

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

**ENERGY DIVISION**

**RESOLUTION E-4868**

**August 24, 2017**

**R E S O L U T I O N**

Resolution E-4868. Approves, with modifications, the Utilities' Click-Through Authorization Process which releases Customer Data to Third-Party Demand Response Providers.

**PROPOSED OUTCOME:**

- This Resolution approves with modifications, the click-through authorization processes proposed by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (together, Utilities) that streamlines, simplifies and automates the process for customers to authorize the Utility to share their data with a third-party Demand Response Provider(s).
- Resolves technical issues to increase customer choice in accordance with the principles outlined in Decision 16-09-056.
- Forms the Customer Data Access Committee to address ongoing issues.
- Requires the Utilities to file future Advice Letters to make additional improvements and an application for improvements beyond what is possible within the Advice Letter funding caps, including expanding the solution(s) to other distributed energy resource providers.

**SAFETY CONSIDERATIONS:**

- There is no impact on safety.

**ESTIMATED COST:**

- This Resolution approves funding for PG&E, SCE, and SDG&E in the amount of \$12 million authorized in Decision 17-06-005.

By Advice Letter (AL) 4992-E (Pacific Gas and Electric Company), AL 3541-E (Southern California Edison Company), and AL 3030-E (San Diego Gas & Electric Company), Filed on January 3, 2017.

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**SUMMARY**

This Resolution approves with modifications, the click-through authorization processes proposed by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (together, Utilities) that streamlines, simplifies and automates the process for customers to authorize the Utility to share their energy related data with a third-party demand response provider, an essential step in enrolling in a third-party retail program. Specifically, this Resolution resolves many technical and policy issues needed to implement the authorization solutions. Further, this Resolution orders the creation of a stakeholder Customer Data Access Committee to address ongoing implementation issues. This Resolution also orders the Utilities to file future advice letters and an application to make further improvements to the click-through authorization process(es).

This Resolution addresses PG&E Advice Letter (AL) 4992-E, SCE AL 3451-E, and SDG&E AL 3030-E, filed on January 3, 2017 (“the Advice Letters”). We address the Advice Letters together to ensure consistent review and approval of the Utilities click-through authorization processes, which adds clarity for customers and third-party demand response providers in the marketplace.

We approve with modifications the click-through authorization processes proposed in the Advice Letters. We order the Utilities to:

- 1) Expand the data set that customers may authorize the Utility to share with third-party demand response providers in order to support a customer’s right to choose service from a third-party;
- 2) Develop websites for reporting performance metrics with consistent metrics across the Utilities, and report metrics in real-time or near real-time, but no less frequently than daily;
- 3) Incorporate flexibility in the design of the click-through to accommodate future expansion of the click-through to other Distributed Energy Resource providers;
- 4) Form the Customer Data Access Committee with guidance from the Commission’s Energy Division with any other interested stakeholders to

address improvements, ongoing implementation issues, and informal dispute resolution;

- 5) Begin developing the business requirements for API Solution 1 and file an application with a cost estimate for this and other improvements within fifteen months;
- 6) Implement various technical and functional specifications including among others: using alternative authentication measures; providing dual authorization; design the click-through using two screens and four clicks for the “quick path”; incorporating timely feedback from stakeholders when designing the display of the terms and conditions; ensuring that the click-through solutions are optimized for mobile devices; allowing an “indefinite” timeframe for customer authorization; sending an automatically generated notification such as email after authorization is completed; providing multiple pathways for customer revocation; delivering a shorter or summarized data set within ninety seconds on average after the Demand Response Provider requests the information ; and delivering the complete expanded data set within two days;
- 7) File a one or more Tier 3 Advice Letter(s) to request funding for improvements to the click-through authorization solution(s) described herein, beyond what was included in the extant Utility Advice Letters; and
- 8) File an application(s) within fifteen months to request funding for improvements beyond what is possible within the Advice Letter funding cap, including expanding the click-through authorization solution(s) to other distributed energy resource and energy management providers.

## **BACKGROUND**

### **I. What is Click-Through?**

Decision 16-06-008 ordered PG&E, SCE and SDG&E to meet with the Commission’s Energy Division and interested stakeholders to reach a consensus proposal on the click-through authorization process. This process enables a

customer to authorize the Utility to share the customer's data with a third-party Demand Response Provider<sup>1</sup> by completing a consent agreement electronically.<sup>2</sup> Authorizing data sharing is an essential step in the process of enrolling in and beginning a third-party program because the provider needs access to a customer's data in order to provide demand response services. The data is also necessary to bid and settle the customer's load drop into the California Independent System Operator's (CAISO) wholesale energy market.

Currently, third-party demand response providers are authorized to receive customer data from the Utility through a paper or PDF<sup>3</sup> Customer Information Service Request Demand Response Provider form (CISR-DRP Request Form) that the customer signs. The Utility must verify the identity of the customer through a review of the CISR-DRP Request Form before the data is released. Several third-party demand response providers argued in the proceeding that the current CISR-DRP Request Form process has led to reductions in enrollments because the process is time-consuming and difficult to complete.<sup>4</sup>

The Decision ordered the Utilities and stakeholders to develop a process that begins and ends on a third-party website, and verifies the customer's identity.<sup>5</sup> The Decision allows the process to "pre-populate" fields in the authorization

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<sup>1</sup> Demand Response Provider refers to a CPUC Demand Response Provider defined in Electric Rule 24 (PG&E, SCE) and 32 (SDG&E) (together, Rule 24/32):

"An entity which is responsible for performing any or all of the functions associated with either a CAISO DRP and/or an Aggregator. DRPs must register with the CPUC and CAISO DRPs must also register with the CAISO. Unless otherwise specifically stated, all references to "DRP" herein shall refer to this definition."

<sup>2</sup> Decision (D.) 16-06-008, at Ordering Paragraph 1 and 9.

<sup>3</sup> Portable Document Format (PDF) is a file format used to present and exchange documents reliably, independent of software, hardware, or operating system.

<sup>4</sup> D.16-06-008 at 20-23, especially footnote 35 describing customer fatigue due to unsuccessful attempts at entering a login and password.

<sup>5</sup> D.16-06-008 at 12-14.

process, but clarifies that the customer must complete the click-through, “not a third party on behalf of the customer.”<sup>6</sup>

In developing the click-through process, the Commission tasked Utilities and stakeholders to:

“streamline and simplify the direct participation enrollment process, including adding more automation, mitigating enrollment fatigue, and resolving any remaining electronic signature issues.”<sup>7</sup>

The Decision explained that in order to streamline, simplify, automate, mitigate enrollment fatigue and address electronic signature issues, stakeholders should:

“attempt to identify unnecessary steps in the enrollment process and determine options to eliminate these steps. Parties should also discuss approaches to coordinate the Applicants’ enrollment systems with those of the providers and/or aggregators and address any remaining issues with electronic signatures.”<sup>8</sup>

Finally, the Commission ordered the Utilities to develop a consensus proposal in a stakeholder working group process and file it by November 1, 2016.<sup>9</sup>

## II. Working Group Development of Solutions

PG&E, SCE and SDG&E worked with the Commission’s Energy Division and held more than sixteen working group meetings in person and on the phone over a six-month period. In addition to representatives from the Utilities and Energy Division, participants included the Office of Ratepayer Advocates (ORA), Advanced MicroGrid, the California Efficiency and Demand Management Council (formerly the California Energy Efficiency Industry Council), Chai

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<sup>6</sup> D.16-06-008 at 13-14.

<sup>7</sup> *Id.* at Ordering Paragraph 9.

<sup>8</sup> *Id.* at 22-23.

<sup>9</sup> The Commission’s Executive Director granted the Utilities’ request to file the consensus proposal on January 3, 2017.

Energy, CPower, eMotorWerks, EnergyHub, EnerNOC, Mission:Data, NRG, OhmConnect, Olivine, SolarCity, Stem, Sunrun, UtilityAPI, and Earth Networks (formerly WeatherBug), and others. The Assigned Commissioner's office also attended several meetings.

Over the course of the working group meetings, the stakeholders developed two different click-through frameworks for consideration. These frameworks, named Solution 3 and Solution 1 are fully described and compared in an Informal Status Report that the stakeholders served to the service list in application proceeding 14-06-001 et. al.<sup>10</sup> In the report, stakeholders also state their preference between the two frameworks and justification for their preference.

In Solution 3 or "OAuth Solution 3," the customer starts on the third-party Demand Response Provider's website, but then the customer is redirected to the Utility website via a 'pop up' window or iFrame window within the provider webpage. There the customer enters his credentials – either a Utility login and password or other identifying information to verify or authenticate their identity. Then the customer selects several options including how long the third-party will be able to access the data and authorizes the data sharing. After finalizing the authorization, the customer is re-directed back to the third-party Demand Response Provider's website. Solution 3 uses Open Authorization (OAuth) technology, similar to what many website service providers use to allow customers to create an account on website such as the New York Times using credentials from another service, such as Google or Facebook. In this way, a customer is able to use their credentials from one service and pass certain information on to the other provider. The other provider receives a limited amount of information and does not gain access to customer credentials.

Solution 1 or "API Solution 1" allows the customer to stay on the third-party website for the entire process. The customer enters information to verify or authenticate their identity and that is sent to the Utility to be processed by its

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<sup>10</sup> See Informal Status Report at 1 and Appendix B, available on the Commission Demand Response Workshop page at: <http://www.cpuc.ca.gov/General.aspx?id=7032>.



back-end IT system. If the information is correct, then the utility returns information to pre-populate the authorization screens on the third-party provider's website. The customer completes and electronically signs the authorization and allows the Utility to share the customer's data with the third-party demand response provider. The third-party returns an electronic record to the utility indicating the authorization was completed. Solution 1 uses a type of Application Program Interface (API) technology.

On October 18 and November 5, 2016, Energy Division provided guidance on what the Utilities should include in their Advice Letter filings:<sup>11</sup>

- 1) Plans for implementing Solution 3 & proposed budget (w/DRP conditions)
- 2) A schedule for developing Solution 1 and a plan for cost recovery.
- 3) A transparent system to track the utility Green Button Connect performance for Solution 3
- 4) Improvements worked on in sub groups (CISR, Data Set)
- 5) Status of spending on Green Button Connect (D.13-09-025)

Finally, on January 3, 2017, PG&E, SCE and SDG&E each submitted an Advice Letter with proposals for OAuth Solution 3 and other improvements to the click-through authorization process.

### III. Policy Considerations for Improvements to the Click-Through Process

While D.16-06-008 ordered stakeholders to streamline and simplify the click-through authorization process, later Commission policies support directing the Utilities to pursue further improvements to the click-through processes, beyond what was filed in the Advice Letters. In D.16-09-056, the Commission established a goal and a set of principles for future demand response. These principles support making improvements to the click-through authorization process to increase customer choice, eliminate barriers to customer data access,

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<sup>11</sup> Energy Division Advice Letter Guidance, October 18 and November 5, 2016, available at: <http://www.cpuc.ca.gov/General.aspx?id=7032>.

and develop a competitive market with a preference for third-party demand response providers.

The Commission established the principle that,

“Demand response customers shall have the right to provide demand response through a service provider of their choice and Utilities shall support their choice by eliminating barriers to data access;”<sup>12</sup>

The Commission explained that demand response should be customer-focused. Customers should be able to enroll in any available demand response program of their choosing, regardless of the provider. Further, Utility and third-party demand response providers must educate customers and offer just compensation for the services customers provide.<sup>13</sup> To facilitate customer choice, Utilities must remove barriers to third-party access to customer data, while complying with Commission Privacy Rules.<sup>14</sup>

Further, the Commission established the principle that,

“Demand response shall be market-driven leading to a competitive, technology-neutral, open-market in California with a preference for services provided by third-parties...”<sup>15</sup>

The Commission affirmed that all types of demand response programs should compete on a level playing field; but that some carve outs are still necessary given that the playing field is not level for all types of demand response.<sup>16</sup> To

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<sup>12</sup> D.16-09-056 at 46 and Ordering Paragraph 8.

<sup>13</sup> *Id.* at 50.

<sup>14</sup> Commission Privacy Rules refers to the “Rules Regarding Privacy and Security Protections for Energy Usage Data” established in D.11-07-056 and D.12-08-045 as part of the Smart Grid Rulemaking 08-12-009. These rules are repeated in each Utility’s privacy rules – Electric Rule 25 for SCE, Rule 27 for PG&E and Rule 33 for SDG&E.

<sup>15</sup> *Ibid.*

<sup>16</sup> *Id.* at 50-51.

facilitate an increasingly competitive market, third-party demand response must be preferred.

Utilities and third-party providers are not currently on a level playing field because of the years of ratepayer investments in Utility programs, and because the Utility has access to the base of potential customers and their data. The playing field is made slightly more “level” with an improved click-through which creates a process by which third-party providers can direct their customers to grant them access to customer data. These third-parties may never have a completely level playing field because they do not have the same type of access to the customers as the Utilities. However, an improved click-through will make progress and help the development of a robust, competitive market.

