cost. However, the Panel finds that this cost is warranted when taking into consideration the need to manage the growing RDDA balance as reviewed above and that the current GCOC Stage 2 proceeding is

Order G-94-24 9 of 13

still in its early stages, where the BCUC's decision may not be rendered until later in 2024, at the earliest.<sup>74</sup> Accordingly, the Panel directs RDE to recover this difference by way of bill adjustments over a period not to exceed six months, accruing interest at the average prime rate of RDE's principal bank for its most recent year, until it is fully recovered. In addition, we direct RDE to file a compliance filing with the BCUC within 30 days of the order issued concurrently that includes a schedule with the anticipated timing and amounts of the bill adjustments with interest applied. In regard to its tariff, the Panel directs RDE to submit updated tariff pages, reflecting the determinations made in this Decision, to the BCUC for endorsement within 30 days of the order.

## 3.0 Thermal Energy Rate Comparisons

In setting the initial rates for the DEU in 2012, the BCUC agreed with RDE that BC Hydro electricity rates could be an acceptable benchmark for RDE's proposed thermal energy rates and that it was reasonable for RDE to calculate the BC Hydro residential rate based on an assumed weighted average consumption mix of 50 percent Tier 1 and 50 percent Tier 2. The BCUC also accepted that the DEU was well positioned to deliver additional intangible benefits to consumers, such as the higher quality of service associated with hydronic heat, environmental benefits, reduced exposure to future commodity price changes and the additional floor space freed up within individual projects, and therefore a premium of up to 10 percent above the benchmark electricity rate could be justified when establishing the rates for the DEU. To By Order G-2-12, the BCUC approved RDE's initial 2012 effective rate of \$92.37 per MWh, which was calculated as a five percent premium above the calculated BC Hydro benchmark rate of \$87.97 at that time.

RDE provides a comparison of its proposed thermal energy rates to the rates charged by regional natural gas, electricity, and TES providers. Table 8 below lists the effective thermal energy rates (\$/MWh) for a 19,000 square metre residential building, which RDE states is an indicative building size for current and future RDE customers.<sup>77</sup>

Table 8: Thermal Energy Rate Comparison<sup>78</sup>

Order G-94-24 10 of 13

<sup>&</sup>lt;sup>74</sup> As per Order G-6-24, the deadline for the utilities reply argument (with IR No. 2) in the GCOC Stage 2 proceeding is currently Wednesday, September 18, 2024.

<sup>&</sup>lt;sup>75</sup> Phase 1 CPCN p. 30.

<sup>&</sup>lt;sup>76</sup> Order G-2-12, Appendix A, p. 1.

<sup>&</sup>lt;sup>77</sup> Exhibit B-1, p. 13.

<sup>&</sup>lt;sup>78</sup> Exhibit B-3, BCUC IR 6.1, Table 13.

Utility	2	022	2	023	2	2024 2025		025	Notes
RDE	\$	109	\$	112	\$	117	\$	122	Rate estimates are based on a reference building with an annual energy demand of 109 kWh per m <sup>2</sup> of floor area. Actual effective rates for customers will vary due to differences in energy performance from building to building. Assumes 3.94% increases as per 2011 CPCN.
Vancouver False Creek NEU	\$	125	\$	129	\$	133	\$	137	Rate estimates are based on a reference building with an annual energy demand of 109 kWh per m <sup>2</sup> of floor area. Actual effective rates for customers will vary due to differences in energy performance from building to building. Assumes historic average increase of 2.39%.
Surrey City Energy	\$	124	\$	127	\$	131	\$	134	Rate estimates are based on a reference building with an annual energy demand of 109 kWh per m² of floor area. Actual effective rates for customers will vary due to differences in energy performance from building to building. Assumes 3.19% increases as per utility forecasts.
BC Hydro	\$	118	\$	119	\$	122	\$	124	See Appendix B
Burnaby Mountain DEU	\$	129	\$	131	\$	134	\$	136	Initial in-service rate of \$119.67 per MWh Order C-5- 17, pg. 46. Assumes 2% annual increases.

RDE notes that its baseline methodology in calculating the blended residential electricity rates for BC Hydro provided in Table 8 above, assumes a 50/50 consumption split between Tier 1 and Tier 2 BC Hydro energy charges. PRDE states that it has used a 50/50 blend of BC Hydro Tier 1 and Tier 2 energy charges to determine the BC Hydro comparative rates since the DEU was established. RDE has not done any additional work to establish whether the split continues to be appropriate. R1

Table 9 below illustrates how RDE's calculation of the blended residential electricity rates change based on various BC Hydro Tier 1/Tier 2 electricity consumption splits. RDE states that it takes no position on whether these other splits are appropriate, as they are provided for information purposes only.<sup>82</sup>

