

March 29, 2019

VIA COURIER & RESS FILING

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
27th Floor, Box 2319
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Energy+ Inc. ("Energy+") 2019 Cost of Service Application;
Board File No. EB-2018-0028;
Toyota Motor Manufacturing Canada Inc.; Final Argument**

We are writing on behalf of Toyota Motor Manufacturing Canada Inc. to file its Final Argument in the above-noted proceeding. This Final Argument has been filed through RESS.

Two hard copies are being couriered to the OEB today.

Yours very truly,

Dentons Canada LLP

original signed by Helen T. Newland

Helen T. Newland
HTN/ko
Encls.

cc: Melody Collis, TMMC
Bill Fantin, TMMC
Pete Leonard, TMMC
Jo Keaton, TMNA
John Vellone
Sarah Hughes
Parties to EB-2018-0028

ONTARIO ENERGY BOARD

IN THE MATTER the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15
(Schedule B);

AND IN THE MATTER OF an application to the Ontario Energy Board by
Energy+ Inc. pursuant to Section 78 of the Ontario Energy Board Act for
approval of its proposed distribution rates and other charges effective
January 1, 2019.

Toyota Motor Manufacturing Canada Inc.

Final Argument

March 29, 2019

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A. INTRODUCTION

1. This argument ("**Argument**") is made on behalf of Toyota Motor Manufacturing Canada Inc. ("**TMMC**") in respect of Energy Plus Inc.'s ("**Energy+**") application to the Ontario Energy Board ("**Board**" or "**OEB**") for approval of distribution rates and other charges, effective January 1, 2019 (the "**Application**"). This argument addresses Energy+'s cost allocation study and rate design proposals as they pertain to the Large Use ("**LU**") class, as well as Energy+'s standby rate and gross load billing proposals for customers with load displacement generation ("**LDG**"). TMMC is one such customer.¹
2. Originally, TMMC intervened in this proceeding because it had questions and concerns about Energy+'s proposed standby rate. It did not understand why the dedicated facilities that had been paid for by TMMC in order to secure enhanced levels of reliability and redundancy, relative to "normal" distribution service, would suddenly be generating new costs that needed to be recovered through a new charge. TMMC also had questions about whether Energy+'s proposed standby charge methodology and its TMMC-specific contract demand properly reflected the level of standby service required by TMMC and the actual costs of providing such service. Finally, TMMC was concerned that Energy+ would be able to increase the contract demand in its sole discretion, over the objection of TMMC. TMMC's concerns about these matters are set out in more detail in the Written Evidence of Melody Collis filed on September 27, 2018.
3. Nearly one year, countless interrogatories, a Settlement Conference, a Technical Conference, an oral hearing and a significant investment of resources later, TMMC has concluded that the cost allocation and rate design proposed by Energy+ for the Large Use class, including the proposed standby rate proposal, do not properly reflect cost causality principles and, accordingly, do not result in just and reasonable rates for the LU class. Its position in this regard is supported by the evidence and testimony of Jeffry Pollock, the only cost allocation and rate design expert to provide evidence in this proceeding.
4. TMMC retained Mr. Pollock to review Energy+'s Application and provide an independent opinion on Energy+'s standby proposal. Mr. Pollock confirmed TMMC's concerns about Energy+'s standby proposal and also identified certain fundamental flaws in Energy+'s underpinning cost allocation study and LU class rate design. Mr. Pollock's conclusions and recommendations on cost allocation and rate design, including his recommendation for two LU classes and a cost-

¹ Terms used in this Argument that are not defined, have the meaning ascribed to them in the written evidence documents of Melody Collis and Jeffry Pollock.

based standby rate methodology for customers with LDG facilities, are set out in his Written Evidence (“**Original Pollock Evidence**”) and his Updated Written Evidence (“**Updated Pollock Evidence**”), filed in this proceeding on September 27, 2018 and February 15, 2019, respectively.

5. The balance of this Argument:
 - (i) presents an overview of the key issues in this proceeding;
 - (ii) summarizes the relief sought by TMMC;
 - (iii) describes, in summary fashion, Mr. Pollock's evidence; and
 - (iv) addresses the following specific issues on the Board's List of Issues attached as Schedule A to Procedural Order No. 4:
 - Cost Allocation (Issue 3.2);
 - Rate Design (Issue 3.3);
 - Gross Load Billing of RTSR (Issue 3.6); and
 - Standby Charges (Issue 3.7).
6. TMMC takes no position on unsettled issues that are not specifically addressed in this Argument.

B. OVERVIEW

7. In this proceeding, extensive and in-depth examination of cost allocation and rate design issues pertaining to the LU class has brought to light two significant concerns about Energy+'s cost allocation study, namely, instances of lack of adherence to cost causality principles and disregard for accepted cost allocation practices and related Board policy and direction.
8. Since 2006, the last time that Energy+'s cost allocation methodology was at issue in a cost of service proceeding, Energy+'s cost allocation studies have been accepted for rate-making purposes without any real scrutiny.² Specifically, Energy+'s cost allocation studies do not appear to have been examined to determine: (i) why certain costs are allocated to some classes of customers and not to others; and (ii) whether there are any identifiable and significant distribution

² Cost allocation issues in the 2010 and 2014 cost of service applications were settled.

facilities that are dedicated to a single rate classification and, thus, subject to direct assignment as required by the Board.³

9. In this proceeding, two key cost allocation issues have emerged, namely: (i) why the LU class has been allocated a share of the pooled costs of bulk and underground facilities when these facilities are not used to serve the LU class; and (ii) whether the dedicated facilities that have served TMMC exclusively since 1995, should be directly assigned to the LU class in accordance with Board's policy.
10. In his evidence, Mr. Pollock recommends that the Board reject Energy+'s cost allocation study because it does not reflect cost causation principles. It is trite to say that following sound cost causality is the primary criterion that should guide the development of a cost allocation methodology. The Board has acknowledged as much, on multiple occasions.⁴
11. Mr. Pollock also recommends that the Board accept the cost allocation study that he has developed and in which TMMC is treated as a separate customer class, the costs of the dedicated facilities that serve TMMC are directly assigned to TMMC and no costs of underground and bulk facilities are allocated to the TMMC Class.
12. Based on his two-class/direct assignment cost allocation study, Mr. Pollock also recommends TMMC-specific rate designs for Supplementary Distribution (i.e., regular) service and Standby Distribution service. Mr. Pollock's standby rate design is based on a structure developed by the New York Public Service Commission and reflects that Commission's objectives of incentivizing behind-the-meter generation.⁵ Unlike Energy+'s proposal, Mr. Pollock's standby rate proposal is consistent with cost causation principles. Mr. Pollock's methodology can also be used by the Board to design standby rates for other customer classes.
13. Energy+, in its Argument-in-Chief, has stated that it is open to considering alternative cost allocation scenarios.⁶ As a first step, Energy+ states that there is sufficient and credible evidence to justify the direct assignment of the costs of the dedicated feeders that provide service to TMMC and that such direct assignment should also account for the capital contribution paid by TMMC in support of these costs. Energy+ does not go as far as to say that the dedicated meters and the

³ EB-2005-0317, Cost Allocation Review, *Board Directions on Cost Allocation Methodology for Electricity Distributors* at 23 (Sept. 29, 2006) ("**Board Cost Allocation Direction**") at pp.30-32.