Decision 16-09-056 further recognized the competition and inherent tension between third-party providers and the Utilities, finding that ultimately, customers will decide what the role of the Utility should be in the future.<sup>17</sup> The Commission emphasized customer choice and competitive neutrality by encouraging “the use of fair competition between the Utilities and third-party providers...” While the Commission recognized the importance of Utility experience and years of ratepayer investments in Utility programs, the Commission also separated third-party provider and Utility roles in the demand response auction mechanism in order to “improve competition for third-party providers.”<sup>18</sup> Commission policy supports measures to improve competition for third-party demand response providers, and improving click-through beyond what was proposed in the Utility Advice Letters is consistent with this policy.

## **NOTICE**

Notice of PG&E Advice Letter (AL) 4992-E, SCE AL 3541-E and SDG&E 3030-E were made by publication in the Commission’s Daily Calendar on January 5 and 6, 2017. PG&E, SCE and SDG&E state that a copy of the Advice

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<sup>17</sup> *Id.* at 55-56.

<sup>18</sup> *Id.* at 56 and 70.

Letters were mailed and distributed in accordance with Section 4 of General Order 96-B.

## **PROTESTS**

PG&E AL 4992-E, SCE AL 3541-E, and SDG&E AL 3030-E were protested by the Joint Protesting Parties,<sup>19</sup> OhmConnect, Inc. (“OhmConnect”), Olivine, Inc. (“Olivine”), and UtilityAPI, Inc. (“UtilityAPI”) on January 23, 2017.

The Utilities filed replies to the protests on January 30, 2017.

The following Section provides details of the issues raised in the protests and other issues that need clarification.

## **DISCUSSION**

### **1. Alternative Authentication Credentials**

Decision 16-06-008 resolved the issue of authentication or verification in that it determined that the click-through authorization process sufficiently verifies the customer’s identity. The Commission stated that the click-through authorization process, “provides reasonable verification that the customer completed the form,” because of “the nature of the information requested, e.g., the service account number, address, and name demonstrates that the customer completed the form.”<sup>20</sup> This means that the identity of the customer has been authenticated or verified because of the type of information the customer is required to include in the form.

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<sup>19</sup> The Joint Protesting Parties include the Joint Demand Response Parties (Comverge, CPower, EnerNOC, and EnergyHub), the California Energy Efficiency Industry Council (now the California Efficiency and Demand Management Council), and Mission:Data Coalition. In comments to the Draft Resolution, the Joint Protesting Parties became the Joint Commenting Parties, where Comverge did not contribute and Olivine joined in contributing, instead of submitting separate comments.

<sup>20</sup> D.16-06-008 at 12 and footnote 20.

Both OAuth Solution 3 and API Solution 1 anticipate a system where the customer first enters some identifying information. The Utility then verifies the customer identity based on that information, and provides customer information to pre-populate data fields.<sup>21</sup> When the Utility provides this information, the customer is relieved of the work of finding all of their account information. This is consistent with the goals of the Decision to “streamline and simplify the direct participation enrollment process, including adding more automation, [and] mitigating enrollment fatigue.”<sup>22</sup>

While the D.16-06-008 determined that the click-through process verifies or authenticates the customer identity, the Decision did not resolve the issue of how much identifying information is needed before releasing the type of information that would be used to pre-populate the click-through authorization screen(s). SCE expressed concern about releasing data needed to pre-populate the authorization screen(s) because it could conflict with data minimization principles in Commission Privacy Rules. PG&E explained that it could only release this information once it verifies the customer, after the completion of the authorization process.<sup>23</sup> Among other reasons, Utilities expressed a preference for OAuth because it uses the customer login and password for the Utility account to pre-populate the authorization screens. The Utility login is viewed as more secure because the Utility has already verified the customer identity in order to establish the online account.<sup>24</sup>

Stakeholders however, advocated for alternative authentication credentials because the use of utility login and password presents a problem for many customer classes.<sup>25</sup> Requiring the use of utility login and password is

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<sup>21</sup> PG&E Advice Letter 4992-E at 4-5, SCE Advice Letter 3451-E at 4, SDG&E Advice Letter 3030-E at 3-4, and Informal Status Report at 1 (Attachment A to this Resolution).

<sup>22</sup> *Id.* at Ordering Paragraph 9.

<sup>23</sup> Click-Through Working Group Notes at 15-18, Part 3: September 13, 2016, available at: <http://www.cpuc.ca.gov/General.aspx?id=7032>.

<sup>24</sup> Click-Through Working Group Notes at 19-20, Part 2: August 24, 2018, available at: <http://www.cpuc.ca.gov/General.aspx?id=7032>.

<sup>25</sup> Informal Status Report at 4, 8, 10-11, 14 and Appendix E.

problematic for customers who do not have online accounts,<sup>26</sup> customers who have forgotten their login or password (or have trouble resetting it), and representatives of commercial customers who do not have access to the utility account on behalf of the company.<sup>27</sup> Many stakeholders preferred the use of static credentials such as the customer service account number and zip code,<sup>28</sup> while the Utilities asserted the need for these credentials to evolve as industry best practices evolve.<sup>29</sup>

The majority of the stakeholders agreed that the pieces of identifying information or credentials that the customer must enter in order to pre-populate and initiate the click-through authorization process should be limited to information that is easily available to the customer. The specific credentials may evolve over time as industry best practices evolve, but the credentials should be no more onerous than a similar online utility transaction.<sup>30</sup>

#### 1.1. Utility Click-Through Proposals for Alternative Authentication

Consistent with working group discussions, the Utilities agreed with the general principle that alternative authentication should be no more onerous than similar Utility processes.<sup>31</sup> PG&E noted that static fields such as name, address, and service account identification number are less secure than what PG&E requires currently. For some Utility transactions, PG&E requires last name, zip code, and

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<sup>26</sup> *Id.* at Page 10 citing Utilities Smart Grid Annual Reports, Metric #9 from October 2015 showing that over half of California ratepayers do not have online utility accounts.

<sup>27</sup> Joint Protesting Parties Protest at 13 explaining that the need for alternative authentication for commercial customers was discussed many times during the stakeholder process.

<sup>28</sup> Informal Status Report at 4, 8, 10-11, 14 and Appendix E.

<sup>29</sup> PG&E Advice Letter 4992-E at 11-12, SCE Advice Letter 3451-E at 9-10, SDG&E Advice Letter 3030-E at 5.

<sup>30</sup> *Id.* and Informal Status Report at 11 stating that the “authentication process must not require anything of the customer above and beyond what is needed to authenticate at a utility’s website directly.”

<sup>31</sup> PG&E Advice Letter 4992-E at 11-12, SCE Advice Letter 3451-E at 9-10, SDG&E Advice Letter 3030-E at 5.

the last four digits of a customer's social security number or tax identification number.<sup>32</sup> Initially, SCE stated that it would not allow for ongoing data transfer for customers who decline to create a My Account or use alternative authentication. Instead, SCE would "provide a one-time data transfer for the purposes of determining a customer's eligibility."<sup>33</sup> However, in reply comments, SCE re-examined the issue and determined that ongoing data will be provided with "guest" logins or alternative authentication credentials. SCE maintains its commitment to provide a summarized data set to facilitate a determination of eligibility.<sup>34</sup> Similarly, SDG&E agreed to provide ongoing data to the Demand Response Provider for customers that enter alternative authentication credentials. SDG&E proposed however, to provide alternative authentication credentials for residential customers only and not commercial customers so it could focus its efforts.<sup>35</sup> The credentials SDG&E proposes using include the ten-digit SDG&E bill account number, the zip code for the account service address, and the last four digits of the social security number or federal tax identification number.

## 1.2. Protests to Utility Proposals for Alternative Authentication

Olivine, OhmConnect, and the Joint Protesting Parties addressed alternative authentication credentials in their protests. Olivine believes that SCE should implement a solution that provides ongoing access to data when alternative credentials are used. Olivine states that SCE's proposal for a one-time data transfer may be relevant to some use cases, but it does not meet the requirements for Electric Rule 24/32 Direct Participation.<sup>36</sup> OhmConnect supports the general principle discussed in the working group that the click-through authorization process developed here should be no more onerous than similar utility transactions.<sup>37</sup> OhmConnect believes adopting this general principle will help to

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<sup>32</sup> PG&E Reply to Protests at 3-4.

<sup>33</sup> SCE Advice Letter 3451-E at 9-10.

<sup>34</sup> SCE Reply to Protests at 5.

<sup>35</sup> SDG&E Advice Letter 3030-E at 5 and Attachment A to the Advice Letter at 3-4.

<sup>36</sup> Olivine Protest to the Advice Letters at 2.

<sup>37</sup> OhmConnect Comments on Draft Resolution E-4868 (Draft Resolution) at 10.

achieve the demand response described in D.16-09-056<sup>38</sup> because this principle eliminates barriers to data access and supports market-driven demand response.<sup>39</sup>

The Joint Protesting Parties oppose the proposals of all three Utilities. During working group meetings, the Joint Protesting Parties agreed to prioritize OAuth Solution 3 with conditions. One condition included alternative credentials to verify customer identity as well as to finalize the authorization.<sup>40</sup> The Joint Protesting Parties oppose PG&E's refusal to use static credentials because many Utility programs only require the customer to enter the name, address and account number, which is less information than may be required under PG&E's proposal. The Joint Protesting Parties argue that to achieve a level playing field, all demand response programs should have parallel customer authentication requirements.<sup>41</sup> Like Olivine, the Joint Protesting Parties oppose SCE's refusal to allow ongoing data access with alternative credentials. Finally, the Joint Protesting Parties oppose SDG&E's proposal because it incorrectly assumes that commercial customers will be able to manage a single user name and single set of credentials. This issue was addressed many times throughout the stakeholder process and the Joint Protesting Parties believe that OAuth Solution 3 is not viable without alternative authentication for all customer classes.<sup>42</sup>

### 1.3. Discussion

It is reasonable to adopt an alternative authentication principle. The alternative authentication credentials shall be limited to information that is easily available to the customer and the specific credentials should be no more onerous than

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<sup>38</sup> See D.16-09-056 at 46 and Ordering Paragraph 8.

<sup>39</sup> OhmConnect Protest to the PG&E and SCE Advice Letters at 2-3, and OhmConnect Protest to the SDG&E Advice Letter at 2-3.

<sup>40</sup> Joint Protesting Parties Protest to the Advice Letters at 9.

<sup>41</sup> *Id.* at 10.

<sup>42</sup> *Id.* at 13.



those required for a similar online utility transaction.<sup>43</sup> Taking this approach removes the barrier of opening a utility account<sup>44</sup> consistent with the principles established in D.16-09-056, and the goal of reducing customer fatigue established in D.16-06-008.

We find however, that the use of social security numbers as suggested by PG&E and SDG&E to be unreasonable due to the burden placed on customers by being asked to provide such sensitive information. The social security number is a sensitive piece of information that many customers prefer not to enter because it is tied to other highly confidential processes, such as bank accounts, credit, and employment records. Further, not all ratepayers are eligible for social security numbers or federal tax identification numbers.<sup>45</sup> Thus, requiring customers to enter a social security number in order to share their data as part of the enrollment process would create additional barriers for joining third-party demand response programs. The alternative authentication credentials shall not include any part of the social security or federal tax identification number.

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<sup>43</sup> PG&E Advice Letter 4992-E at 11-12, SCE Advice Letter 3451-E at 9-10, SDG&E Advice Letter 3030-E at 5, Informal Status Report at 11, Joint Protesting Parties Protest to Advice Letters at 9-10, OhmConnect Protest to PG&E and SCE Advice Letters at 2-3, and OhmConnect Protest to SDG&E Advice Letter at 2-3.

<sup>44</sup> See Informal Status Report at Page 10 citing IOU's smart grid annual reports, Metric #9 from October 2015 showing that over half of California ratepayers do not have online utility accounts.

<sup>45</sup> See Robert Warren, *Democratizing Data about Unauthorized Residents in the United States: Estimates and Public-Use Data, 2010-2013*, 2 JMHS no. 4, available at: <http://cmsny.org/democratizing-data-about-unauthorized-residents-in-the-united-states-estimates-and-public-use-data-2010-to-2013/> (accessed July 8, 2017), showing that California has between 2.5 and 2.9 million undocumented immigrant residents.

See also U.S. DEPT. OF TREASURY, INTERNAL REVENUE SERVICE, PUB. 1915, UNDERSTANDING YOUR IRS INDIVIDUAL TAXPAYER IDENTIFICATION NUMBER, (Nov. 2014), available at: <https://www.irs.gov/pub/irs-pdf/p1915.pdf> (accessed July 8, 2017), showing that undocumented immigrants are ineligible for social security numbers and may apply to obtain an individual taxpayer identification number (ITIN), but only for the purposes of filing taxes.