Table 9: Alternative Weighted BC Hydro Rates<sup>83</sup>

	Units	2022	% reduction vs FY2024		2023 (Current)	2024	% change from prior year	2025	% change from prior year
Approx. Equivalent BCH Fiscal Year		FY2023			FY2024	FY2025		FY2026	
BCH Fiscal Year Description		April 2022- March 2023			April 2023- March 2024	April 2024- March 2025		April 2025- March 2026	
Residential Service Tier 1	\$/kWh	0.0966	0.970%		0.0975	0.0996	2.18%	0.1016	2.00%
Residential Service Tier 2	\$ / kWh	0.1394	0.970%		0.1408	0.1439	2.18%	0.1467	2.00%
							(from G-154-23)		(assumed)
Residential Service Tier 1	\$/MWh	\$ 96.56		5	97.50	\$ 99.63		\$ 101.62	
Residential Service Tier 2	\$/MWh	\$ 139.45		\$	140.80	\$ 143.87		\$ 146.75	
Blends									1
75% Tier 1 / 25% Tier 2	\$/MWh	\$ 107.28		\$	108.33	\$ 110.69		\$ 112.90	1
50% Tier 1 / 50% Tier 2	\$/MWh	\$ 118.01		\$	119.15	\$ 121.75		\$ 124.18	1
25% Tier 1 / 75% Tier 2	\$ / MWh	\$ 128.73		\$	129.98	\$ 132.81		\$ 135.46	1

<sup>&</sup>lt;sup>79</sup> Exhibit B-3, Appendix B; Under BC Hydro's Residential Service rate, customers are charged one rate (\$/MWh) for electricity up to a certain threshold in each bi-monthly billing period. Electricity consumed above this threshold is charged at a higher rate. Step 1 or Tier 1 energy charges apply to the first 1350 kWh consumed in a two-month billing period. (BC Hydro Electric Tariff)

Order G-94-24 11 of 13

<sup>&</sup>lt;sup>80</sup> Exhibit B-3, BCUC IR 6.3.

<sup>81</sup> Exhibit B-3, BCUC IR 6.3.

<sup>82</sup> Exhibit B-3, BCUC IR 6.3.

<sup>83</sup> Exhibit B-3, BCUC IR 6.1, Appendix B.

RDE states that it did not consider increasing its rates for 2024 and 2025 to be 10 percent above the current BC Hydro blended residential electricity rate, even though the BCUC had previously found that such a premium could be justified, although it will consider such an approach when it develops its RRA for the 2026 calendar year forward.<sup>84</sup>

#### Panel Discussion

The Panel notes that RDE has provided a comparison of rates, and we accept that the proposed rates for 2024-2025 are lower than those of other local energy providers.

In terms of comparing RDE's proposed rates to BC Hydro's rates, however, the Panel is uncertain whether continuing to refer to a 50/50 consumption split between Tier 1 and Tier 2 remains relevant. We note that RDE has made this assumption since the DEU was established in 2011. While we accept that there is no information to the contrary, we also query whether assuming a 50/50 consumption split continues to be reasonable. As Table 9 above illustrates, a change in consumption split could have a significant impact on the BC Hydro rate that RDE references in Table 8. Therefore, the Panel suggests RDE consider undertaking additional work for the next RRA to determine if this assumption is still appropriate, in particular as it relates to new building units, to ensure comparisons are meaningful.

Order G-94-24 12 of 13

<sup>&</sup>lt;sup>84</sup> Exhibit B-3, BCUC IR 6.5.2.

 $27^{th}$ 

day of March 2024.

**DATED** at the City of Vancouver, in the Province of British Columbia, this

Commissioner

Order G-94-24 13 of 13

# River District Energy Limited Partnership 2024 to 2025 Interim Rates

# **EXHIBIT LIST**

# Exhibit No. Description

### **COMMISSION DOCUMENTS**

A-1	Letter dated November 2, 2023 – Appointing the Panel for the review of River
	District Energy Limited Partnership Application for 2024 to 2025 Interim Rates
A-2	Letter dated November 9, 2023 – BCUC Order G-304-23 establishing a regulatory timetable
A-3	Letter dated November 29, 2023 – BCUC Information Request No. 1 to
	RDE

### **APPLICANT DOCUMENTS**

B-1	RIVER DISTRICT ENERGY LP (RDE) - 2024 to 2025 Interim Rates Application dated
	October 6, 2023
B-2	Letter dated November 22, 2023 – RDE submitting confirmation of Order G-304-
	23 notification compliance
B-3	<b>PUBLIC</b> - Letter dated December 13, 2023 – RDE submitting responses to BCUC
	Information Request No. 1
B-3-1	CONFIDENTIAL - Letter dated December 13, 2023 – RDE submitting confidential
	responses to BCUC Information Request No. 1

### **LETTERS OF COMMENT**

D-1	RESIDENTIAL CONSUMER INTERVENER ASSOCIATION (RCIA) — Letter of Comment dated	
	December 20, 2023	

Order G-94-24 1 of 1