⁴ See, for example, the Board Cost Allocation Direction at pp.3 and 35.

⁵ 2 Tr. 50, ll. 15-24.

⁶ Energy+ Argument-in-Chief at p.20, para.60.

operations and maintenance (“O&M”) costs related to the dedicated feeders, should also be directly assigned. These issues are addressed, in detail, below in this Argument.

14. In testimony and in Argument-in-Chief, Energy+ points to the need for further study, in particular, with respect to the cost data used in Mr. Pollock’s cost allocation study. The Board will hear this, no doubt, from other intervenors. The Board should reject such arguments for two reasons. First, the Board’s Cost Allocation Direction requires that a distributor, as an initial step in developing its cost allocation study, identify any significant distribution facilities that are dedicated exclusively to only one customer rate classification. The costs of such facilities, as well as the associated O&M expenses, should then be directly allocated to that customer classification.⁷ Energy+ should have, but failed to do this. A plea for time to do further cost studies should not excuse this failure.
15. Second, for the reasons set out below (at paragraphs 44-49), the Board can have a high degree of confidence in the dedicated asset costs included in Mr. Pollock’s cost allocation study. As for shared assets, Mr. Pollock’s study allocates \$1,550,000 of pooled pole costs to TMMC, an over-contribution of \$1,192,679, relative to Energy+’s estimate of the cost of the poles that are actually used to provide service to TMMC. As Mr. Pollock testified:⁸

MS. NEWLAND: Could you comment on the pole costs that your cost allocation model allocates to the Toyota large use class, relative to the actual cost of the poles that Toyota uses to support the two feeders?

MR. POLLOCK: Yes, I can. So if we look at just the cost of the poles as determined by Energy+’s direct assignment study, you are looking at a number that’s around 350, 360 thousand dollars fixed, the gross fixed assets. And in the cost of service study in JP 11, Toyota is getting allocated 1.55 million. So almost, you know, four times as much cost of poles is being allocated to Toyota than the direct assigned costs of the poles themselves.

16. The Board may be inclined to defer, to a future time, decisions on whether and how to make the changes recommended by Mr. Pollock. Such a deferral would be a mistake for two reasons:
 - first, the record of this proceeding is informed and has the benefit of the written evidence and oral testimony of Mr. Pollock, an independent expert with over 40

⁷ *Ibid.*, footnote 3.

⁸ 2 Tr.129, ll. 2-13.

years experience on electricity cost allocation and rate design issues, including appearances before regulatory commissions in multiple U.S. jurisdictions; and

- second, Energy+'s lack of adherence to accepted principles of cost causality extends to matters beyond the single issue of whether the costs of the dedicated TMMC feeders should be directly assigned (which Energy+ has now conceded); if the other LU class cost allocation issues discussed below are not addressed, rates will be neither cost-based nor just and reasonable.

17. In the course of examination-in-chief, Ms. Pollard, TMMC Vice President of Administration and Corporate Secretary, had this to say:⁹

MS POLLARD: Yes, I wanted to maybe comment on the some of the discussion that has taken place up to this point. As TMMC, we are a company that works well with our customers and our suppliers. We collaborate, we seek feedback, we provide support and in return, we expect to be treated very fairly.

On the issue of cost allocation, the direct costs method using a separate large user class as we are proposing, is truly a fair and reasonable approach. We are a unique user within this class, we are also the largest user by a significant margin. And dedicated assets have been clearly identified, as we have discussed.

In addition, TMMC has already contributed directed to some of these capital costs for these dedicated assets.

Allocations, by their very nature, are arbitrary and can result in disproportionate charges. The fairest method remains one that is driven by cost causality; direct costs should always be the first course of action when assets have exclusive use.

As I listened to Energy+'s statements yesterday, I heard no argument really against the rationale for direct cost allocation, but only reasons perhaps not to pursue it due to additional work to study further, additional complexity, and perhaps a financial system limitation on identification of assets.

So we truly want to improve the accuracy with which utilities are charged to users. It will involve work and further study and, perhaps the most

⁹ 2 Tr.21-32.

challenging, it will require a willingness to change methods that have become the norm. Thank you.

18. Ms. Pollard is correct. Concerns expressed by Ms. Hughes on behalf of Energy+ about the addition of a layer of complication, with a corresponding increase in cost and effort¹⁰ should not deter the Board from remedying the cost causality problems that TMMC has identified. Concerns about regulatory and administrative burden and the protection of confidential customer information are simply not relevant in this calculus. Concerns about the need to study the issues further and refine cost data should not deter the Board. Change has to start somewhere and perfection is the enemy of the good or, in this case, of just and reasonable rates.
19. If the Board is looking for an OEB precedent for the two LU class models recommended by Mr. Pollock, it need look no further than the Board's decision in respect of Horizon Utilities Corporation's ("**Horizon**") 2014 Custom Incentive Regulation application.¹¹ In the Horizon case, the Board approved a separate LU class for certain LU customers who were all served by the same set of identifiable dedicated facilities.
20. Horizon's decision to propose a new customer class and changes to the allocation of subaccounts to customer classes was based on its desire to conform more consistently to the principles of cost causation.¹² TMMC submits that the reasons that underpin its two LU class/direct assignment proposal in this proceeding are almost identical to the reasons that underpinned Horizon's proposal, namely, the need to ensure that cost allocation reflects cost causation and, thus, provides for just and reasonable distribution rates.

C. THE POLLOCK EVIDENCE

21. The totality of the evidence of Jeffry Pollock, including the Original Pollock Evidence, the Updated Pollock Evidence and Mr. Pollock's responses to interrogatories and Technical Conference undertakings, is listed in a table entitled "List of Witness Responsibilities" which was filed as part of Exhibit K1.1 and which is attached hereto as **Attachment 1**, for ease of reference.
22. In this original Written Evidence, Mr. Pollock:

¹⁰ 1 Tr.20, ll.19-25.

¹¹ In addition to Horizon, the Board has approved three LU classes for Enwin Utilities Ltd., two of which pertain to Enwin's automotive customers.

¹² EB-2014-0002, Application, Exh.7 at pp.1-3.