We agree with the Joint Protesting Parties that the functionality of alternative authentication credentials must be available to all customer classes and must allow customers to authorize ongoing data to the third-party Demand Response Provider of their choice. Including this essential functionality in the click-through authorization process is consistent with the principles defined in D.16-09-056.

## 2. Dual Authorization

For partnering demand response providers, the ability for a customer to authorize two providers at once is critical to creating a streamlined authorization process.<sup>46</sup> In 2016, Olivine partnered with eight out of the nine providers that won demand response auction mechanism contracts.<sup>47</sup> Olivine provides CAISO Demand Response Provider services like registering customer service accounts and scheduling bids and settling in the market as described in Electric Rule 24/32. Olivine also provides other demand response services including forming bids, and customer facing demand response services.<sup>48</sup> Olivine typically partners with another Demand Response Provider that oversees customer contact such as education, marketing, and notification of events. In this scenario, both Olivine and the partnering provider need access to customer data. Providing an efficient method for the customer to authorize the Utility to simultaneously share their data with both providers creates efficiency for providers and their customers. The ability for the customer to authorize more than one provider in a single authorization is critical to such emerging business models.<sup>49</sup>

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<sup>46</sup> See Informal Status Report at Appendix E, describing functional requirements needed by third-party demand response providers.

<sup>47</sup> Informal Status Report at 14, footnote 7.

<sup>48</sup> OLIVINE, INC., *DRAM SERVICES*, available at: <http://olivineinc.com/dram/> (accessed on May 8, 2017), explaining the services Olivine provides to demand response providers participating in the demand response auction mechanism pilot.

<sup>49</sup> Olivine Protest at 2.

### 2.1. Utility Click-Through Proposals for Dual Authorization

Currently, PG&E and SDG&E provide dual authorizations in their paper CISR-DRP Request Forms while SCE requires customers to fill out two separate Request Forms.<sup>50</sup> PG&E has included dual authorization functionality on the paper forms since 2016 and plans on adding the functionality to the new click-through authorization process.<sup>51</sup> Similarly, SDG&E will provide dual authorization on both the online and paper authorization processes.<sup>52</sup>

In its advice letter, SCE stated it planned to include dual authorization in its online click-through authorization process, but not on its paper CISR-DRP Request Form. Further, SCE stated dual authorization would be limited to customers who use their Utility login and password, but not to customers who use the alternative authentication credentials described in Section 1.<sup>53</sup>

### 2.2. Protests to Utility Proposals for Dual Authorization

Olivine protested this issue, urging SCE to allow dual authorization for its on-line click-through authorization process and its paper CISR-DRP Request Form. Additionally, Olivine requested that click-through systems be designed to support “more than one” third-party authorization, not limiting the system to supporting the authorization of two demand response providers at a time. This could allow for future flexibility and the possibility of authorizing three or more Demand Response Providers in one action.<sup>54</sup> In response to Olivine’s protest, SCE changed its position and stated it will include dual authorization on both the online and paper authorizations on the condition that, (1) this functionality can roll out at the same time for both processes, and (2) SCE’s support for dual

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<sup>50</sup> Compare CISR-DRP Request Form, PG&E Electric Sample Form 79-1152 and SDG&E Electric Sample Form 144-0820 at 1, with SCE Electric Form 14-941 at 1. All three forms became effective January 1, 2016.

<sup>51</sup> PG&E Advice Letter 4992-E at 10.

<sup>52</sup> SDG&E Advice Letter 3030-E, Attachment A at 10.

<sup>53</sup> SCE Advice Letter 3541-E at 7.

<sup>54</sup> Olivine Protest at 2.

authorization on the CISR-DRP Request Form does not imply support for dual authorization for other types of customer request forms.<sup>55</sup>

### 2.3. Discussion

We find that dual authorization functionality is reasonable on the paper CISR-DRP Request Forms as well as on the online click-through authorization. Dual authorization shall be incorporated into OAuth Solution 3 and any future improvements to the click-through process(es). Further, dual authorization shall be available to both customers who complete the click-through authorization using Utility credentials or alternative authentication credentials. Dual authorization reduces customer fatigue and streamlines the process as intended in D.16-06-008 by allowing the customer to fill out one form or complete one online process to authorize two providers. Additionally, dual authorization removes the data access barrier of requiring a customer to fill out two forms described in the demand response principles in D.16-09-056.

We find reasonable SCE's request to delay implementation of dual authorization in the paper process until dual authorization for the online process has been developed. It is reasonable because SCE will be implementing dual authorization for the first time and may need additional time to change its internal processes. We make no determination about requirements for other customer information service request forms or the functionality preferred by SCE for those forms and processes. We also find that Olivine's suggestion of allowing for flexibility to potentially allow for more than two providers on one form is novel, however no information was provided to indicate that such functionality is needed. If the Utilities are able to include this functionality for future system flexibility at minimal additional cost, they are encouraged to do so, but should not delay implementation of the first phase of OAuth Solution 3.

### 3. Design: Number of Clicks/Screens

The working group discussed the number of screens a customer sees and the number of clicks a customer must execute in order to complete the authorization.

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<sup>55</sup> SCE Reply to Protests at 9-10.

The greater the number of screens and clicks, the greater the likelihood that the customer will quit the process. Many stakeholders advocated for limiting the number of screens to two and the number of clicks to four, while the Utilities emphasized that this would not be possible for all use cases.<sup>56</sup>

### 3.1. Utility Proposals for Number of Clicks/Screens

All three Utilities believe that limiting the number of screens to two is possible with one screen for authentication and one screen for authorization. The Utilities are incorporating this requirement into their plans.<sup>57</sup> However, SDG&E departed from that position slightly stating that authentication would include an additional screen, presenting customers with linked accounts and service addresses.<sup>58</sup> In response to protests, SDG&E decided to eliminate this step in the process, thereby removing any additional clicks or screens.<sup>59</sup>

Regarding the number of clicks needed, all three Utilities expressed a commitment to reducing the number of clicks. PG&E and SDG&E agree with stakeholders that the number of clicks should be minimized and four may be enough for the majority of use cases. There are cases however, where more clicks will be needed including additional authentication measures like a click box or “captcha,” where multiple service agreements exist and need to be unchecked, as well as when the customer needs to change options like the length of authorization.<sup>60</sup> SDG&E also mentioned that it would include an additional check box to finalize the authorization, which would result in an extra click.<sup>61</sup> In response to protests, SDG&E further reviewed its position and eliminated this extra click.<sup>62</sup> SCE explained in its Advice Letter that it is committed to

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<sup>56</sup> Informal Status Report at Appendix E.

<sup>57</sup> PG&E Advice Letter 4992-E at 10, SCE Advice Letter 3541-E at 7, and SDG&E Advice Letter at 3030-E at 5.

<sup>58</sup> SDG&E Advice Letter at 3030-E, Attachment A at 2.

<sup>59</sup> SDG&E Reply at 2.

<sup>60</sup> PG&E Advice Letter 4992-E at 11, and SDG&E Advice Letter at 3030-E at 5.

<sup>61</sup> SDG&E Advice Letter at 3030-E, Attachment A at 6.

<sup>62</sup> SDG&E Reply at 5.

minimizing the number of clicks and incorporating Demand Response Provider feedback, but it is too early to determine the number of clicks needed.<sup>63</sup> In response to protests, SCE explained that it would endeavor to limit the number of clicks to four for all use cases, but that may not be possible.<sup>64</sup>

Finally, in its Advice Letter, SDG&E describes the design of the customer authorization platform as, “a web page with a CISR-DRP form web application widget ‘mashed up’ into it.”<sup>65</sup> Many at the January 9, 2017 workshop understood this to mean that the CISR-DRP Request Form would be embedded in its entirety on a web page. In response to protests, SDG&E clarified that “form” and “mashed up” were technical terms of art and SDG&E’s solution will include summarized information and will not require customers to input text fields.<sup>66</sup>

### 3.2. Protests to Utility Proposals for Number of Clicks/Screens

Olivine, OhmConnect, and the Joint Protesting Parties protested this issue. Olivine argues that without design mock-ups, it is difficult for parties to judge the Utilities’ implementation plans. Olivine raises concerns about SDG&E’s “mashed up” widget embedded form, but believes PG&E and SCE solutions to be simplified and streamlined.<sup>67</sup> OhmConnect raises concerns that the Advice Letters failed to provide specific language or layouts for the solutions. OhmConnect also urges PG&E and SCE to commit to two screens.<sup>68</sup> OhmConnect opposes the additional screens and clicks in SDG&E’s solution.<sup>69</sup> Further, OhmConnect urges the Utilities to pre-populate all the elements of the click-through authorization so that customers can complete the process as quickly as possible.<sup>70</sup> The Joint Protesting Parties argue that the Utilities should limit the number of clicks to no more than four. The Joint Protesting Parties raise

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<sup>63</sup> SCE Advice Letter 3541-E at 9.

<sup>64</sup> SCE Reply at 9.

<sup>65</sup> SDG&E Advice Letter at 3030-E, Attachment A at 4.

<sup>66</sup> SDG&E Reply at 2-3.

<sup>67</sup> Olivine Protest at 5.

<sup>68</sup> OhmConnect Protest to PG&E and SCE at 3-4.

<sup>69</sup> OhmConnect Protest to SDG&E at 3 and 5.

<sup>70</sup> OhmConnect Protest to SCE and PG&E at 3; and OhmConnect Protest to SDG&E at 4-5.

concerns about SDG&E's solution because the idea of a form being incorporated into a webpage seems to contravene working group progress, and would not provide a customer friendly experience. A solution like this could lead to customers falling out of the authorization flow and becoming stranded on SDG&E's website.<sup>71</sup>

### 3.3. Discussion

We find the Utility proposals as clarified in the reply comments to be reasonable. Indeed, there seems to be a consensus on this issue, despite the protests. The concerns about the extra clicks or screens in SDG&E's solution and the need for a firmer commitment to minimizing clicks and screens from SCE were resolved in reply comments. In the Informal Status Report, the demand response providers and stakeholders describe the user experience in terms of the "quick path." There are many cases where a customer would need to use extra clicks or be directed to additional screens like forgetting a password to the Utility account. Because the parameters in the Informal Status Report indicate that the proposal to have four clicks maximum and two screens maximum only applies in the "quick path," we find the requirements in Appendix E of the report reasonable. We also find that minimizing clicks and screens is essential to creating a streamlined process as required by D.16-06-008. In their comments on the Draft Resolution, the Joint Commenting Parties request that the Commission further define the "quick path" in order to avoid doubt and ensure the timely implementation of OAuth Solution 3.<sup>72</sup> PG&E, SCE, and SDG&E shall ensure that in the "quick path," the click-through authorization OAuth Solution 3 can be completed with a maximum of four clicks and only two screens. The "quick path" shall be defined as a user flow in which the customer:

- (1) Was not already logged into the utility account;
- (2) Does not click the "forgot your password" link;
- (3) Does not initiate a new online Utility account registration;
- (4) Has a single service account, or intends to authorize all service accounts;
- (5) Accepts the default timeframe for authorization;

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<sup>71</sup> Joint Protesting Parties Protest at 13-14.

<sup>72</sup> Joint Commenting Parties Comments on Draft Resolution at 5-6.

- (6) Does not click to read the detailed terms and conditions; and
- (7) Uses either utility login credentials or alternative authentication.  
credentials.

Further, in all cases except for when the customer clicks the “forgot your password” link or initiates a new online Utility account registration, the click-through authorization process shall be completed in two screens.<sup>73</sup>

Regarding additional design concerns, we agree with the Joint Protesting Parties that there must be a clear path back to the authorization flow wherever possible<sup>74</sup> for cases where a customer somehow leaves the flow. For example, if a customer fails at resetting their password, a clear path should exist to begin the authorization process again. Finally, we agree with OhmConnect that the elements in the click-through process should be pre-populated to minimize customer fatigue and prevent drop off. PG&E, SCE, and SDG&E shall work with parties and any interested stakeholders to address these and any other design issues in the Customer Data Access Committee as described in Section 18 of this Resolution.

#### 4. Display of Terms and Conditions

The terms and conditions that will be displayed within the authorization screens include the legal language from the paper CISR-DRP Request Form.<sup>75</sup> During the working group process, a consensus was formed that the OAuth Solution 3 should have summarized terms and conditions information on the authentication and authorization screens. Reducing the formal legal language on the click-through authorization would likely reduce customer confusion and

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<sup>73</sup> *Id.*

<sup>74</sup> See SCE Comments on Draft Resolution at 4, and Appendix A at A-3. Further, if a question arises about whether a path back to the authorization flow is possible, parties should take the issue to the Customer Data Access Committee as described in Section 18.

