Pacific Gas and Electric Company 2027 GRC

A.25-05-009

TURN HEARING EXHIBIT

TURN Ex-310

Ryan Weber

TURN Response to PG&E Data Request 029

PACIFIC GAS AND ELECTRIC COMPANY
2027 General Rate Case Phase I
Application 25-05-009
Data Request

To:	The Utility Reform Network
Recipient Name:	Hayley Goodson
Request Date:	April 17, 2026
PG&E Data Request No.:	PGE_TURN029
PG&E File Name:	GRC-2027-PhI_DR_PGE_TURN029
Due Date:	April 24, 2026
PG&E Witness(es):	Ryan Weber – Gas Operations
Response Date:	April 22, 2026

Please provide electronic responses to the following questions. Hard copy responses are unnecessary. The responses should be sent as e-mail attachments to the recipients below. If the files are too large to email, please contact the Discovery Manager below to upload the documents into a folder on the Electronic Secure File Transfer (ESFT) and notify the recipient below.

GRC 2027 Discovery Manager:
Spencer Oram
at GRC@pge.com

GRC Case Coordinators
at GRCCaseCoordinators@pge.com

SUBJECT: MARQUETTE ENERGY ANALYTICS (MEA)

EXHIBIT: (TURN-06) ADDESSING GAS STORAGE CAPITAL AND EXPENSES (EX. PG&E-03, CHAPTER 7) AND THE GAS PEAK DAY SUPPLY STANDARD (EX. PG&E-03, CHAPTER9)

QUESTION:

Regarding Exhibit TURN-06, p. 33, lines 4 and 5: “Model 5 . . . provides the best statistical fit ($R^2 \approx 98\%$ for all days and 88.3% for cold days).”

1. Has TURN calculated the R^2 value of MEA’s ensemble forecast?

Q01 Response:
No, TURN has not (re-) calculated the R^2 value of MEA's ensemble, or of any of the five regression models or three linear fit models, for two reasons:

First, TURN did not have the underlying data or code needed to reconstruct the regression models using the specifications employed in MEA's original analysis. In response to TURN's request for the working Excel spreadsheets or commented code used to generate core demand, PG&E stated: "Marquette Energy Analytics (MEA) has indicated that due to the commercially sensitive and proprietary nature of its information, that it cannot provide

this code." (A.24-07-020, Data Request TURN-003, Q001Rev01(a).) Without access to MEA's model specifications, training data partitions etc., any independent recalculation would not be comparable to the values on the record.

Second, TURN has relied on the R^2 values, and the explanation of the regression models' underlying data, specifications, and accuracy metrics, that PG&E provided in its response to TURN's discovery in A.24-07-020, Data Request TURN-003, Q002Rev01(e), reproduced below:

Model	DDC 1-In-10 Estimate (MDth)	R^2 All Days	R^2 Coldest Days
Model 1	2,492	96.4%	81.3%
Model 2	2,560	96.0%	83.8%
Model 3	2,540	96.8%	83.5%
Model 4	2,441	97.6%	85.7%
Model 5	2,500	98.0%	88.3%
Linear Fit 1	2,600	-	80.6%
Linear Fit 2	2,680	-	85.5%
Linear Fit 3	2,677	-	85.6%
Ensemble	2,560	-	84.9%

A direct apples-to-apples R^2 comparison between the ensemble and the five regression models is not feasible. PG&E confirmed in its data response: "the linear fit models' R^2 and the ensemble R^2 are calculated on only the 20% coldest days while the regression models' R^2 is calculated on all days. This is because the linear fit models cannot be evaluated on non-heating days."

Even on the narrower 20% coldest-day subset on which the ensemble and linear fits are defined, the ensemble and every linear fit underperform Model 5:

- Ensemble (84.9%) is 3.4 % points lower than Model 5 (88.3%)
- Linear Fit 1 (80.6%) is 7.7 % lower than Model 5
- Linear Fit 2 (85.5%) is 2.8 % lower than Model 5
- Linear Fit 3 (85.6%) is 2.7 % lower than Model 5

Model 5 can be evaluated across all days and demonstrates superior fit on both the full distribution (98.0%) and the cold-day subset (88.3%). None of the three linear fits, nor the ensemble itself, outperforms Model 5 on the very subset of days they are purpose-built to characterize.

This confirms TURN's contention that PG&E's weighting scheme is unreasonable. Models 1 and 2 each receive 25% weight (50% combined), Model 3 and the three linear fits each receive 10% (40% combined), and Models 4 and 5 each receive only 5% (10% combined). Model 5, the best-fitting model on both the full distribution and the cold-day subset, receives just 5%. The likely explanation is that Model 5 produces a lower and more empirically grounded 1-in-10 DDC estimate of 2,500 MDth.

2. If so, provide the result of the calculations.

   Q02 Response: See Q01 Response above.

3. If not, explain why TURN has not calculated the R^2 value of the MEA ensemble model.

   Q03 Response: See Q01 Response above.