- presented a critique of Energy+'s cost allocation study (also referred to as a **"Class Cost-of-Service Study"** or **"CCOSS"**);
 - presented an alternative CCOSS that addressed the flaws in Energy+'s study (the **"One Large Use Class/Partial Direct Assignment CCOSS"**);
 - presented a critique of Energy+'s rate design for the LU class;
 - proposed an alternative LU class rate design that reflected cost causation principles by recognizing in the volumetric rates, the different types of distribution services and the correspondingly different costs incurred to serve each LU customer in the class;
 - presented a critique of Energy+'s standby rate design; and
 - proposed an alternative standby rate design that reflected cost causation principles instead of revenue generation objectives.
23. In the Updated Pollock Evidence, Mr. Pollock replaced his original One Large Use Class/Partial Direct Assignment CCOSS with a new CCOSS (the **"Two Large Use Classes/Direct Assignment CCOSS"**) based on a separate TMMC LU class and the direct assignment to that class of the specific costs to serve TMMC. Mr. Pollock's recommended CCOSS is included in the Updated Pollock Evidence as Schedule JP-11. The specific differences between the new CCOSS model in Schedule JP-11 and the CCOSS included in the Original Pollock Evidence as Schedule JP-5, are described in the Updated Pollock Evidence on pages 11-13.
24. The Updated Pollock Evidence also included revisions to reflect certain learnings gained over the course of the proceeding about the OEB's cost allocation model (version 2018) and about specific OEB-specific policies and practices; for example, directions about how adjustments to revenue-to-cost ratios are to be made and how service charges are to be determined.¹³
25. Based on his Two LU classes/Direct Assignment CCOSS, Mr. Pollock also recommended TMMC-specific rate designs for both Supplementary (i.e., regular) Distribution service and Standby Distribution service.

¹³ Updated Pollock Evidence at p.45 of 75, II.6-9.

26. The decision to recommend a new CCOSS with two LU classes that, with the sole exception of “shared” poles, directly assigns all other distribution-related costs to the TMMC LU class, was made in response to three developments that occurred since the time that the Original Pollock Evidence was filed, namely:

- a request, by OEB Staff, to develop and file an alternative CCOSS that treated TMMC and the other LU customer as separate customer classes¹⁴; in the Original Pollock Evidence, Mr. Pollock recommended separate volumetric rates for each of the two LU customers in order to recognize the different costs of providing service to the two LU customers; this three-part rate structure was, in effect, a proxy for a two LU class structure;
- the production of Energy+'s Direct Assignment Study (in response to an interrogatory from TMMC) that identified: (i) the cost of the facilities that are used exclusively to serve TMMC, including the dedicated M24 and M30 feeders that interconnect with the Preston Transformer Substation (“**Preston TS**”) owned by Hydro-One Networks Inc. (“**Hydro One**”); (ii) the costs of the primary poles, towers and fixtures that support the dedicated M24 and M30 feeders but also serve other loads; and (iii) the O&M activities pertaining to TMMC's dedicated facilities and their associated expenses that could be directly allocated to TMMC; and
- the disclosure of the fact that Energy+ does not own any high voltage (>50 kV) bulk distribution facilities at the Preston TS.

D. COST ALLOCATION (ISSUE 3.2)

(a) Energy+'s flawed CCOSS

27. Energy+'s CCOSS is flawed in three separate and distinct ways:

- first, it overstates the cost of serving the LU class by erroneously grossing up or adjusting the LU class 12CP, 4NCP and 12NCP demands used to allocate demand-related costs to the class, contrary to Board policy in this regard;

¹⁴ TMMC Response to OEB Staff Interrogatory 1(b).

- second, it overstates the cost of serving the LU class by including the cost of bulk and underground facilities that are not used to provide service to the LU class, contrary to Board policy in this regard; and
- third, it overstates the cost of serving TMMC and the LU class by failing to recognize, contrary to Board policy in this regard, that the set of facilities used to serve TMMC are materially different from, and significantly less costly than, the facilities used to provide service to the other LU customer.

Each of these flaws is discussed below.

- ***erroneous adjustments to demand allocators***

28. The demand allocation factors (12CP, 4NCP and 12NCP) for the LU class are overstated because they do not reflect the LU class's actual load characteristics, as derived from Energy+'s load profile demands for the LU class. Instead, they reflect adjustments to these demands that Energy+ made to incorporate the impact of unsupported assumptions about the timing, amount and duration of the standby service that Energy+ provides to TMMC during outages of its LDG. Specifically, Energy+ grosses up the LU class 12CP and 12NCP loads by 30,443 kW, which is an amount derived by multiplying the arithmetic difference between TMMC's peak demand in 2017 (i.e., 26,222 kW)¹⁵ and its average monthly peak demand (i.e., 23,685) x 12 months.¹⁶
29. Energy+'s approach, described above, assumes that TMMC will require up to 26,222 kW in each and every month of the forecast period. This assumption is not underpinned by any analysis of the impact of LDG on the LU class's load characteristics and, in fact, is not borne out by actual experience; for example, the load data for the Cambridge Plant for the period January 1, 2016 (when the LDG Facility went into service) to June, 2018, shows that for 19 months within this 30 month period, monthly peak demand actually fell below 25,000 kW (i.e., well below the 26,222 kW value assigned). There were three (3) months in which maximum demand was less than 20,000 kW. It is clear that Energy+'s adjustments result in a gross overstatement of TMMC's system usage. It is notable that no party in this proceeding has challenged the accuracy of this data.
30. The assumption that TMMC will require 26,222 kW each and every month during the forecast period ignores the diversity within the LU class. By assuming that an outage of TMMC's LDG

¹⁵ This annual peak occurred on November 8, 2017 at 8 am.

¹⁶ Updated Pollock Evidence at p.46 of 76, II.7-14.

would occur simultaneously with the LU class's coincident and non-coincident peak demands in each and every month, Energy+ has assumed zero diversity in the LU class. Ignoring diversity ignores Board policy and directions that require distributors to explain the steps taken to gather relevant data to assess the existence of diversity, and the steps were taken to reflect any diversity of generation in its filing.¹⁷

31. Table 3 in the Updated Pollock Evidence measures Energy+'s LU class demand diversity.¹⁸ The diversity between the LU class's 12NCP and its 12CP is 1.10, while the diversity between the LU class's billing demand and the 12NCP demand is 1.15. This demonstrates that even a class comprised of only two customers can exhibit diversity. Mr. Pollock's analysis also demonstrates that since TMMC's LDG facility went into service in 2016, the degree of diversity within the LU class would have increased. This is because forced outages of generators are random, short-duration occurrences. Similarly, planned outages can be scheduled in advance at times when capacity is readily available such as during the non-summer months and off-peak hours. Based on these assumptions, the addition of LDG will increase the diversity within the LU class. The higher the diversity, the lower the distribution volumetric rate required to recover the cost of providing standby distribution service.¹⁹
32. Finally, grossing up the LU class 12 CP and 12NCP loads ignores Board policy and directions with respect to cost allocations to the LDG classification:

The total costs to be allocated to the LDG classification will consist of costs associated with providing distribution service to the base load that is the same as a standard distribution customer, along with the distribution costs required to support the incremental load when the load displacement generator is not operating.²⁰

In other words, the first step in the cost allocation process is to determine a proper cost-based rate for providing base or Supplementary distribution service to the class, irrespective of the impact of LDG. Energy+ skipped this step when it grossed up the LU class demand allocation factors.