<sup>75</sup> Such as the full list of data points that a customer will authorize the Utility to share with the Demand Response Provider, an explanation of the relationship between the provider and the customer, and a release of liability for the Utility.



fatigue.<sup>76</sup> Instead, the complete terms and conditions could be available through a link. During the working group, stakeholders expressed concern about the customer confusion that a scroll bar or pop-up tab could cause. For example, a scroll bar could be difficult to manage on a mobile device given the small screen space. A pop-out screen or tab could also be difficult to manage because many users may not know how to return to the authorization screen. These types of challenges would likely cause a customer to “drop off” or abandon the authorization.

#### 4.1. Utility Proposals for Display of Terms and Conditions

Each Utility takes a different approach. PG&E states it will provide a link to the terms and conditions. SCE does not commit to the exact design, but states SCE states it will provide a link to the full list of data points that customers will authorize. SDG&E will provide a link to the terms and conditions, but the authorization button will be greyed out or unusable until a customer clicks on the link.<sup>77</sup> No parties protested this issue.

#### 4.2. Discussion

We find that reducing the formal legal language and ensuring that the authorization screens are written in clear and concise language, is an effective way to reduce customer fatigue in accordance with D.16-06-008. While we decline to order a specific method for accessing the complete terms and conditions, we stress the importance of reducing the likelihood of customer abandonment resulting from user experience problems. We do however find that customer fatigue and abandonment is especially likely in the case of scroll bars and requiring customers to click on a link before approving the authorization.<sup>78</sup> Therefore, the terms and conditions shall be summarized, preferably, with a link to the full terms and conditions, and shall not make use of a scroll bar, or pop-out that the customer is required to view before approving

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<sup>76</sup> Informal Status Report, Appendix E at 2, Requirements for the User Experience points 8-9.

<sup>77</sup> PG&E Advice Letter 4992-E at 9-11, SCE Advice Letter 3541-E at 7, SDG&E Advice Letter 3030-E at 5 and SDG&E Reply at 3.

<sup>78</sup> Joint Commenting Parties Comments on Draft Resolution at 6-7.

the authorization. We encourage customers to be informed, but leave it up to the customer to decide whether they would like to read the full terms and conditions. Additionally, the Utilities shall provide a clear path back to the authorization screen after the customer has completed reading the terms and conditions. The display of terms and conditions shall accommodate positive customer experiences on both mobile and desktop devices. The Utilities shall work with parties and all interested stakeholders as part of the Customer Data Access Committee, described in further detail in Section 18, to ensure that the method for accessing the terms and conditions in OAuth Solution 3 or other solution avoids or minimizes customer fatigue. The Utilities shall incorporate stakeholder feedback.

## 5. Emphasis on Mobile Applications

### 5.1 Utility Proposals for Mobile Applications

PG&E and SCE explain that their OAuth Solution 3 will be compatible with mobile applications, but little detail is given. PG&E explains that the authentication and authorization process will be optimized for mobile devices and the design will be responsive to accommodate mobile applications.<sup>79</sup> Similarly, SCE explains that mobile access will be available for OAuth Solution 3 as it is for Green Button Connect.<sup>80</sup> As explained below in Section 18, PG&E proposes to invite stakeholders to focus groups to provide feedback on the issues of mobile design and others. SCE explained that it is “open to sharing content” with stakeholders. SDG&E did not specifically address mobile applications in its Advice Letter or Reply.

### 5.2 Protests to Utility Proposals for Mobile Applications

The Joint Protesting Parties, OhmConnect, and Olivine protested how OAuth Solution 3 will work on mobile devices. The Joint Protesting Parties objected to the lack of detail provided regarding the design of OAuth Solution 3 on mobile devices and requested that the Utilities file additional advice letters. The Joint

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<sup>79</sup> PG&E Advice Letter 4992-E at 9, and Appendix B.

<sup>80</sup> SCE Reply at 10.

Protesting Parties are concerned that the mobile user experience will not be streamlined and seamless, which could lead to many customers “dropping off” or failing to complete the authorization process. The Joint Protesting Parties believe that 65% of enrollments from residential customers are likely to be mobile users.<sup>81</sup>

OhmConnect and Olivine raise concerns that SDG&E’s solution will be unworkable on mobile devices because it would be structured like a “form” embedded onto a webpage.<sup>82</sup> Further, OhmConnect and the Joint Commenting Parties distinguish between websites that are “mobile capable” and websites that are “optimized” for mobile devices.<sup>83</sup>

### 5.3 Discussion

The existing PG&E ShareMyData and SCE Green Button platforms are mobile device capable;<sup>84</sup> however, customer fatigue in the authorization process was a principle impetus for the Commission to order the Utilities to develop the click-through authorization process.<sup>85</sup> While the existing platforms for customer authorization may be mobile capable, past customer experience does not indicate a seamless experience. We agree with OhmConnect, the Joint Protesting and Joint Commenting Parties.<sup>86</sup> Here we must distinguish between a process that is capable of being displayed on mobile devices, to a process that is optimized for mobile devices. Any website is capable of being displayed on a mobile device, even websites that merely display a smaller version of a full webpage where users must zoom in to read the text displayed. Therefore, without additional

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<sup>81</sup> Joint Protesting Parties Protest at 10-11.

<sup>82</sup> Olivine Protest at 3 and OhmConnect Protest to SDG&E at 5.

<sup>83</sup> OhmConnect Comments on the Draft Resolution at 8-9, and Joint Commenting Parties Comments on the Draft Resolution at 7.

<sup>84</sup> PG&E Advice Letter 4992-E at 8 and SCE Advice Letter 3541-E at 10.

<sup>85</sup> D.16-06-008 at Ordering Paragraph 1 and 9.

<sup>86</sup> OhmConnect Comments on the Draft Resolution at 8-9, and Joint Commenting Parties Comments on the Draft Resolution at 7.

design specifications, stakeholders remain uncertain about the requirements for mobile optimization.

The parties concern about the mobile user experience is reasonable. However, we decline to order additional changes through advice letter filings and instead establish the Customer Data Access Committee to address this issue as described in Section 18 of this Resolution. Focus groups and merely sharing content is not enough. The Committee will serve as a place for third-party providers and other interested parties to provide meaningful and timely input into the design, look, and feel of how the solution(s) integrate with mobile devices. The Utilities must optimize how the click-through authorization solution(s) perform on mobile devices. As a starting point, Utility click-through solution(s) shall “be visible and interactable above 600 pixels below the top of the screen (or similar as dimensions may change and screen height/width ratios change).”<sup>87</sup> Further, even when the text being displayed on the click-through authorization solution(s) fits within those 600 pixels, the solution(s) may not be “optimized.” For example, if the click-through process were displayed with a wall of text, customers may not be able to easily decipher how to proceed. The Utilities shall incorporate timely input from participants in the Customer Data Access Committee when determining if the solutions are sufficiently optimized for mobile devices.

## 6 Length of Authorization

Within the working group, demand response providers and other stakeholders proposed enhancements to streamline the customer options for the length of time that data will be provided from Utilities to third-parties. A key objective was to align authorization timeframes consistent with the programs offered by the demand response provider. Stakeholders proposed allowing demand response providers to pre-register with their preferences so that the customer can only choose from authorization timeframes actually offered. The customer would always retain the option to cancel the operation and not accept the authorization or revoke authorization at any time in the future.

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<sup>87</sup> Informal Status Report, Appendix E at 2.

### 6.1 Utility Proposals for Length of Authorization

PG&E and SCE took a similar approach, while SDG&E's approach is unclear. In their Advice Letters, PG&E and SCE agreed to the Demand Response Provider proposal and will allow the Demand Response Provider to pre-register and choose a minimum end date, a preferred end date, or indefinite.<sup>88</sup> However, in PG&E's comments on the Draft Resolution, it describes a completely new proposal, where at registration, Demand Response Providers will choose one timeframe to present to customers, either one, three, or five years, or indefinite.<sup>89</sup>

SDG&E's Advice Letter however, did not make it clear whether SDG&E would incorporate the indefinite option. SDG&E seems to be describing two different proposals. First, SDG&E explained that the current form allows an indefinite option, but only up to a maximum of three years. SDG&E then states that it would incorporate the Demand Response Provider proposal without indefinite timelines, "unless SDG&E determines that indefinite timelines best serve the customer."<sup>90</sup> Further SDG&E would add language to make it clear to the customer that they may revoke authorization at any time. In SDG&E's Reply, it points to Attachment A where indefinite timeline is included as an option, but only "if SDG&E determines it best serves the customer."<sup>91</sup>

Second, unlike SDG&E making a determination on which timeframe best suits the customer, SDG&E explained in detail an approach that seems to align with the approach discussed in working group meetings. SDG&E defined the following steps for specifying authorization time frames:

- "1) allow the [Demand Response Provider (DRP)] to specify a preferred end date (or indefinite timeline) on the CISR DRP, which will be pre-populated and presented to the customer as part of the customer's affirmative online choices and preferences;
- 2) allow the DRP to specify a minimum end date;

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<sup>88</sup> PG&E Advice Letter 4992-E at 13, SCE Advice Letter 3541-E at 10-11, and SCE Reply at 8.

<sup>89</sup> PG&E Comment on the Draft Resolution at 4.

<sup>90</sup> SDG&E Advice Letter 3030-E at 6.

<sup>91</sup> *Id.*, Attachment A at 5, and SDG&E Reply at 6.

- 3) allow the customer to choose only between the minimum date and any date after the minimum end date;
- 4) prohibit the customer from choosing an authorization period shorter than such minimum end date; and allow[sic] the DRP to revoke the authorization in addition to the customer.”<sup>92</sup>

## 6.2 Protests to Utility Proposals for Length of Authorization

Olivine, OhmConnect and the Joint Protesting Parties protested this issue. Olivine commends PG&E and SCE for supporting indefinite authorization timelines. Olivine is opposed to SDG&E’s position and notes that Rule 24/32 does not limit “indefinite” to a period of three years.<sup>93</sup> OhmConnect also supports PG&E and SCE’s approach and opposes SDG&E’s approach of determining what timeframe best suits the customer. However, OhmConnect does support SDG&E’s approach that seems to align with the approach discussed in working group meetings.<sup>94</sup> OhmConnect also clarifies that all components of the OAuth Solution 3 should be pre-populated, not only the length of authorization.<sup>95</sup> The Joint Protesting Parties believe the length of authorization must include the indefinite option because requesting that a customer renew annually or every three years would be onerous, especially compared to Utility programs where customers remain enrolled automatically.<sup>96</sup>

## 6.3 Discussion

The current CISR-DRP Request form allows the customer to enter the start and end date for the authorization timeframe that the Utility will release data to the third-party demand response provider.<sup>97</sup> SDG&E provided no explanation for why choosing an indefinite timeframe might not “best serve the customer.”

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<sup>92</sup> SDG&E Advice Letter 3030-E at 6.

<sup>93</sup> Olivine Protest at 2-3.

<sup>94</sup> OhmConnect Comment on the Draft Resolution at 5-6.

<sup>95</sup> OhmConnect Protest to PG&E and SCE at 3, and OhmConnect Protest to SDG&E at 4.

<sup>96</sup> Joint Protesting Parties Protest at 12-13.

<sup>97</sup> See Utility CISR-DRP Request Forms, § C. *Timeframe of Authorization* at 3 (79-1152 for PG&E, 14-941 for SCE, and 144-0820 for SDG&E).

SDG&E's approach of allowing "indefinite" authorization timeframe, but only up to three years was not explained and is inconsistent with the plain meaning of 'indefinite.'<sup>98</sup> We find that the customer, not SDG&E is in the best position to determine whether the length of authorization offered by the Demand Response Provider best suits their needs.

Further, we find that offering an indefinite timeframe removes barriers to customer data access and puts third-party demand response providers on a more level footing with Utility programs because customers do not have to renew authorization periodically. An indefinite timeframe also helps achieve the policy goals of increased customer choice, and showing a preference for third-party providers as described in D.16-09-056.

Therefore, we order all three Utilities to allow demand response providers to choose an indefinite timeframe for authorization to present to customers, both on the paper CISR-DRP Request Form and the electronic click-through solution(s). We find that SDG&E's description of the timeframe options described herein most coincide with the options discussed in the working group. All three Utilities shall allow demand response providers to pre-register or pre-select their preferred timeframe which may include a minimum end date and a preferred end date. Either end date can include a specification of an indefinite timeframe. PG&E shall provide the options described herein by Phase 3.

## 7 Notification After Completion of Authorization

### 7.1 Utility Proposals for Completion of Authorization

In its Advice Letter, SDG&E explained that customers and third-party demand response providers will be notified by a system generated email after completion of the click-through authorization process.<sup>99</sup> Additionally, SDG&E will send the Demand Response Provider an access token that includes information about the date and time of authorization, the provider authorized, the service account

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<sup>98</sup> Merriam-Webster defines "indefinite" as, "having no exact limits." Available at: <https://www.merriam-webster.com/dictionary/indefinite> (accessed July 8, 2017).

