Voice automation technology for load management study

1. Overview

PG&E started to default residential customers to TOU rate in April 2021.Therefore, PG&E will expand the existing tools and technologies offeredon PG&E's website in order to help customers to be successful in these new time varying rates. The objective of this DRET study is to leverage residential voice assistant technology (such as Amazon Alexa) to educateresidential customers on energy usage and bill forecast, rates and Time- Of-Use automation/optimization, and notification of utility events.

Customer Engagement through Voice Assistants require the customer to have access to Amazon Alexa via speakers, display and/or mobile app. Information is collected and processed from PG&E's internal rate engineand Share My Data (SMD) to 3rd party system. The customer would then interact with a third- party system (Energy Expert) through smart speakers, smart display, and mobile devices. The Energy Expert will advise the customers to optimize energy use based on the customer's rate schedule. In addition, the app will provide customer notification such as Smart Days and PSPS events.

This study has two phases. Phase 1 of this program will target 5-10 employees (combination of PG&E employees and friends of PG&Eemployees). Phase 2 will target over 500 customers.

2. Collaboration

The DRET team will partner with the internal customer care Pricing Pilotand Marketing teams to develop frequently asked questions (FAQs) that relate to TOU and load management. PG&E hired a third party to developa smart speaker application (a voice automation skill named Energy Expert) for this study.

3. Results/Status

The DRET team is in the process of performing small scale User Acceptance Test on the Energy Expert skill. Below is list of samplequestions that are supported by the Energy Expert skill in Phase I:

- What's my bill? (As of yesterday)
- What's my energy usage? (As of yesterday)
- What is my current rate?
- What other rates are available?
- Am I on the right rate?
- What's a good time for to run appliances?
- When are prices the lowest? (For both Smart Rate and non-SRcustomers)

4. Next Steps

The DRET team worked with Amazon to leverage the notification function for Smart Days and PSPS and successfully completed Phase 1 ofthe study. PG&E is planning to launch Phase II of this study in the 1st quarter of 2022