¹⁷ *Ibid.*, footnote 3 at p. 23.

¹⁸ Updated Pollock Evidence at p.49 of 73, Table 3.

¹⁹ Original Pollock Evidence at p.23 of 76, ll.10-16.

²⁰ *Ibid.*, footnote 3 at p.92.

- ***bulk and underground facilities***

33. Energy+'s cost allocation study allocates a portion of the pooled costs in the bulk facilities accounts²¹ to the LU class, notwithstanding that TMMC is served via Hydro One's Preston TS and the other LU customer is served via Hydro One's Galt Transformer Station.²² Energy+ also allocates a portion of the pooled costs in its underground facilities accounts²³ to the LU class, notwithstanding that neither customer receives service from such facilities.²⁴
34. In his CCROSS, Mr. Pollock did not allocate any bulk or underground investment (i.e., conduit and conductors) and related expenses (including overhead costs) to the LU class. There are a number of reasons for this. First, TMMC is served entirely from an overhead "radial" distribution system and Energy+ does not use any underground equipment to serve TMMC. Second, the TMMC's radial system is not electrically connected to any of Energy+'s other facilities, including its underground facilities. Third, there are technical reasons why TMMC could never receive service from underground facilities. As Mr. Pollock testified:²⁵

The underground system has a limitation that will only account or accommodate up to 200 amps, all right? Toyota's load in the summer is in excess of 200 amps. There's no technical way that Toyota could take service from an underground system even if it were more cost-effective than the overhead system that they were now serving, so it's not – you can't say that that's a fungible commodity that is shared by all customers, because it can only be used by customers whose loads are in total 200 amps or less.

35. TMMC is unable to benefit from any system integration function that these facilities provide. Accordingly, allocating underground costs to TMMC is inconsistent with cost-causation principles.
36. During his testimony, when asked about why the LU class was assigned a share of underground facilities that were not used to serve the LU class, Energy+'s consultant, Mr. Bacon, replied:²⁶

²¹ USoA accounts 1805-1 (Land Station > 50 kV), 1806-1 (Land Rights Station > 50 kV), 1808-1 (Buildings and Fixtures > 50 kV), and 1815 (Transformer Station Equipment – Normally Primary above 50 kV).

²² 1 Tr.184-85; Energy+ Technical Conference 1R-3(a).

²³ USoA Accounts 1840-4 and 1845-4.

²⁴ 1 Tr.185; II.5-12.

²⁵ 2 Tr. 60, II. 20-28.

²⁶ 1 Tr.185-86.

MR. BACON: Because that's the design of the cost allocation model. There's various costs that go to various classes that not every customer in that class uses those particular facilities. That's just the way it is.

I mean, that's the way the model worked.

MS. NEWLAND: But no one in the class is using underground facilities.

MR. BACON: And there's other people in the room that may know more about a cost allocation model than I do, but it is my understanding that you cannot – the model is not designed to allocate underground and overhead differently to various classes.

MS. NEWLAND: So my next question is this: Cost allocation is principally supposed to be driven, as I understand it, by cost causation and we had a discussion about that.

But what I am hearing you are saying is that the construct of the model determines what you do as opposed to your actions being determined by cost causality.

MR. BACON: I would say that, yes, the construct of the model pretty much guides how costs are allocated to the classes.

MS. NEWLAND: So it's possible that the construct of the model does not properly recognize cost causation?

MR. BACON: Possible, yes. I think – there are things in the cost allocation model that it deals with, like for instance the difference between primary and secondary, and using line transformers. It does not do underground and overhead allocation to class based on the use of underground and overhead by the class.

I don't recall if we actually had that discussion when we worked on it. We probably did, and for some reason, it was not built into the model.

37. When asked if he could find a “work around” the limitations in the cost allocation model, Mr. Bacon replied “yes” that it would be possible, but difficult.²⁷ TMMC submits that the fact that proper cost allocation is complex and difficult should not trump the need to ensure that Energy+'s cost allocation study properly reflects cost causality.
38. Finally, it is worth noting that Energy+ does not allocate bulk or underground costs to embedded distributors. When asked about the discrepancy whereby embedded distributors are not allocated

²⁷ 1 Tr.186-87.

such costs but the LU class is, notwithstanding the fact that neither class uses bulk or underground facilities, Mr. Bacon replied that it was because of precedents that had been established in at least two previous Energy+ (CND) cases.²⁸ Precedents aside, fairness suggests that similarly situated customers within Energy+'s customer base should be afforded similar treatment. Unfortunately, this is not the case here.

- ***costs to serve TMMC are lower than assumed by Energy+ and should be directly assigned***

39. TMMC receives service via a set of dedicated facilities that serve no other Energy+ customer and which are not part of Energy+'s integrated distribution network. These facilities include:²⁹

- (i) the 21M24 and 21M30 overhead feeders;
- (ii) insulators, clamps, bolts, bracket connectors and switches associated with (i) above;
- (iii) two TMMC-specific load-break switches;
- (iv) a "few" solid blade switches;
- (v) the poles located at the Preston TS;
- (vi) the lightning arrestors on the 21M24 and 21M30 overhead feeders;
- (vii) four (4) meters that were upgraded in 2015 which are used exclusively to provide distribution service to TMMC; and
- (viii) the fibre optic link between the Hydro One owned relays at the Preston TS and TMMC owned relays at TMMC.

40. The following assets serve TMMC, as well as other Energy+ customers:³⁰

- 106 poles that support the M24 feeder, as well as other feeders that do not serve TMMC;
- 142 poles that support the M30 feeder, as well as other feeders that do not serve TMMC;
- PTs and CTs at the Preston TS;

²⁸ 1 Tr.189.

²⁹ Energy+ Responses to Technical Conference TMMC IR-1(a) and (b).

³⁰ Energy+ Responses to Technical Conference TMMC IR-1(c) and (d).

- general plant assets (eg., vehicles, offices, tools and equipment; and
 - guys, anchors and grounding/neutral conductors.
41. The dedicated TMMC facilities described above are not electrically interconnected with any other Energy+ facilities.³¹ TMMC's supply system is not part of Energy+'s integrated distribution network. If the Preston TS were to "go down", Energy+ would not be able to provide service to TMMC.³² If feeders M24 and M30 were to "go down", Energy+ would not be able to provide service to TMMC.³³ There is no ability to backup or back-feed under either of these two scenarios.³⁴ In contrast, the other customer in the LU class receives service via Energy+'s integrated distribution network.
42. The difference between how TMMC receives distribution service and how the other LU customer receives service mean that the costs of serving each customer are also different. These costs differences are illustrated in the table below which shows revenue-to-cost ratios for each customer class at the current OEB-approved rates.