<sup>99</sup> SDG&E Advice Letter 3030-E, Attachment A at 8.

authorized, and the end date of authorization.<sup>100</sup> PG&E and SCE indicated that the customer would be redirected back to the third-party provider's website upon completion of the authorization.<sup>101</sup> Further, PG&E will send an authorization code and an access token/refresh token pair when the authorization is complete or an error code if the customer declines to authorize.<sup>102</sup> Finally, SCE stated in its reply that demand response providers will be notified with a system generated email.<sup>103</sup>

## 7.2 Protests to Utility Proposals for Completion of Authorization

In its protest, OhmConnect requested that PG&E and SCE explain how the demand response providers will be notified of successful completion of the click-through authorization process. OhmConnect also requested notification if customers have made changes to the authorization preferences including the length of authorization.<sup>104</sup>

## 7.3 Discussion

Third-party demand response providers shall be notified after the successful completion of authorization, and if any changes are later made to the parameters of the authorization. However, accepting three different forms of notification of successful authorizations could be confusing and burdensome for the demand response providers. Therefore, to ensure consistency among the Utilities and to allow for efficient third-party Demand Response Provider operations, we order PG&E to send a system generated email to demand response providers in addition to the authorization code and token or refresh code.

Additionally, we find reasonable SDG&E's proposal to send system generated emails to the customer after completion of the authorization. Throughout the

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<sup>100</sup> SDG&E Reply at 5.

<sup>101</sup> PG&E Advice Letter 4992-E at 4, and SCE Advice Letter 3541-E at 4.

<sup>102</sup> PG&E Reply at 10, and Attachment A at 1.

<sup>103</sup> SCE Reply at 1.

<sup>104</sup> OhmConnect Protest to PG&E and SCE at 4.



Advice Letters, all three Utilities expressed concern about compliance with Commission Privacy Rules, and protection of customer data from potential cybersecurity threats, fraud and abuse.<sup>105</sup> However, only SDG&E proposed to send an email notification to the customer once the authorization is received by the Utility.<sup>106</sup> A system generated email serves the purpose of preventing errors, fraud, or security threats. The customer is notified of the change to the use of their data and can contact the utility if the customer did not themselves complete the authorization or if the authorization was completed in error. The customer should not be required to respond to the email as part of the authentication process unless a similar utility transaction requires this type of verification as described in Section 1 of this Resolution.

Therefore, we order PG&E and SCE to send an automatically generated electronic notification such as email, to the customer and to the third-party demand response provider(s) after successful completion of the authorization process. Further, a system generated email shall also be sent to both the demand response provider(s) and the customer, if the parameters of the authorization are modified later. Note however, that the third-party Demand Response Provider is not relieved of its notification obligations under Rule 24, especially the Commission approved Customer Notification Letter described in § C.7.

## 8 Revocation

No party protested the issue of revocation; however, clarification is needed regarding where revocation must occur and whether the third-party Demand Response Provider may revoke authorization. Commission Privacy Rules § 6(e)(2) require a customer be able to revoke an authorization at any time. Indeed, Rule 24/32 puts the responsibility of providing a means to revoke on the Utility.<sup>107</sup> In the event a demand response program is canceled, the third-party

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<sup>105</sup> PG&E Advice Letter 4992-E at 16-17, SCE Advice Letter 3451-E at 18-19, SDG&E Advice Letter 3030-E at 8, Informal Status Report at 11

<sup>106</sup> SDG&E Advice Letter 3030-E, Attachment A at 8.

<sup>107</sup> These rules are repeated in each Utility's privacy rules – Electric Rule 25 for SCE, Rule 27 for PG&E and Rule 33 for SDG&E.

demand response providers must notify customers “that they should contact [the Utility] to revoke the authorization for the non-Utility [demand response provider] to receive their usage data.”<sup>108</sup> Rule 24/32 is silent on any further responsibility of the third-party provider to assist the customer in revoking the authorization. While the Utility must provide the customer with the means to revoke authorization, Rule 24/32 does not specify whether this must be available in an online format like the click-through authorization process.

Clarification is also needed regarding whether the third-party Demand Response Provider may revoke authorization. As part of the two solutions, demand response providers and other stakeholders proposed that a provider be able to stop receiving customer data.<sup>109</sup> Among other reasons, a provider may not want to take on any liability associated with receiving confidential data for a customer who no longer receives demand response services. The current paper CISR-DRP Request Form requires that customers pre-authorize a Demand Response Provider to have the ability to revoke their authorization.<sup>110</sup> This becomes a burden because a Demand Response Provider may not be able to reach the customer, and are obligated to continue receiving their data.

### 8.1 Utility Proposals for Revocation

PG&E and SDG&E take similar approaches and have planned for revocation through existing infrastructure, while SCE does not provide for customer revocation on the Utility website. PG&E plans on allowing demand response providers to revoke through a portal on ShareMyData, PG&E’s Green Button platform.<sup>111</sup> Customer will be able to revoke authorization through the online MyAccount portal, where they could also manage and even extend the

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<sup>108</sup> PG&E Electric Rule 24 § G.3.d.

<sup>109</sup> PG&E Advice Letter 4992-E at 13.

<sup>110</sup> PG&E Advice Letter 4992-E at 12 and PG&E Customer Information Service Request form for Demand Response Provider Demand Response Provider (CISR-DRP), Electric Sample Form 79-1152 Effective January 1, 2016 at 4.

<sup>111</sup> PG&E Advice Letter 4992-E at 9, 12-13, 18 and Appendix B.

timeframe of an authorization.<sup>112</sup> Similarly, SDG&E provides for customer revocation on the current Customer Authorization Platform, its Green Button platform, where customers will also be able to manage their authorizations.<sup>113</sup> SDG&E will further provide a method for customers to revoke authorization through the click-through OAuth Solution 3. A customer will be able to access the click-through process through the demand response provider's website. The system will recognize that the customer has already completed an authorization and then presents the customer with the ability to revoke authorization or manage the authorization. SDG&E will also provide for Demand Response Provider revocation. Finally, SCE provides for either customer or demand response providers to revoke authorization. Demand response providers can revoke using the Green Button Connect platform, but customers may only revoke authorization on the demand response providers' website.<sup>114</sup>

## 8.2 Discussion

We find that SDG&E's approach is reasonable because customers will have the option of easily revoking authorization through their online Utility account or through OAuth Solution 3. This effectively streamlines the authorization process as directed by the Commission in D.16-06-008 and provides for additional customer choice as emphasized in D.16-09-056. For example, if a customer would like to choose a different provider, or re-enroll in a Utility program, the customer will be able to revoke their authorization in a variety of ways. We encourage PG&E and SCE to follow SDG&E's model and include revocation as an option in the click-through OAuth Solution 3 in subsequent phases of click-through implementation. We order all three Utilities to provide for customer revocation through existing infrastructure, the Utility MyAccount and/or the Utility Green Button platform. If additional funding is needed, the Utilities shall request funds for this improvement as described in Section 19 of this Resolution.

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<sup>112</sup> PG&E Reply, Attachment A at 3.

<sup>113</sup> SDG&E Advice Letter Attachment A at 4, and 9-10.

<sup>114</sup> SCE Advice Letter 3451-E at 15.

Further, any third-party Demand Response Provider that makes use of OAuth Solution 3 or API Solution 1, shall provide their customers with a link to the Utility Green Button platform or MyAccount revocation section and instructions on how to revoke online with the Utility. The customer starts the click-through authorization process online with the third-party demand response provider, so it follows that the customer should be able to learn how to revoke authorization on the providers' website. The instructions shall be subject to Energy Division review because ensuring clear communication to the customer about revocation is a customer protection issue within the authority and jurisdiction of the Commission.

Finally, we conclude that third-party demand response providers should be able to revoke authorization both online and on the paper CISR-DRP Request Form. Any changes needed to Rule 24/32 or the CISR-DRP Request Form to allow Demand Response Provider revocation shall be filed in a Tier 2 Advice letter no later than 45 days after the adoption of this Resolution.

## 9 Other Technical Features Protested by Parties

OhmConnect addressed several additional technical issues and requests for added functionality in its protest. Additionally, the Joint Commenting Parties addressed the issue of compliance with the OAuth 2.0 standard in their comments on the Draft Resolution. Some of these issues are addressed throughout the resolution. Here, we discuss issues that PG&E addressed in its reply. The other two Utilities did not address the following issues.

*Directing the Authentication Flow:* OhmConnect requests the ability to present its customers with only one authentication option, to enter Utility credentials, and not alternative credentials.<sup>115</sup> PG&E opposes limiting customers' choices and notes that this issue was not brought up in the working group.<sup>116</sup> We agree that this issue was not explored in the working group and therefore additional work would be needed to determine the need and feasibility of this option.

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<sup>115</sup> OhmConnect SDG&E Protest at 5-6, and OhmConnect Protest to PG&E and SCE at 4.

<sup>116</sup> PG&E Reply, Attachment A at 2.

Stakeholders should raise this issue in the Customer Data Access Committee (CDAC) established herein.

*Exiting the Authorization and the OAuth 2.0 Standard:* OhmConnect asks how a customer exits the authorization flow if they do not wish to continue with the authorization.<sup>117</sup> The Joint Commenting Parties recommend that the Utilities follow the OAuth 2.0 standard in implementing alternative authentication and where customers exit the authorization flow.<sup>118</sup> In OAuth 2.0, a user is redirected to a designated URL whenever there is: (1) an error; (2) a declination by the user; or (3) a reauthorization.<sup>119</sup> PG&E plans on using a cancel button and will notify the Demand Response Provider with an error message.<sup>120</sup> PG&E's approach is reasonable, but in addition to the Demand Response Provider receiving a notification, the customer should be re-directed to the provider's website as specified in the OAuth 2.0 standard. The Utilities shall adhere to the OAuth 2.0 standard or subsequent standard agreed upon by the Customer Data Access Committee. This will provide all parties with a standard approach which will allow third-party Demand Response Providers to more efficiently utilize the click-through authorization process. If further clarification is needed, stakeholders should raise this issue in the CDAC.

*Refresh tokens for errors or updates:* OhmConnect suggests using refresh tokens to address data errors, revisions, or updates in customer information.<sup>121</sup> PG&E did not address this issue in its reply. If this functionality has not been built into OAuth Solution 3, stakeholders should raise this issue in the CDAC.

*Re-authorization:* OhmConnect asks what happens when a customer re-authorizes the same Demand Response Provider or authorizes one and then another.<sup>122</sup> PG&E explains in its response that it can explore solutions for this scenario, especially where a customer authorizes one Demand Response Provider twice

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<sup>117</sup> OhmConnect Protest to PG&E and SCE at 4-5.

<sup>118</sup> Joint Commenting Parties comments on the Draft Resolution at 5 and 9.

<sup>119</sup> *Id.* at 9.

<sup>120</sup> PG&E Reply, Attachment A at 2.

<sup>121</sup> OhmConnect SDG&E Protest at 7, and OhmConnect Protest to PG&E and SCE at 6.

<sup>122</sup> OhmConnect Protest to PG&E and SCE at 7.

with different service accounts selected each time.<sup>123</sup> We recognize that many different scenarios were not explored. Online solutions like the click-through are dynamic and future improvements may be needed. Therefore, it is appropriate for the CDAC to address these issues and recommend any further improvements in a subsequent Advice Letter filing(s).

*Individually Customizing the Length of Authorization:* Finally, OhmConnect requested the ability to change the length of authorization parameters for any particular customer.<sup>124</sup> PG&E shall provide this functionality by Phase 2.<sup>125</sup> A Demand Response Provider would be able to update the timeframe of authorization and then send a customer a link to update its individual authorization.<sup>126</sup> This functionality is useful. SCE and SDG&E shall develop a similar feature by Phase 3. If additional funding is needed, SCE & SDG&E may file a Tier 3 Advice Letter as described in Section 19.

#### 10 Expansion of the Rule 24/32 Data Set

The amount and type of data that the Utility provides to the third-party Demand Response Provider gets to the heart of the click-through authorization process. More often than not, the Utility is the Meter Data Management Agent (MDMA) that receives the data from customers' meters, then collects, stores, and manages the data. The Utility then uses the data to provide a number of services to the customer including, sometimes, demand response services. The third-party demand response providers also need this data to provide demand response services to customers.

The tension here is the amount and type of customer's data that the Utility should provide to the third-party Demand Response Provider. Throughout the click-through working group meetings, third-party providers expressed the need for a wider range of data points. In the original proposal for Solution 1 and 3,

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<sup>123</sup> PG&E Replay, Attachment A at 3, and PG&E Comments on the Draft Resolution at 4.

