

**BEFORE THE PUBLIC UTILITY COMMISSION**

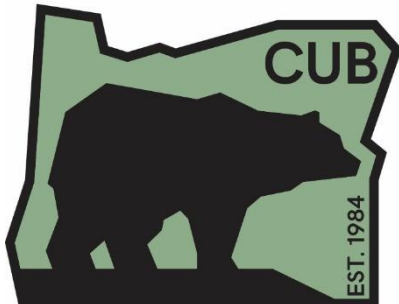
**OF OREGON**

**LC 73**

In the Matter of )  
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PORTLAND GENERAL ELECTRIC )  
COMPANY, )  
 )  
2019 Integrated Resource Plan Update. )  
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COMMENTS OF THE  
OREGON CITIZENS' UTILITY BOARD

March 10, 2021



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**I. INTRODUCTION**

The Oregon Citizens' Utility Board (CUB) files these Comments on Portland General Electric Company's (PGE or the Company) 2019 Integrated Resource Plan Update (IRP or Plan), filed on January 29, 2021.

CUB appreciates PGE addressing CUB's comments on its 2019 IRP in this updated analysis. PGE's near-term action plan remains unchanged in the IRP update. Among other things, PGE's IRP update includes a refreshed analysis of its residential, commercial, and industrial load forecasts.

The long-term load forecast is directly used in the Company's assessment of its capacity need, energy and Renewable Portfolio Standard (RPS) positions, as well as its preferred portfolio cost calculations. Table 1 below summarizes the changes in these metrics that resulted from an updated load forecast:

Table 1<sup>1</sup>

	<b>2019 IRP</b>	<b>November 2019 Needs Assessment</b>	<b>2019 IRP Update</b>
2025 Capacity Need – Reference Case	-	697 MW	511 MW <sup>2</sup>
2025 Net market Shortage - Reference Case	580MWa	527 MWa	595 MWa
RPS Compliance Obligations	-	-	Increases <sup>3</sup>
	<b>2019 IRP</b>	<b>LC 73 PGE Final Comments</b>	<b>2019 IRP Update</b>
Preferred Portfolio Cost (in \$millions)	25,740	25,617	25,713

PGE’s load forecast update includes:

- the impact of COVID-19 on its energy deliveries as well as its long-term average growth rates, and,
- testing out alternative economic drivers for its industrial load forecast. PGE conducted this analysis specifically in response to CUB comments on its 2019 IRP.

CUB will provide comments on the following:

- A. PGE’s estimated long-term commercial load growth rate,
- B. PGE’s analysis of alternative industrial load drivers and estimated industrial load growth, and,

<sup>1</sup> Data Source: Portland General Electric 2019 IRP Update.

<sup>2</sup> The capacity need increases to 909 MW in 2026 primarily due to the load forecast update

<sup>3</sup> “The June 2020 load forecast displays slightly higher long-term growth rates, which increase RPS compliance obligations”, p38 of 84, PGE 2019 IRP Update.

C. Consideration of New Load Direct Access (NLDA) in its forecast of industrial load.

## II. DISCUSSION

### *A. Commercial Load Forecast*

PGE estimates an increase in its commercial sector’s load in the long-term. The commercial class average annual load growth was estimated to be 0.5% over the planning period (2020-2050) in PGE’s 2019 IRP. This estimated growth rate is revised to 0.9% for 2021-2050 in the IRP update. PGE explains that while COVID-19 has significantly reduced its commercial energy deliveries in the short-term, projected employment and economic growth rates drive the new higher estimated growth rate in the IRP update.

The graph below from the Plan shows the impact of COVID-19 on PGE’s energy deliveries across the residential, commercial, and industrial customer classes. As seen in CUB Figure 1, PGE’s energy deliveries shifted from the commercial to the residential sector during the pandemic.<sup>4</sup> While the commercial deliveries fell well below the forecasted levels, the residential deliveries exceeded projected levels. This is consistent with a rise in “work from home” culture accompanied by a decline in the need for commercial/office spaces as well as a slowing economy as a result of the pandemic. While there is reason to believe that the economy will recover from this temporary setback once the pandemic is over, at least part of the structural changes and business and firm closures that the economy has experienced may well be permanent.