Table 1 Summary of TMMC's Recommended and Energy+'s Settlement CCROSS Results³⁵				
Customer Class	Revenue Requirement (\$000)		Revenue-To-Cost Ratio at Current Rates	
	TMMC	Energy+	TMMC	Energy+
Residential	\$22,784.7	\$22,646.9	84.9%	85.4%
GS < 50 kW	\$4,166.5	\$4,104.4	107.1%	108.7%
GS: 50 – 999 kW	\$5,839.4	\$5,633.4	135.4%	140.3%
GS: 1,000 – 4,999 kW	\$2,118.4	\$2,012.7	108.0%	113.5%
Large Use	N/A	\$1,108.3	N/A	100.7%
Large Use 1	\$206.1	N/A	133.9%	N/A
TMMC (Large Use 2)	\$393.5	N/A	211.4%	N/A
Street Light	\$493.2	\$494.7	151.2%	150.8%

³¹ 1 Tr. 154, ll.1-2.

³² 1 Tr. 153, ll. 14-21.

³³ 1 Tr. 152, ll. 19-28; 153, ll. 1-5.

³⁴ 1 Tr. 153 ll.14-21.

³⁵ TMMC **Schedule JP-11**; Energy+ Settlement CCROSS, Rows 40 and 75.

Table 1 Summary of TMMC's Recommended and Energy+'s Settlement CCROSS Results³⁵				
Customer Class	Revenue Requirement (\$000)		Revenue-To-Cost Ratio at Current Rates	
	TMMC	Energy+	TMMC	Energy+
Sentinel	\$23.2	\$23.4	70.1%	69.6%
Unmetered Load	\$78.1	\$78.3	90.0%	89.7%
Hydro One 1 CND	\$43.5	\$43.4	120.7%	120.9%
Waterloo No. CND	\$157.9	\$157.9	144.9%	144.8%
Hydro One BCP	\$29.5	\$30.5	401.2%	401.4%
Brantford Power	\$12.9	\$12.9	44.6%	44.6%
Hydro One 2 BCP	\$3.0	\$3.0	167.9%	167.9%

43. TMMC's revenue-to-cost ratio at the current OEB-approved rates is 211.4%. This clearly demonstrates that current Large Use class rates are significantly above the cost of providing service to TMMC and should be significantly reduced to more closely reflect the actual cost of providing distribution service to TMMC.
44. During cross-examination, the Energy+ witnesses testified about their degree of confidence in the cost data included in the Energy+ Direct Assignment Study. Ms. Hughes stated that Energy+ was "fairly comfortable with its estimates".³⁶ She further testified that Energy+ was comfortable with the reliability of the estimated cost of the dedicated feeders (including associated insulators, clamps, bolts, bracket connectors and switches; two TMMC-specific load break switches; a few solid blade switches and lightening arrestors).³⁷ Finally, Ms. Hughes testified that Energy+ was able to determine the cost of the meters that were dedicated to TMMC by going back to certain work orders related to upgrading work.³⁸

³⁶ 2 Tr.18 ll.10-12.

³⁷ 1 Tr.120, ll.15-19; 1 Tr.64, ll.16-22.

³⁸ 1 Tr.122, ll.21-27; 1 Tr.69, ll.8-22.

45. There is no uncertainty as to the amount of the capital that TMMC contributed to the cost of the dedicated feeders, namely \$184,453.81. This amount is documented in a letter dated October 1995 from Cambridge and North Dumfries to TMMC.³⁹
46. With respect to the cost estimate for poles, both Mr. Sinclair and Ms. Hughes described the granular methodology that Energy+ relied upon to derive its estimate of the gross book value of the poles that support the M24 and M30 feeders (\$357,321.66)^{40 41} This estimate, included in Energy+'s Draft Assignment Study, is in marked contrast to the pole allocation of \$1.55 million that Mr. Pollock used in his CCROSS (Schedule JP-11). Mr. Pollock's proposal to allocate pooled pole costs to the TMMC LU class, as opposed to directly assign only the costs of those poles that TMMC actually uses, results in an allocation of costs that is more than four times greater than Energy+'s own cost estimate.
47. Finally, on a total Energy+ O&M budget for the 2019 Test Year of \$5,930,641, Energy+ estimated TMMC's share to be \$93,115 or 1.57%.⁴² In response to a Technical Conference interrogatory from TMMC, Energy+ provided a detailed description of how it had arrived at this estimate.⁴³
48. In light of all of the above, it is fair to conclude that the Board can have a high degree of confidence in the cost data upon which Mr. Pollock relied for the purposes of direct assignment of costs in his recommended CCROSS. There is virtually no risk that, overall, TMMC would not pay its fair share of system costs or that it would be subsidized by other customers. In fact, under Mr. Pollock's proposal, it would pay more than its fair share.
49. Mr. Pollock addressed this issue in the Updated Pollock Evidence as follows:⁴⁴

Energy+ acknowledged that the Direct Assignment Study did not include Energy+'s investments in certain equipment (*i.e.*, guys, anchors, and grounding/neutral conductors) that support the direct assigned overhead feeders⁴⁵ There is no indication that these omissions would materially change the amount of costs directly assigned to TMMC. Moreover, as discussed later in this evidence, the rate design that I am now

³⁹ TMMC Cross-Examination Compendium, Tab 7.

⁴⁰ 1 Tr. pp.165-168.

⁴¹ Response to Technical Conference TMMC IR-2(d).

⁴² Energy+ Response to Technical Conference TMMC IR-2(d).

⁴³ *Id.* at pp.17-19 of 21.

⁴⁴ Updated Pollock Evidence at p. 14 of 73.

⁴⁵ Energy+ Response to TCQ TMMC IR-1(c) and (d). In Undertaking JTC1.5 Energy+ stated that it had no investment in either current or potential transformers associated with TMMC's metering equipment.

recommending for TMMC would establish a target revenue requirement based on a 1.15 revenue-to-cost ratio. This will provide a more than ample cushion above a purely cost-based rate to offset any additional incidental costs that the Direct Assignment Study does not account for. For these reasons, the Board should accept the result of Energy+ Direct Assignment Study for the purpose of setting rates in this proceeding.