<sup>124</sup> OhmConnect Protest to PG&E and SCE at 7.

<sup>125</sup> PG&E Reply, Attachment A at 4; and PG&E Comment on the Draft Resolution at 4 and Appendix B.

<sup>126</sup> *Id.*

third-party providers include list of the data points they believe constitute a “Full Data Set.”<sup>127</sup> Demand Response Providers need a full data set in order to bid customer’s load drop into the wholesale market, as well as in order to run effective demand response programs. PG&E and SCE have agreed to provide most of the specific data points, while SDG&E objects to providing any additional data beyond what is currently provided.

#### 10.1 PG&E and SCE Proposals for the Expanded Rule 24/32 Data Set

PG&E proposed to provide many of the additional data points in the “Full Data Set,” except for PDF copies of bills and the Customer Class Indicator.<sup>128</sup> PG&E explained in its reply that providing PDF bills would disclose information that is not needed like gas data, or not authorized like payment information. Payment information may not be authorized for all service accounts. This could occur where a commercial customer enrolls in a demand response program for one site, and the customer representative has the authority to enroll in a demand response program for a number of service accounts, but may not have the authority to disclose payment information used with multiple accounts. PG&E further explained in its reply that it does not currently store the Customer Class Indicator data point, however with the information that is already provided to third-parties, those numbers can be calculated.<sup>129</sup>

SCE took a very similar approach, however the data points that it prefers not to release are slightly different. SCE will provide all of the data requested by third-party demand response providers, except the number of meters per account, the standby rate, and PDF copies of the bill. Like PG&E, SCE objects to providing PDF copies of the bill because it includes customer payment information. SCE prefers not to provide the standby rate as a separate data point. This information is included in the service tariff data because the standby rate is marked with an “S” in the tariff schedule such as TOU-8-S or TOU-8-RTP-S. Finally, providing

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<sup>127</sup> Informal Status Report at Appendix B, the original PowerPoint presentation that describes the proposed solutions as well as the “Rule 24 Data Set” or “Full Data Set.”

<sup>128</sup> PG&E Advice Letter 4992-E at 14-15 and Appendix C, Footnote 5 and 6.

<sup>129</sup> PG&E Reply at 7-9.

the number of meters per account would be costly because that information is not typically stored.<sup>130</sup>

## 10.2 SDG&E Proposal for the Expanded Rule 24/32 Data Set

Unlike PG&E and SCE, SDG&E objected to providing any additional data points beyond what is currently released under Rule 24/32.<sup>131</sup> In its Advice Letter, SDG&E cited privacy and cost concerns, questioning whether the requested expanded data set is necessary to support demand response direct participation. Further, SDG&E believes that third-party demand response providers should obtain the requested data on their own, and not at a cost to the ratepayers. Finally, SDG&E urged the Commission to consider the “wider implications” of providing an expanded data set.<sup>132</sup>

SDG&E offered additional clarification in its reply, objecting to providing the data at a cost to the ratepayer and questioning the process by which the Commission could approve an expanded data set.<sup>133</sup> SDG&E believes the issue should be considered in a broader forum with other distributed energy resource providers and other interested stakeholders. While SDG&E understands the principle described in Decision 16-09-056 of “eliminating barriers to data access,” it points out that that decision did not define any data fields. Further, SDG&E believes the data set permitted under Rule 24/32 is limited to only “customer usage data” because prior decisions drew a line around what IOUs should provide at ratepayer expense. SDG&E objects to enabling demand response provider’s business practices at a cost to the ratepayer, because it believes that data is available from other sources. SDG&E suggests that demand response providers may already have access to IOU program information and other data that the Utility has.

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<sup>130</sup> SCE Advice Letter 3541 at 11-12 and Appendix A.

<sup>131</sup> See Attachment A to this Resolution, showing the current and expanded data sets for PG&E and SCE. The current Rule 24 data varies slightly between PG&E and SCE.

<sup>132</sup> SDG&E Advice Letter 3030-E at 8.

<sup>133</sup> SDG&E Reply at 6-7.



Finally, SDG&E gave two examples of specific data points that raise concerns – PDF bills and data not related to demand response. First, like PG&E and SCE, SDG&E was concerned that PDF bills contain sensitive information.<sup>134</sup> SDG&E pointed out that PDF bills contain data that customers may not realize is there including on-bill financing. Second, SDG&E noted that PDF bills could include data about other rebates, program enrollments and other activity that does not relate to demand response.

### 10.3 Protests to Utility Proposals for the Expanded Rule 24/32 Data Set

Olivine, OhmConnect, the Joint Protesting Parties, and UtilityAPI protested the issue of the expanded data set, with the majority of the protests addressing SDG&E. Olivine was pleased that PG&E and SCE have agreed to expand the data set, but finds that SDG&E's position is troubling.<sup>135</sup> Olivine mentions SDG&E's position expressed in the working group meetings that data beyond what is currently provided is proprietary and third-parties should acquire the data from other sources. UtilityAPI believes that all three Utilities should provide the same data set to meet the UtilityAPI Guiding Principles.<sup>136</sup>

OhmConnect believes that providing an expanded data set helps achieve the Commission goal of “enable[ing] customers to meet their energy needs at a reduced cost,” as well as the principles of “provid[ing] demand response through a service provider of their choice” and “eliminating barriers to data access.”<sup>137</sup> OhmConnect believes that SDG&E failed to explain what data points it believes are “reasonably necessary” to support demand response direct participation. OhmConnect believes the IOUs should release data that is: (1) necessary for direct participation (wholesale market integration), (2) necessary for essential DRP business practices, and (3) recommended for providing a successful customer experience. Appendix A in OhmConnect's

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<sup>134</sup> *Id.* at 7.

<sup>135</sup> Olivine Protest at 3-5.

<sup>136</sup> UtilityAPI Protest at 5-6. *See also* Section 15 discussing the UtilityAPI Guiding Principles.

<sup>137</sup> OhmConnect Protest to SDG&E at 6 and Appendix A.

protest lists the data that it believes is necessary or recommended to run a successful DR program.

Lastly, the Joint Protesting Parties believe that the ability to easily share data would effectively utilize Advance Metering Infrastructure that ratepayers have invested in.<sup>138</sup> The Joint Protesting Parties disagree with SDG&E's position that the demand response providers should get the data from the customers because it misses the point of the development of the click-through authorization process – to reduce customer “friction.” The Joint Protesting Parties believe that the cost of expanding the data set is minute compared to SDG&E's total budget of \$4.9 million. Finally, the Joint Commenting Parties noted that the Utilities currently provide data beyond the statutorily required “usage data” to customers through the Green Button Connect infrastructure.<sup>139</sup> Therefore, the Resolution should affirm that “usage data” means “usage and related information necessary for increasing customer participation in EE or DR.”<sup>140</sup>

#### 10.4 Discussion

We find that the benefits of increasing customer choice and providing successful customer experiences outweigh the likely minor costs of releasing an expanded data set. We find that an expanded data set<sup>141</sup> is needed to run effective demand response programs and not easily available elsewhere. Further, providing the expanded data set is within the scope of the Rule 24/32 Application 14-06-001 et. al. and subsequent implementation.

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<sup>138</sup> Joint Protesting Parties Protest at 7-9.

<sup>139</sup> Public Utilities Code § 8380(a) defining, “‘electrical or gas consumption data’ [as] data about a customer’s electrical or natural gas usage...”

<sup>140</sup> Joint Commenting Parties Comments on the Draft Resolution at 9-10.

<sup>141</sup> The expanded data set includes the “Full Data Set” described in the Informal Status Report at Appendix B, as well as the data sets described in the PG&E and SCE Advice Letters. Attachment 1 to this Resolution reproduces the data sets proposed by PG&E and SCE. The expanded data set excludes PDF copies of the bill, payment information, data that is not typically stored, and data relating to gas service.

We approve PG&E's and SCE's proposed expanded data sets because it will facilitate increased third-party Demand Response Provider participation in the market. We find it reasonable to exclude PDF copies of the bill, payment information, data that is not typically stored, and data relating to gas service. However, in their comments on the Draft Resolution, OhmConnect explained that the ability to determine whether a customer is residential or commercial is necessary in order to comply with the rules set out in D.16-09-056 and Resolution E-4838 for the treatment of prohibited resources, as well as complying with Demand Response Auction Mechanism agreements.<sup>142</sup> We find this approach reasonable. Even if third-parties are able to perform calculations to determine the customer class, they should not be required to guess. Further, complying with rules regarding prohibited resources will reduce greenhouse gas emissions. All three Utilities must include the Customer Class Indicator in the expanded data set. If PG&E or SDG&E need additional funding, they may file a Tier 3 Advice Letter as described in Section 19.

Since PG&E and SCE agree to provide an expanded data set, we primarily discuss SDG&E's approach here. We order SDG&E to deliver an expanded data set, on an ongoing basis to third-party demand response providers after a customer provides their consent using the click-through authorization process. The data set SDG&E shall deliver to the third-party Demand Response Provider is described in Attachment 1. Like PG&E and SCE, SDG&E will not be required to deliver historical PDF copies of bills, or payment information. If SDG&E needs additional funding, it shall file a Tier 3 Advice Letter. Otherwise, SDG&E may use the \$173,000 listed in its Advice Letter to expand the data set.<sup>143</sup> If SDG&E needs to deviate from the data set in Attachment 1, it shall file a Tier 2 Advice Letter. The Commission will only consider excluding data that is not typically stored or data relating to gas service. However, all three Utilities must include the Customer Class Indicator in the expanded data set.

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<sup>142</sup> OhmConnect Comments on the Draft Resolution at 4-5.

<sup>143</sup> SDG&E Advice Letter 3030-E at 8.

*Customer Interest in Their Own Data.* SDG&E staff participating via phone at a January 9, 2017 workshop said that data beyond “customer usage data”<sup>144</sup> is proprietary.<sup>145</sup> SDG&E suggests that the Utility, not the customer, owns data beyond customer usage data. This position ignores the customer’s own interest in their energy related data.

In comments on the Draft Resolution, all three Utilities expressed concern about how the Draft Resolution defined the Utility and customer interest in data by finding that only the customer has a proprietary interest in their data because of the Public Utilities Code § 8380 (“the statute”) prohibition on the sale of data.<sup>146</sup> We do not define interests here or exclude the Utility from having an interest(s) in customer data, but we do recognize that the customer has an interest in their own data. Releasing only “usage data” could limit the customer’s interest in accessing and determining to whom their energy-related data should be disclosed.<sup>147</sup>

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<sup>144</sup> “Customer usage data” or “consumption data” refers to data about a customer’s energy usage that comes from the meter and does not include information like tariff schedules, other Utility program information, billing data, or location data. See Public Utilities Code § 8380(a), Stats. 2011, Ch. 255, Sec. 3, defining “consumption data” as “data about a customer’s electrical or natural gas usage that is made available as part of an advanced metering infrastructure.” See also Commission Privacy Rules § 1(b) defining “covered information” as “electrical or gas usage information.”

<sup>145</sup> See Olivine Protest at 4, and the Joint Protesting Parties Protest at 9.

<sup>146</sup> All three Utilities oppose the Draft Resolution’s conclusions about proprietary interests and believe that the issue of ownership is not in scope of this proceeding. See SCE Comments on the Draft Resolution at 6-10, distinguishing between different types of property interests and requesting that the Commission remove all language that implies that only the customer has a legal interest in their data; SDG&E Comments on the Draft Resolution at 3-4, defining property interests in customer data that are not related to the sale of data; and PG&E Comments on the Draft Resolution at 5-6, stating that Utility data about their customers are intangible Utility assets.

<sup>147</sup> See SCE Comments on the Draft Resolution at 7, describing bundled rights of “integrity, use, disclosure, copy, access, transmission, and transfer;” associating privacy rights with the right to determine to whom the information is disclosed; and stating that Public Utilities Code § 8380 and Commission Privacy Rules “create rights for the customer, or data subject.” See also SCE Comments on the Draft Resolution at 9

As part of Smart Grid Proceeding, Decisions 11-07-056 and 12-08-045 adopted the Commission Privacy Rules creating the current framework for the protection of customer data.<sup>148</sup> These rules, including the requirement that the Utilities receive authorization from a customer before releasing data<sup>149</sup> were developed because of the legislative directive in the statute. In addition to requiring customer consent to release data, the statute makes clear that the Utility “shall not share, disclose, or otherwise make accessible to any third party **a customer’s electrical or gas consumption data**” (emphasis added).<sup>150</sup> The grammatical placement of “a customer’s” in the statute tends to imply that the customer, has an interest in their energy-related data.<sup>151</sup>

While the statute refers to “consumption data,” and not “all data identified with a customer,” it does not support a determination that the Utility is not required to make available to the customer, data other than consumption data. Because of the customer’s interest in their own data, the Utility should make available to the customer data beyond “consumption” or “usage data.”<sup>152</sup>

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explaining that Public Utilities Code § 8380 and Commission Privacy Rules “legally recognize that customers have an interest in data about themselves;” “were meant to create privacy rights for the customer;” and “the customer has an interest in protecting his/her energy-related data.” Taken together, SCE’s comments define the customer interest as a privacy right which includes the right to access, protect, and determine to whom their energy-related data should be disclosed.