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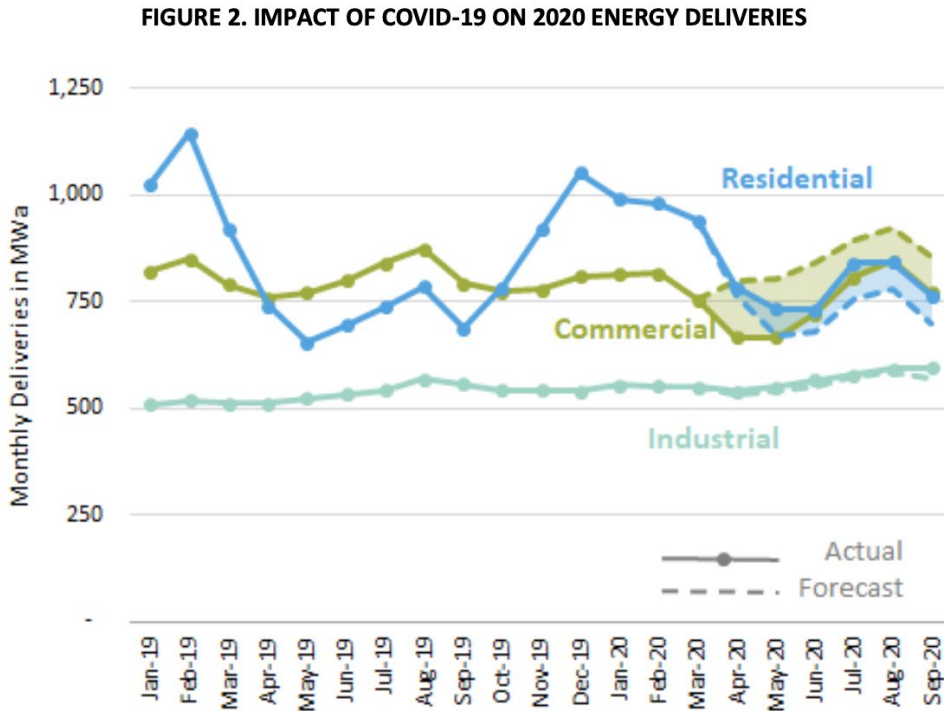
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<sup>4</sup> CUB Figure 1 corresponds with Figure 2 in the Plan.

CUB Figure 1



Businesses may choose to keep costs low by giving up commercial office spaces allowing employees to work remotely on a long-term or permanent basis. Recently, several small, medium, and large businesses, including Nike, have abandoned office spaces; This trend is believed to continue at least for some time.<sup>5</sup> Additionally, a significant share of small businesses have closed permanently and may not revive even when the pandemic is over. The most recent Oregon Economic and Revenue Forecast indicates that almost 30% of businesses in Oregon have closed and 50% of leisure and hospitality firms have shut down.<sup>6</sup> While this data refers to the entire state, PGE’s service area is similarly impacted.

<sup>5</sup> <https://pamplinmedia.com/but/239-news/496609-398330-nike-quits-acres-of-office-space-in-beaverton-area>

<sup>6</sup> Oregon Economic and Revenue Forecast, March 2021, p-6.  
<https://www.oregon.gov/das/OEA/Documents/forecast0321.pdf>

Therefore, even if the economy bounces back and businesses reclaim old office spaces or lease new ones, the load growth in the commercial sector would first need to come back to its original level as forecasted in PGE’s 2019 IRP. The future employment and economic growth in the area would have to be substantial enough to exceed the previous estimate of an annual average load growth rate of 0.5% for the commercial class customers over the planning period (2020-2050) and increase to 0.9%. CUB believes that there is a strong possibility that the commercial sector load growth will not exceed the previous estimate of 0.5% because of the reasons provided by the Company. CUB would appreciate the Company taking a hard look at these load growth numbers in light of the current economic circumstances and looks forward to PGE’s response on this matter.

In its opening comments in LC 73, CUB also discussed the potential around energy efficiency of data centers. CUB referred to the Seventh Power Plan of the Northwest Power Council to recommend further exploration of energy efficiency opportunities in both embedded and custom data centers.<sup>7</sup> Embedded data centers are typically included under commercial load. Fully exploring the energy efficiency potential of data centers will result in future load declines in the commercial sector. The Commission, in its Order No. 20-152, directed PGE to conduct workshops on data center load and energy efficiency potential before filing its next IRP. PGE states in the 2019 IRP update that it will work with Energy Trust of Oregon to arrange these workshops. CUB appreciates this effort and looks forward to participating in these workshops.

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<sup>7</sup> LC 73, CUB’s Opening Comments, p6-7.  
<https://edocs.puc.state.or.us/efdocs/HAC/lc73hac132227.pdf>

## ***B. Industrial Load Drivers and Forecast***

CUB appreciates that PGE responded to CUB's request in its opening comments on the Company's 2019 IRP industrial load forecast to consider alternative economic drivers that better reflect the industrial landscape defining PGE's service territory. CUB also cited to other utilities, including PacifiCorp and Puget Sound Energy that include regional variables such as state employment rates or industrial production data in their load forecast models.