E. LARGE USE CLASS RATE DESIGN (ISSUE 3.4)

(a) two LU class proposal

50. Mr. Pollock's proposed CCROSS is based on two LU classes. Separate customer classes are required when the per-unit customer or demand-related costs are sufficiently different between identifiable groups of customers to justify different rates.⁴⁶ Based on this test, the facts in this case justify and, in fact, require a separate LU class for TMMC.
51. There are four key differences between how TMMC and the other LU customers receive distribution service and the characteristics of these services. These differences translate into significant differences in the costs of providing service to each of these customers.
52. First and importantly, TMMC operates a load displacement generation (LDG) facility. The other LU customer does not have any LDG facilities. The presence of LDG means that TMMC would have different load characteristics than the other LU customer, which does not have LDG.
53. Second, TMMC's load is in excess of 20 MW and larger than the other LU customer's load by a factor of at least four (4).⁴⁷ Size creates scale economies; that is, the larger the customer, the lower the fixed costs per customer. Recognizing TMMC's larger size is also consistent with how the OEB uses size to define the other general service customer classes. Further, the Two Large Use Classes/Direct Assignment study shows that the per-unit customer-related cost to serve TMMC is substantially below the corresponding per-unit customer-related cost to serve the other Large Use class customer.
54. Third, as discussed in the Original Pollock Evidence and documented in **Schedule JP-2**, TMMC receives Primary Substation service whereas the other LU customer receives Primary Distribution service. These are two different types of service. Primary Substation service is provided when the customer is served from dedicated feeder lines that are directly connected to a transformer

⁴⁶ EB-2007-0031, Staff Discussion Paper, *Rate Design for Recovery of Electricity Distribution Costs* at p. 22 (March 31, 2008 Revised June 6, 2008).

⁴⁷ 1 Tr. 173, ll. 7-11.

substation. The dedicated M24 and M30 feeders that serve TMMC are directly connected to Preston TS. This is TMMC's only electrical connection to the Energy+ distribution system. This is in contrast to the other LU customer, which receives Primary Distribution service using Energy+'s integrated primary distribution network. No Energy+ assets are used, exclusively, to serve this customer. Primary Substation service is less costly than Primary Distribution service.

55. Fourth, with the sole exception of primary poles, all of the distribution facilities that serve TMMC are exclusively used by TMMC and no other Energy+ customers can be served from these facilities. This means that all distribution facilities used to serve TMMC, other than poles, can be directly assigned to TMMC.
56. TMMC submits that a two LU class construct, as proposed by Mr. Pollock, properly recognizes the unique circumstances that pertain to TMMC and ensures that TMMC's volumetric distribution rate reflects proper cost causality. (Note that in the Original Pollock Evidence, Mr. Pollock proposed a one LU class construct but with different volumetric rates applicable to each of the two LU customers. This approach would be another way to recognize the different costs of serving TMMC and ensure proper cost causality).

(b) Supplementary Distribution service rate

57. Schedule JP-13 of the Updated Pollock Evidence shows the derivation of Mr. Pollock's rate design for the Supplementary Distribution service that is provided to TMMC. To be clear, the term "Supplementary" refers to the "regular" distribution service provided to a customer for load that is not otherwise supplied from the customer's LDG facilities.⁴⁸
58. A summary of Mr. Pollock's recommended TMMC Supplementary Distribution rate design is set out in Table 10 of the Updated Pollock Evidence.⁴⁹ The Distribution Volumetric Rate would recover \$312,444 (based on using the current OEB-approved service charge) of the TMMC LU class target revenue requirement of \$420,157. Mr. Pollock's recommended Distribution Volumetric Rate is designed to recover the costs of the M24 and M30 feeders used exclusively by TMMC. The cost of these feeders is fixed because they were installed prior to the time when TMMC energized its LDG facilities and, consequently, there is more than sufficient capacity to serve TMMC's total (Supplementary and Standby service) requirements, even if one or both of its LDG units were to go out of service. In other words, there are no incremental costs to provide

⁴⁸ Updated Pollock Evidence at p.22, ll.18-21.

⁴⁹ Updated Pollock Evidence at p.23 of 73.

standby service to TMMC. Accordingly, the Distribution Volumetric Rate should account for the amount of TMMC's Contract Standby Demand, which Mr. Pollock has assumed to be 6,900 kW.⁵⁰

F. GROSS LOAD BILLING (ISSUE 3.6)

59. TMMC's position with respect to Energy+'s Gross Load Billing Proposal remains unchanged from the position articulated in Ms. Collis's Written Evidence of September 27, 2018, namely, that the issue deserves a thorough examination that should take place in the context of a generic policy review that considers, *inter alia*, the "de-incentivizing" effects of gross load billing on the development of distribution generation.⁵¹
60. TMMC's position is consistent with the Board's letter dated March 29, 2016 to all Licensed Distributors announcing a policy review to address the question of how commercial and industrial customers should be billed when they have behind-the-meter LDG facilities. In that letter, the Board noted that many electricity distributors have LDG within their service area and that there was value in examining the issue on a generic basis.⁵²
61. TMMC's position is also consistent with the Board's decisions in respect of requests by each of Guelph Hydro Electric Systems Inc. ("**Guelph Hydro**"), Niagara-on-the-Lake Hydro Inc. ("**Niagara Hydro**") and Erie Thames Powerlines Corporation ("**Erie Thames**"). In the case of Guelph Hydro, the Board referred to its March 29, 2016 letter and advised that it would not proceed with the application to amend Guelph Hydro's rates... including the Retail Transmission Rate... because of the pending outcome of policy reviews on LDG issues, including in the Commercial and Industrial Consultation (EB-2015-0043).⁵³ In the case of Niagara Hydro, the Board once again declined to decide the gross load billing issue on the basis of a pending generic review of the issue.⁵⁴ Finally, in the case of Erie Thames, the Board accepted Erie Thames' request to withdraw its proposals for standby charges and gross load billing and noted as follows⁵⁵:

The OEB notes that the issue of Standby Charges is currently being considered by the OEB as part of its policy review of commercial and industrial rates. Gross Load Billing is not of that policy review, but the

⁵⁰ Updated Pollock Evidence at p.23 of 73, ll.9-17.

⁵¹ Written Evidence of Melody Collis at p.13 of 33, ll.262-272; 2 Tr.40, ll.12-28.

⁵² Letter from Board to All Licensed Distributors dated March 29, 2016.

⁵³ EB-2015-0380, Application for a 2016 Load Displacement Generator – Gross Load Billing – Retail Transmission Rate, letter from Board to Guelph Hydro Electric Systems Inc. dated April 29, 2016.

⁵⁴ EB-2017-0064, Decision and order on Application by Niagara-on-the-Lake Hydro Inc. for rates effective May 1, 2018 (March 22, 2018) at p.12.

⁵⁵ EB-2017-0038, Decision and Order (November 1, 2018) at p.6.

OEB agrees that it is a complex matter that is best considered under a policy review.