<sup>148</sup> The Commission Privacy Rules are repeated in each Utility’s privacy rules – Electric Rule 25 for SCE, Rule 27 for PG&E and Rule 33 for SDG&E.

<sup>149</sup> Commission Privacy Rules § 4(c)(4) requires the “consent of the customer, where the consent is express, in written form, and specific to the purpose and to the person or entity seeking the information,” prior to releasing customer data to a third-party for a secondary purpose. Public Utilities Code § 8380(b)(1) allows the Utility to disclose a customer’s data only “upon consent of the customer.”

<sup>150</sup> Public Utilities Code § 8380(b)(1).

<sup>151</sup> See SCE Comments on the Draft Resolution at 9, explaining that “it would be correct for the draft resolution to say that the term “customer’s” in the statute tends to imply that the customer has an interest in protecting his/her energy-related data.”

<sup>152</sup> The terms “consumption data” and “usage data” are used interchangeably.

*Data Beyond “Customer Usage Data” and Data Needed for Direct Participation.*

SDG&E’s Advice Letter and Reply imply that the only data that SDG&E must provide to third-party demand response providers under SDG&E Rule 32 is “customer usage data.”<sup>153</sup> SDG&E asserts that the issue was already litigated, and therefore SDG&E should not be required to release additional data points. SDG&E notes that D.16-09-056 does not “specifically set forth the data fields which a utility should or must provide” despite requiring that Utilities eliminate barriers to data access. Further, SDG&E believes it should only provide data that is specifically needed to “bid ... products into the CAISO market.”<sup>154</sup> Olivine, UtilityAPI, the Joint Protesting Parties, and OhmConnect objected to SDG&E’s narrow definition of the purposes for which customer data is needed.

We find that Rule 24/32 already requires the Utilities to release data beyond “customer usage data.” Currently, Rule 24/32 requires numerous data points beyond “usage” data to be released and defines the data that should be released as “confidential customer-specific information and usage data.”<sup>155</sup> Rule 24/32 Sections D.1.a. and D.1.b. require the release of DR programs and tariff schedules, customer service account information, a Unique Customer Identifier, the Meter read cycle letter, and six to twelve months of customer billing data. Rule 24/32 data therefore includes both customer energy “usage data” and other energy related data that can be identified with customer.

The fact that Rule 24/32 has already been litigated should not deter further improvements in the click through authorization process, especially given the Commission finding that “the direct participation enrollment process is an evolving one that can and should be improved.”<sup>156</sup> D.16-06-008 ordered parties and stakeholders to work together to develop a click through authorization

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<sup>153</sup> See SDG&E Reply at 7, adding emphasis to and labelling customer data as “Customer **Usage** Data.”

<sup>154</sup> SDG&E Reply at 7.

<sup>155</sup> SDG&E ignores Rule 24/32 text directly under the heading “Access to Customer Usage Data” in Section D.1.

<sup>156</sup> D.16-06-008 at 25 and Finding of Fact 27.

consensus proposal and advice letter that that would “streamline and simplify the direct participation enrollment process, including adding more automation, mitigating enrollment fatigue, and resolving any remaining electronic signature issues.”<sup>157</sup> Expanding the data set is an example of how the direct participation process can evolve. Additionally, it relates to data delivery, which adds more automation. Therefore, we find that expanding the data set is within the scope of the click-through Advice Letters and the Customer Data Access Committee that is ordered in this Resolution. We acknowledge SDG&E’s assertion that data access should be discussed in a broader forum however, progress must first be made for demand response use cases before the solution(s) can be expanded to other distributed energy resource and energy management providers. This issue is explored further in Section 15.

SDG&E correctly points out that the Commission did not list data points that must be included in the expanded data set in D.16-09-056. However, that Decision did not address many implementation details: that was left to the working group and advice letter process. The click through working group was the process that allowed stakeholders the opportunity to develop these technical details. Therefore, we find that the adopted principle of “eliminating barriers to data access” necessitates an expanded data set.

The expanded data set provides customer specific energy-related data needed for: (1) direct participation integration into the wholesale market; (2) essential Demand Response Provider business practices; and (3) a successful customer experience.<sup>158</sup> Third-party Demand Response Providers do more than bid demand response into the market; they offer customer oriented programs. Therefore, this additional data is needed to support the customer experience.

*Availability of the Data Elsewhere and the Cost of the Expanded Data Set.* SDG&E argues that third-party demand response providers should obtain the data from other sources such as directly from the customers, and not at the expense of

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<sup>157</sup> *Id.* at Ordering Paragraph 9.

<sup>158</sup> OhmConnect Protest to SDG&E at 6 and Appendix A of the Protest.

ratepayers.<sup>159</sup> We find this notion unreasonable and burdensome. This arrangement would be contrary to the purpose of the Commission directive to “streamline and simplify the direct participation enrollment process, including adding more automation....”<sup>160</sup> We agree with the Joint Protesting Parties that SDG&E has missed the point. Customers could provide third-parties with incorrect information. If customers have to provide this information, or provide information multiple times due to errors, they may become fatigued and decide not to enroll in the third-party program. Further, SDG&E seems to suggest that the customer should ask the Utility for the data and then provide that to the third-party demand response provider. Demand response providers, not customers should be responsible for managing this type of data. This extra step would reduce automation, and is therefore contrary to the objective of developing the click-through authorization process.

*Cost of the Expanded Data Set.* Finally, SDG&E raises the concern that the ratepayers should not bear the cost of the provision of the expanded data set.<sup>161</sup> We disagree and find the cost of expanding the data set to be reasonable, especially when compared to the benefit of increased choice. Ratepayers already paid for the Advance Metering Infrastructure (AMI) and for the Utility to collect, store and the manage customer data. Customers should benefit from this investment and be provided with more choices, like demand response offered by third-party providers.

PG&E will provide synchronous Application Program Interface (API) transfers and secure flat file transfers for most of the expanded data set within a budget of \$1.2 million.<sup>162</sup> SCE’s entire proposed budget including system functionality, user experience design, training, and project team costs is between \$500,000 and

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<sup>159</sup> SDG&E Reply at 7.

<sup>160</sup> D.16-06-008 at Ordering Paragraph 9.

<sup>161</sup> SDG&E Reply at 7.

<sup>162</sup> PG&E Advice Letter 4992-E at 9, 14-16, and 24.



\$1.5 million.<sup>163</sup> We find these costs reasonable. We approve the expanded data sets proposed by PG&E and SCE as described in Attachment 1 to this resolution.

SDG&E lists the cost as \$173,000 to expand the data set in its Advice Letter.<sup>164</sup> We find this cost reasonable. Finally, should SDG&E deviate from the expanded data set in Attachment 1, SDG&E may file an advice letter as described in Section 19.

## 11 Synchronous Data Within Ninety Seconds

During the working group process, stakeholders requested that the full Rule 24/32 data set be made available to the Demand Response Provider synchronously or within ninety seconds of completion of authorization in order to meet market needs.<sup>165</sup> These market needs include: ensuring a positive customer experience, registering customers with the CAISO in a timely fashion, and making a determination of customer eligibility for a provider's demand response program.

### 11.1 Utility Proposals for Synchronous Data Within Ninety Seconds

PG&E has committed to providing the current Rule 24/32 data set within ninety seconds, but it cannot provide the complete data set within that timeframe because that would require system upgrades and significant costs.<sup>166</sup> PG&E can provide this data quickly because it is available through ShareMyData, which is integrated into its systems. For the expanded data set, PG&E uses a flat-file Electronic Secure File Transfer (ESFT) process. PG&E notifies the third-party that the data set is available and the third-party retrieves the information. This flat-file ESFT process is usually available within two days, but longer if the data is not available automatically. The expanded data set is not available through

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<sup>163</sup> SCE Advice Letter 3541-E at 6, 11-12,

<sup>164</sup> SDG&E Advice Letter 3030-E at 8.

<sup>165</sup> Informal Status Report at 14 and Appendix E.

<sup>166</sup> PG&E Advice Letter 4992-E at 15, 21, and PG&E Reply at 9.

the ShareMyData platform. Delivering the expanded data set in only ninety seconds data would require re-architecting PG&E's backend source systems.<sup>167</sup>

Similarly, SCE cannot provide the full and expanded Rule 24/32 data set within ninety seconds because of the architecture of SCE systems, the large amount of data that would be delivered and the lack of integration of the various databases. However, SCE will provide a summarized data set within ninety seconds that could be used to help determine eligibility in third-party provider programs.<sup>168</sup> SCE further explained that it will be able to provide the full and expanded data set within five business days, and usually within two days. SCE did not complete an estimate of the cost of synchronous, ninety second data for the full data set because it would require a "wholesale redesign of SCE's enterprise systems."<sup>169</sup>

SDG&E was also not able to complete an estimate of synchronous data delivery. However, SDG&E proposes using the \$900,000 remaining in its budget to support this requirement.<sup>170</sup>

In comments on the Draft Resolution, both PG&E and SCE requested that flexibility for to the requirement that the shorter data set or the integrated data set be delivered in 90 seconds. PG&E requested the language be changed to "on average 90 seconds from the time the [Demand Response Provider] requests the data, not from the time of the customer's authorization."<sup>171</sup> The provider must send an "API call" to the Utility to request the data. SCE clarified that it will only be able to provide the summarized data set within 90 seconds if the customer has one service account.<sup>172</sup> Data delivery for customers with multiple accounts will take more than 90 seconds.

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<sup>167</sup> *Id.*

<sup>168</sup> SCE Advice Letter 3541-E at 8.

<sup>169</sup> SCE Reply at 5-6.

<sup>170</sup> SDG&E AL 3030-E at 9.

<sup>171</sup> PG&E Comments on the Draft Resolution at 5.

<sup>172</sup> SCE Comments on the Draft Resolution at 4-5.

### 11.2 Protests to the Utility Proposals for Ninety Second Synchronous Data

OhmConnect, the Joint Protesting Parties, and UtilityAPI protested the issue of synchronous or ninety second data delivery. OhmConnect applauded PG&E for providing the ShareMyData data set within ninety seconds. OhmConnect believes that SCE should provide the data needed for wholesale market integration within ninety seconds. OhmConnect urges the Commission to require all three Utilities to provide the complete and expanded data set within two days, not five days in order to ensure that the customer stays engaged. Finally, OhmConnect believes that SDG&E should spend additional budget to provide synchronous data.<sup>173</sup> The Joint Protesting Parties request that SCE provide this summarized data set within 30 seconds instead of ninety seconds because the customer experience requires a faster data delivery. Customers will be watching their screen for ninety seconds and then they will find out that they cannot fully join the program for another five days.<sup>174</sup> UtilityAPI also supports synchronous data delivery within ninety seconds, including the flat file.<sup>175</sup>

### 11.3 Discussion

We clarify that the data delivery discussed in this section relates to the data delivered to third-party providers, not the data used to pre-populate the click-through, which would affect the amount of time a customer watches their computer before finishing the process. Here, we address the data that PG&E and SCE propose to deliver synchronously, within ninety seconds, and the complete, expanded data set that can be delivered within two days.

Given that none of the Utilities included a cost estimate for synchronous data delivery of the complete data set, it is difficult to tell whether this functionality is an efficient use of ratepayer funds. Therefore, we order the Utilities to provide a cost estimate of delivering the entire and expanded data set within ninety

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<sup>173</sup> OhmConnect Protest to PG&E and SCE at 5-6, and OhmConnect Protest to SDG&E at 7.

<sup>174</sup> Joint Protesting Parties Protest at 12.

<sup>175</sup> UtilityAPI Protest at 5-6.

seconds. This estimate shall be included in an application for improvements in accordance with Section 19 of this Resolution.

We understand however, that speedy data delivery is necessary to ensure a positive customer experience. Demand response providers may need the current Rule 24/32 data set or a summarized data set to determine eligibility more quickly, and the complete expanded data set two days later to integrate with wholesale market and otherwise provide an effective program. We find that PG&E's approach is reasonable, providing data available through the ShareMyData platform within ninety seconds on average, and the complete expanded data set within two days. The clock starts from the time the Demand Response Provider requests the data. We approve PG&E's approach. We also approve SCE's approach of providing a summarized data set within ninety seconds on average, from the time the Demand Response Provider requests the data. However, we encourage SCE to provide as much data as is possible or available on systems integrated with Green Button Connect. We order SDG&E to file a Tier 2 Advice Letter as described in Section 19 with a proposal for a shorter data set that SDG&E will provide synchronously, within ninety seconds on average from the time the Demand Response Provider requests the data. We approve SDG&E's request to use a portion of the \$900,000 for the shorter synchronous data set, funding which was designated for additional requirements ordered in this Resolution.<sup>176</sup> SDG&E should use PG&E and SCE's approaches as a model and provide data that is available on systems that are integrated with the Customer Energy Network platforms.