PGE considers several alternate macro variables as industrial load growth drivers in its IRP update, including Oregon and Portland GDP, weighted GDP of its service territories, Oregon Durable Goods Manufacturing, and The Federal Reserve's US Industrial Production Index. In response to Staff DR 185, PGE explains that the Company was unable to obtain third-party forecasts on all but one of these variables for the entire analysis period and created its own forecast of these alternative drivers. PGE tested for model fit by using statistics like Adjusted R-square and AIC. Based on these statistics, PGE concluded that US GDP serves as the best proxy to capture the cyclical effect on PGE's industrial load in the long run.<sup>8</sup>

CUB appreciates PGE's analysis and realizes that although economic theory would suggest the use of an explanatory variable that closely explains the behavior of the dependent variable, it is reasonable to use a close proxy. PGE's industrial load is driven in large part by rapid growth in the high-tech manufacturing industry in recent years<sup>9</sup>, and Intel's current semiconductor manufacturing facility is one of its largest industrial customers.<sup>10</sup> In this case, the Company's industrial energy deliveries become disproportionately dependent on the expansion

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<sup>8</sup> LC 73, PGE Response to OPUC Data Request No.185.

<sup>9</sup> LC 73, PGE Response to OPUC Data Request No. 184.

<sup>10</sup> Ernst, Steve, *Intel Signals Plans to Use PGE New Load Direct Access Program, Misses Cut*, Clearing Up (Mar. 20, 2020) available at [https://www.newsdata.com/clearing\\_up/supply\\_and\\_demand/intel-signals-plans-to-use-pge-new-load-direct-access-program-misses-cut/article\\_ca01b46c-6afd-11ea-a371-a30b9619dcb1.html](https://www.newsdata.com/clearing_up/supply_and_demand/intel-signals-plans-to-use-pge-new-load-direct-access-program-misses-cut/article_ca01b46c-6afd-11ea-a371-a30b9619dcb1.html).

or downsizing decisions of a single firm that may have nothing to do with the US business cycle in general. In the absence of better measures or data to capture these cyclical impacts on its long-term industrial load forecast, PGE should consider conducting a risk analysis around low and high demand separately for its industrial customer class. CUB would also recommend that PGE explore load forecast models of other energy utilities serving similar industrial customers and include a comparison of its own load forecast model with theirs in its future IRPs.

***C. Consideration of New Load Direct Access (NLDA) in its Forecast of Industrial Load***

CUB understands that PGE is excluding individual customers from its load forecast that it knows will be receiving service under its NLDA program. However, it is highly unlikely that these individual customers represent the limit of customers that will ultimately request NLDA service. Intel specifically has indicated a desire to receive service under the program, at least for a portion of its load.<sup>11</sup> In UM 1837, PGE stated that new loads of a “sizable magnitude could be considered incremental to the regression-based forecast if they deviate significantly from the sector level historic trends.”<sup>12</sup> But this implies that they are not incremental to the load forecast if they do not deviate from historic trends. While it is unclear how much of this load will be direct access, not making any adjustment to account for NLDA is the same as forecasting that this load will be zero. This is clearly not the case. CUB does not believe that there is a basis to conclude that no new industrial load included in the regression-based forecast will be served under through the NLDA program.

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<sup>11</sup> *Supra*, note 9 (“[Intel] says it will continue to work “informally and in good faith with PGE” on a resolution allowing it to participate in the NLDA program.”

<sup>12</sup> UM 1837, PGE Opening Comments, page 7.



### III. CONCLUSION

CUB appreciates the opportunity to participate in PGE's 2019 IRP process. PGE's IRP update has made some important changes to its load forecast analysis by addressing the impact of COVID-19 on its current energy demand. The result was a slight increase in the Company's forecasted long-term growth rate of the net load on its system, arising primarily from increases in forecasted residential and commercial load growth rates. Although that does not impact PGE's near-term action plans, the Company's long-term resource strategy is affected by a revised load forecast.

CUB believes that PGE should continue to evaluate the impact of changing economic conditions in its service area on its long-term load forecast and employ measures to capture the unique circumstances that the Company faces in serving some of its largest industrial customers. CUB looks forward to PGE's response to CUB's concerns in the Company's future IRPs.

Dated this 10<sup>th</sup> day of March, 2021

Respectfully submitted,



Economist  
Oregon Citizens' Utility Board  
610 SW Broadway, Ste. 400  
Portland, OR 97205  
T. 217.552.5680  
F. 503.224.2596  
E. [sudeshna@oregoncub.org](mailto:sudeshna@oregoncub.org)