62. Finally, it would be unfair to distributors such as Guelph Hydro, Niagara Hydro and Erie Thames if the Board were, now, to change its stance and approve Energy+'s gross load billing request, prior to a generic determination of the issue. It would also create an un-level playing field as between TMMC and those of its competitors located in the service areas of distributors who do not gross load bill.⁵⁶

G. STANDBY CHARGE (ISSUE 3.7)

63. TMMC submits that the Board should:
- reject Energy+ proposed rate for Standby Distribution service for the reasons detailed in the Original Pollock Evidence⁵⁷ and summarized in Appendix D-2 of the Updated Pollock Evidence;⁵⁸ and
 - accept Mr. Pollock's TMMC-specific rate design for Standby Distribution service based on the Two Large Use Classes/Direct Assignment CCOSS, the derivation of which is set out in Schedule JP-14 of the Updated Pollock Evidence.

(a) Energy+ standby proposal

64. Energy+ proposes to charge for Standby Distribution service by applying the otherwise applicable distribution volumetric rate to any portion of the LDG customers Contract Demand in excess of the LDG customer's actual monthly peak demand. For TMMC, the otherwise applicable charge would be the Large Use Distribution Volumetric Rate. Energy+ initially set TMMC's Contract Demand to 28.8 MW.⁵⁹ Subsequently, it revised this to 26.2 MW, in response to an interrogatory from TMMC.⁶⁰ The new lower Contract Demand reflects TMMC's maximum demand during calendar year 2017.
65. In effect, the Energy+ proposal involves "topping up" the distribution charges payable when the observed demand is less than the Contract Demand. The top-up would not be based on any measure of the actual amount of delivered standby power drawn. If, however, the LDG

⁵⁶ 2 Tr.40, ll.26-28 and 2 Tr.41, ll.1-60.

⁵⁷ Original Pollock Evidence at pp.36-50.

⁵⁸ Updated Pollock Evidence at pp.54-63.

⁵⁹ Application, Exhibit 7 at 10.

⁶⁰ Energy+ Response to IR-TMMC-4.

customer's actual peak demand in any month exceeds its Contract Demand (in which case there would be no shortfall between actual demand and Contract Demand), then the Distribution Volumetric rate would be applied only to the actual monthly peak demand. Finally, under Energy+'s Standby Distribution service rate design, an LDG customer's Contract Demand could be adjusted from time to time, presumably at Energy+'s discretion.

66. Energy+'s proposed Large Use Standby Distribution service rate design does not reflect cost-causation principles and, thus, would not result in a just and reasonable standby rate. Cost causation means recognizing how Standby Distribution service has different usage characteristics than Supplementary Distribution service because thermal LDGs, such as TMMC's LDG facility, are typically both highly efficient and reliable. This means that Standby Distribution service is used infrequently.
67. There are a number of other problems with Energy+'s proposed standby rate design. First Energy+ has provided no explanation for how it determined the Standby Contract Demand for TMMC. Typically such a determination is made in consultation with the LDG customer. Second, Energy+ ignored the reduction in the amount of capacity it has to reserve as a result of TMMC's LDG. With LDG reducing TMMC's net peak demand, more capacity is available to serve Energy+'s other customers. Third, Energy+'s proposed Standby Distribution service rate design would send the wrong price signals and discourage customers with LDG from scheduling outage in advance at times when the distribution system is less stressed.
68. The above critiques of Energy+'s standby proposal are discussed, in greater detail, at pages 55-63 of the Updated Pollock Evidence.

(b) Pollock's standby rate proposal

69. The derivation Mr. Pollock's recommended rate design for Standby Distribution service, applicable to TMMC, is shown in Schedule JP-14 Revised of the Updated Pollock Evidence. An overview of Mr. Pollock's recommended design, presented at the Technical Conference, is included in the Updated Pollock Evidence⁶¹ and is also included hereto as **Attachment 2**, for ease of reference.
70. Mr. Pollock's recommended design is based on cost-causation principles and reflects the greater diversity associated with Standby Distribution service, relative to Supplementary Distribution service. Standby Distribution is the additional delivery service required when a customer's LDG

⁶¹ Updated Pollock Evidence, Appendix E at pp.64-72.

sustains an outage and there is a net increase in the customer's peak demand previously established during the billing month when there were no outages. Generator outages can be either *forced* or *scheduled*. Forced outages are random, non-recurring events, while scheduled outages are typically planned (sometimes well) in advance. For this reason, it cannot be assumed that forced outages always occur coincident with a system peak. Further, scheduled outages would seldom, if ever, coincide with a system peak.

71. This greater diversity should be recognized in designing a cost-based Standby Distribution service rate. Local distribution costs are allocable to LDG regardless of the amount of Standby Distribution service actually provided. However, because of diversity, the amount of shared distribution costs allocable to LDG should reflect the amount of service provided; that is, the more that Standby Distribution service is used, the more likely an outage will coincide with a system peak and the higher the allocable distribution costs.
72. Applying the above-cost-causation principles, a cost-based rate for Standby Distribution service should then consist of two separate charges:
 - a Contract Volumetric Rate to recover the cost of local distribution facilities; and
 - a Daily Volumetric rate to recover the cost of shared distribution facilities.

The Contract Volumetric Rate would apply regardless of when or how often Standby Distribution service is provided. The Daily Volumetric Rate would apply when Standby Distribution service is actually used. Thus, customers using more Standby Distribution service would pay more than customers that use little or no Standby Distribution service. Further, to ensure that a LDG customer does not pay more for Standby Distribution service than for a comparable amount of Supplementary Distribution service, the sum of the Contract and Daily Volumetric Rate applied in any month would not exceed the otherwise applicable Distribution Volumetric Rate. In other words, a customer that uses Standby Distribution service for an entire month would pay the same total volumetric charges as would a similarly-sized customer, taking only Supplementary Distribution service.

H. RELIEF SOUGHT BY TMMC

73. In this proceeding, the Board should make the following determinations:
 - reject Energy+'s cost allocation study;

- adopt Mr. Pollock's proposed Two Large Use Classes/Direct Assignment CCROSS in which: (i) TMMC is a separate customer class; (ii) all costs incurred to serve TMMC (with the sole exception of primary poles) are directly assigned to TMMC; (iii) TMMC's loads are removed from the allocation of Primary Distribution costs (*i.e.*, overhead lines and conductors; underground conduit; and underground conductors); (iv) TMMC's 4NCP demands are derived from the historical load profiles and do not include an LDG adjustment; and (iv) all LU class loads are removed from the allocation of >50 kV distribution costs;
- establish a target revenue requirement for TMMC based on a 1.15 revenue-to-cost ratio;
- approve a just and reasonable cost-based rate design for the Supplementary Distribution service provided to TMMC, comprising a cost-based Service Charge consistent with the Board's guidance, and a Distribution Volumetric Rate to recover the remaining revenue requirements not already collected in the Service Charge;
- implement a just, reasonable and cost-based Standby Distribution service rate design for TMMC, comprising a Contract Volumetric and a Daily Volumetric Rate, where the former recovers the cost of local distribution facilities applied to TMMC's designated Standby Contract Demand and the latter is based on the cost of the shared distribution facilities, applied to the amount of daily Standby Distribution service (and is capped at the otherwise applicable TMMC Distribution Volumetric Rate); and
- define Standby Distribution service as the *additional* delivery service required when a customer's LDG sustains an outage and there is a net increase in the customer's peak demand, relative to that previously established during the billing month when there were no outages.

ALL OF WHICH IS RESPECTFULLY SUBMITTED THIS 29TH DAY OF MARCH 2019.

DENTONS CANADA LLP

Per:

original signed by Helen T. Newland

Helen T. Newland

Attachment 1

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LIST OF WITNESS RESPONSIBILITIES

Witness	Title	Evidence
Stephanie Pollard	Vice President of Administration and Corporate Secretary, TMMC	Written Evidence of Melody Collis (September 27, 2018).
Melody Collis	Facilities Maintenance Assistant Manager, TMMC	Written Evidence of Melody Collis (September 27, 2018). Written Responses to Interrogatories: October 25, 2018 - 1- EnergyPlus-1, 1-EnergyPlus-2, 1-EnergyPlus-3, 7-EnergyPlus-15, 7-EnergyPlus-16, 7-EnergyPlus-17 and 8-EnergyPlus-30; and January 22, 2019 -Technical Conference Questions – EnergyPlus-TC1 and VECC-TMMC-TC9 (includes all sub-questions).
Jeffrey Pollock	President, J. Pollock Incorporated	Written Evidence of Jeffrey Pollock (September 27, 2018), as revised on October 24, 2018 and November 1, 2018. Updated Written Evidence of Jeffrey Pollock (February 15, 2019), as revised on March 1, 2019. Written Responses to Interrogatories: October 25, 2018 - Board Staff, SEC and VECC, EnergyPlus (except for EnergyPlus responses assigned to Melody Collis, see above.); October 29, 2018 - OEB Staff; January 22, 2019 - OEB Staff, SEC, VECC and EnergyPlus (except for responses to EnergyPlus assigned to Melody Collis, see above.); February 6, 2019 - OEB Staff and Undertakings; February 15, 2019 - OEB Staff, SEC and EnergyPlus; and March 1, 2019 - OEB Staff, VECC, EnergyPlus (except for responses to EnergyPlus assigned to Melody Collis; see above). Further, the following models were provided by Mr. Pollock in response to interrogatory VECC-12.2, OEB 6(c) and EnergyPlus Clarification Question 9 (all March 1, 2019) and modelled different scenarios proposed in these questions. These models do not comprise part of Mr. Pollock's evidence.

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APPENDIX E

Developing a Cost-Based Rate for Standby Distribution Service

February 15, 2019

Filed: 2019-03-29

Standby Distribution Service

Applicable to Customers Who Own Load Displacement Generation (LDG) That is Located Behind the Customer's Meter

The Additional Delivery Service is Required When

- A Customer's LDG Sustains an Outage, AND
- There is a Net Increase in the Customer's Peak Demand As a Result of the Outage

Standby Distribution Service

Cost Basis

Types Of Distribution Facilities

- Shared Facilities are the “Highway”
- Local Facilities are the “Driveway”

Shared Distribution Facilities

- Provide Distribution Service to all Customers (*i.e.*, Bulk Distribution) or Multiple Customers
- CP or NCP Allocation

Local Distribution Facilities

- Provide Distribution Service To Specific Customers (*i.e.*, Primary & Secondary Overhead Lines & Conductors, Poles, Towers, & Fixtures, Underground Conduit, & Underground Conductors)
- Directly Assigned or NCP Allocation

Allocation of Shared Distribution Costs

Outages Rarely Occur Coincident With a System Peak

- Forced Outages are Random, Nonrecurring Events
- Scheduled Outages can be Planned, Sometimes Well in Advance (Controlled Diversity)

Thus, the Recovery of Shared Distribution Costs Should Recognize Diversity

That is, the More Standby Distribution Service is Used, the More Likely an Outage Will Coincide With a System Peak

- & the Higher the Cost to Serve

Allocation of Local Distribution Costs

Local Facilities are Electrically Closer to the Customer

- Less Diversity (Not Zero)
- Sized to Meet the Maximum Expected Demand
- Anytime

Local Distribution Costs Are Incurred Regardless of the Amount of Standby Distribution Service

Thus, the Recovery of Local Distribution Costs Should Recognize Expected Max Peak Demand

Cost-Based Rate For Distribution Standby Service

Contract Volumetric Rate

**Local Distribution
Costs**

**Standby Contract
Demand**

- Customer Determined

Annual Fixed Costs

- Not Affected By the Amount of
Service Actually Provided

Daily Volumetric Rate

Bulk Distribution Costs

Daily Demand

- Weekdays
- On-Peak Period

**Costs Vary With the
Amount of Service**

- Higher Coincidence
- Higher Costs

Example of a Distribution Standby Rate Design For a Hypothetical Customer Class

Description	Supplementary Service	Standby Service	
		Shared Costs	Local Costs
1. Target Rate Design Revenues	\$1,000,000		
2. Less: Service Charge Revenues	\$100,000		
3. Equals: Volumetric Rate Revenues	\$900,000	\$200,000	\$700,000
4. Billing Determinants (kW)	300,000		300,000
5. Volumetric Rate (\$/kW)	\$3.00		
6. Contract Volumetric Rate (\$/kW)			\$2.33
7. System Bulk Distribution Costs	Assumption	\$1,650,000	
8. System 12CP Demand (kW)		2,710,000	
9. Unit Cost (\$/kW)	L.7 ÷ L.8	\$0.609	
10. Loss Factor	Assumption	10%	
11. Unit Cost at Delivery Voltage	L.9 x (1+L.10)	\$0.670	
12. No. of Weekdays Per Billing Month		20.9	
13. Daily Volumetric Rate (\$/kW)	L.11 ÷ L.12	\$0.032	

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Billing Example For a Hypothetical Customer

Description	No Outage	7-Day Outage	1 Month Outage
Supplementary Power Demand (kW)	50	50	50
Standby Contract Demand (kW)	100	100	100
On-Peak Monthly Peak Demand (kW)	50	150	150
Maximum Daily Demand (kW)	N/A	100	100
Volumetric Rate at \$3.00/kW	\$150.00	\$150.00	\$150.00
Contract Volumetric Rate at \$2.33/kW	\$233.00	\$233.00	\$233.00
Daily Volumetric Rate at \$0.032/kW-Day	\$0	\$22.40	\$67.00
Total Volumetric Charges	\$383.00	\$405.40	\$450.00

Questions?



Jeffry Pollock

12647 Olive Blvd, Suite 585

St. Louis, MO 63141

☎: 314-878-5814

💻: 314-878-7339

📞: 314-960-3901

✉ jcp@jpollockinc.com