Further, we order PG&E, SCE, and SDG&E to provide the complete and expanded data set within two business days. If a delay beyond two business days is expected, the Utility must provide an explanation to the demand response provider, with an estimated resolution timeframe. The Commission expects that in the overwhelming majority of cases, data will be delivered within two business days. If parties experience persistent problems, the issue should be

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<sup>176</sup> See Section 17, *supra*.

raised in the Customer Data Access Committee described in Section 18.

## 12 Cost of Data

### 12.1 Utility Proposals for Cost of Data

SCE and SDG&E addressed the issue of costs for access to customer data. SCE explained that usually there are no costs for access to the click-through authorization or data delivery. However, SCE may reevaluate costs in the future. Under normal circumstances SCE does not charge third-party demand response providers, but if a third-party does not collect data within five business days, a manual process must be used to reinitiate the data delivery and a fee may be charged.<sup>177</sup> SDG&E believes that the cost of access to data, especially access to the expanded data set should be borne by the demand response providers, not the ratepayers.<sup>178</sup> PG&E did not address this issue in its Advice Letter.

### 12.2 Protests to Utility Proposals for Cost of Data

OhmConnect and the Joint Protesting Parties protested the issue. OhmConnect believes that data should be provided at no additional cost to the customer or the Demand Response Provider because charges to the customer would run counter to the goal of enabling customers to use demand response to meet their energy needs at a low cost, and the principle of eliminating barriers to data access as described in D.16-09-056.<sup>179</sup> The Joint Protesting Parties believe that a full data set should be provided to demand response providers free of charge. Citing D.13-09-025, the Joint Protesting Parties believe that Commission policy requires customer data to be delivered to authorized third-parties at no cost to the third-party.<sup>180</sup> The Joint Protesting Parties believe that the Commission approved the

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<sup>177</sup> SCE Advice Letter at 15, and SCE Reply at 9.

<sup>178</sup> Informal Status Report, Appendix E at 2, explaining the need for daily reporting on webpage performance and a list of specific metrics that should be tracked.

<sup>179</sup> OhmConnect Protest to PG&E and SCE at 6, OhmConnect Protest to SDG&E at 7-8, and D.16-09-056 at 46.

<sup>180</sup> Joint Protesting Parties Protest at 9, citing D.13-09-025, at 2 and Ordering Paragraph 19. Among other things, D.13-09-025 authorized funding to establish the Green Button platform.

investment in Advance Metering Infrastructure or Smart Meters in order to provide customers with access to their data and access to value added services like demand response.<sup>181</sup>

### 12.3 Discussion

The Commission currently permits the Utilities to recover costs from demand response providers under a variety of conditions. These include, but may not be limited to:

- Various provisions from Rule 24/32:
  - .1. C.1.f. – KYZ pulse installation for telemetry
  - .2. C.9. – CAISO participation related charges detailed in tariffs (below)
  - .3. D.1.c. – charges for certain additional data transfers beyond two times a year and ongoing data that is not released electronically
  - .4. F.1.b. – costs for installing meters in certain instances
  - .5. H.2.a. – cost incurred to Utility for determining a third-party demand response provider's creditworthiness
- Rate schedules (tariffs):
  - .1. PG&E – Schedule E-DRP
  - .2. SCE – Schedule DRP-SF, Schedule CC-DSF
  - .3. SDG&E – Schedule E-DRP

The Commission cannot at this time declare that the Utilities must give third-party demand response providers access to customer data at no charge given the numerous ways that the Commission has already approved costs to be recovered from third-party providers. We do note that this Resolution does not approve any additional fees or charges for third-party demand response providers. Any fees not already formally approved by the Commission, must be reviewed through an advice letter or other Commission process.

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<sup>181</sup> Joint Protesting Parties Protest at 9.

### 13 Reporting Performance Metrics

The working group's Informal Status Report suggested that the OAuth Solution 3 include daily reporting of Utility click-through webpages performance.<sup>182</sup>

Third-party demand response providers and other stakeholders believe that the Utilities must "maintain a high-performance, error free customer experience," because fewer customers will enroll in third-party programs if the webpages in the click-through authorization process take a long time to load, or include many errors. The stakeholder proposed performance metrics include:

1. \*\* The IOUs shall track the following metrics on a per-user basis:
  - a. Start Page
  - b. Order of pages viewed
  - c. Time on each page
  - d. Last Page viewed
  - e. Authorizations completed
2. These metrics shall be compiled, anonymized, and reported on a daily basis (the IOU could aggregate over 10 users for the purpose of anonymizing the reported metrics).
3. The following aggregated values shall be reported:
  - a. Load time per page
  - b. Mean and max load time
  - c. Standard deviation
  - d. 90th percentile load time
4. Time spent between the first step and the last step
  - a. Mean and max load time
  - b. Standard deviation
  - c. 90th percentile load time
5. Number of views per page (tracked daily)

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<sup>182</sup> Informal Status Report, Appendix E at 2, explaining the need for daily reporting on webpage performance and a list of specific metrics that should be tracked.

6. Number of unique user views per page (tracked daily)<sup>183</sup>

\*\*Note that these metrics would be tracked on an individual basis, but would then be aggregated to ensure customer anonymity.

13.1 Utility Proposals for Reporting Performance Metrics

PG&E and SCE prefer monthly or quarterly reporting, in a report format. SDG&E considered and began the process for developing a website to report performance.

PG&E provided a list of performance metrics, which did not include metrics tracked on a per user basis, nor did it include the number of authorizations completed.<sup>184</sup> PG&E considered daily reporting of aggregated, Utility-level data on the performance of the OAuth Solution 3, but found the cost to be too high. Instead, PG&E proposes quarterly reporting in a report format.<sup>185</sup>

SCE provided a list of metrics that include the majority of the metrics proposed by stakeholders, but without daily reporting or performance measured on an individual customer basis.<sup>186</sup> SCE opposes daily reporting because it would require collecting, analyzing and transmitting large quantities of data daily. SCE believes implementing a daily reporting website would take four months and need an annual budget of \$40,000 to \$50,000. Due to the cost and labor required, SCE prefers monthly reporting.<sup>187</sup>

SDG&E was the only Utility to begin the process of planning a publicly accessible website to track the performance of OAuth Solution 3. SDG&E proposes using different software and analytics providers to achieve these goals including Clickfox to measure website navigation, Splunk to measure web

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<sup>183</sup> Informal Status Report, Appendix E at 2.

<sup>184</sup> PG&E Advice Letter 4992-E at 20.

<sup>185</sup> *Id.* 4992-E at 13-14. *See also* PG&E Comments on the Draft Resolution at 3.

<sup>186</sup> SCE Advice Letter 3541-E at 8-9.

<sup>187</sup> *See* SCE Comments on the Draft Resolution at 5-6.



service performance, and CA Wily Introscope to measure webpage performance.<sup>188</sup> SDG&E prefers on-demand monitoring because it would be more effective than daily performance reports sent to a distribution list. Due to the time constraints in preparing the Advice Letter, SDG&E did not provide a formal estimate. However, SDG&E believes that performance monitoring can be decoupled or completed in Phase 2 of OAuth Solution 3 implementation.<sup>189</sup>

### 13.2 Protests to Utility Proposals for Reporting Performance Metrics

UtilityAPI opposes the inconsistent manner each of the Utilities proposes to implement the performance metrics. It argues that it would be very difficult for demand response providers, ratepayers, or the Commission to compare the performance of the three solutions if the metrics provided are different for each Utility.<sup>190</sup> UtilityAPI recommends all three Utilities provide the same metrics on a joint webpage or data repository on the Commission website.

### 13.3 Discussion

We find SDG&E's proposal reasonable. A webpage or dashboard would allow the Commission, members of the public, and third-party demand response providers to effectively monitor the performance of OAuth Solution 3. We agree with UtilityAPI that consistent metrics across each Utility are needed.

A webpage would act as an enforcement mechanism because once performance metrics are published, the Utilities would be motivated to resolve any problems quickly. A webpage is reasonable because it would provide performance metrics on a real-time or near real-time basis. Monthly or quarterly reporting would not meet the objective of flagging any performance issues and quickly resolving these problems. A webpage would ensure the ratepayer investment in OAuth Solution 3 is protected because the performance of the solution would be monitored on an ongoing basis.

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<sup>188</sup> SDG&E Advice Letter 3030-E, Attachment A at 10.

<sup>189</sup> SDG&E Advice Letter 3030-E at 8.

<sup>190</sup> UtilityAPI Protest at 5.

Therefore, we order PG&E, SCE and SDG&E to develop on their websites a reporting format for performance metrics of the click-through authorization solution(s) and other aspects of Rule 24/32 operations. We find the metrics listed above and in the Informal Status Report to be reasonable, especially given that data on an individual customer journey would be aggregated. The Utilities shall work with stakeholders in the Customer Data Access Committee to determine additional metrics to monitor Rule 24/32 operations. These metrics shall be reported in real-time or near real-time basis, but no less frequently than daily (with a day's delay). As SDG&E described, third-party vendors and software analytics can be used to provide data at a near real-time or daily frequency. The Utilities shall use any remaining funding available through the Tier 3 Advice Letter process described below in Section 19.

In addition to metrics related to the performance of OAuth Solution 3, we find it reasonable to monitor other aspects of Rule 24/32 operations such as delivery time for the full data set, the frequency of ongoing data delivery, and delivery time for missing or gaps in data, among other aspects. We find that monitoring of data delivery times is necessary in order to encourage the Utilities to resolve data delivery issues quickly. There may be additional metrics that need to be monitored here. The Utilities shall work with stakeholders in the Customer Data Access Committee, established herein, to develop a consensus proposal and file an advice letter as described in Section 19 herein.

We also recognize the need to capture performance data over time and therefore find it reasonable to report monthly aggregated performance data on a quarterly basis. This information shall be reported on a quarterly basis, in a format approved by the Energy Division, as part of the Quarterly Report Regarding the Status of Third-Party Demand Response Direct Participation. Further, because D.15-03-042 orders the reports only until the end of 2018, we order the Utilities to continue filing this report through 2020. The report shall be filed in the most current demand response proceedings and service lists.

#### 14 API Solution 1

As described earlier, Application Program Interface (API) Solution 1 is an alternative click-through solution that would not require the customer to leave

the third-party DR provider's website to complete authorization. The customer would enter enough customer specific information on the demand response provider's website that would be transmitted directly to the Utility back-end system to verify the customer's identity. The Demand Response Provider is not able to see this information. Once the customer's identity is verified and while still on the demand response provider's website, the customer would authorize the Utility to release the data. An electronic record of the parameters would be sent to the Utility to finalize the transaction.<sup>191</sup>

To build API Solution the Utilities would need to build one or two custom endpoints to verify customer identity and receive the customer's authorization of data release to the demand response provider(s). The Utilities may also need to develop new system functionality and security measures.<sup>192</sup> All three Utilities' argued that developing both OAuth Solution 3 and API Solution 1 at the same time could lead to delay of the click-through in time to help increase third-party provider enrollments in the programs for the Demand Response Auction Mechanism.<sup>193</sup>

On October 18<sup>th</sup>, the Energy Division in conjunction with the Assigned Commissioner's office directed the working group to first develop and implement OAuth Solution 3 and include plans in the Advice Letter filing. API Solution 1 would be considered for implementation at a later time, so the Utilities were directed to include, "[a] schedule for developing and determining the cost for Solution 1," and "[a] plan for the cost recovery of Solution 1."<sup>194</sup> This understanding was described in PG&E's Advice Letter:

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<sup>191</sup> PG&E Advice Letter 4992-E at 4, SCE Advice Letter 3451-E at 4, SDG&E Advice Letter 3030-E at 3-4, and Informal Status Report at 1 (Attachment A to this Resolution).

<sup>192</sup> *Id.*

<sup>193</sup> PG&E Advice Letter 4992-E at 17, SCE Advice Letter 3451-E at 18, SDG&E Advice Letter 3030-E at 9, and Informal Status Report at 12 (Attachment A to this Resolution).

<sup>194</sup> Energy Division Advice Letter Guidance October 18, 2016, available at: <http://www.cpuc.ca.gov/General.aspx?id=7032>.

“[I]t was determined that the solutions would be developed sequentially, with separate Advice Letter processes, rather than to wait for both to be properly scoped with corresponding budget and timeline estimations at a later date.”<sup>195</sup>

The Utilities were directed to implement OAuth Solution 3 first in order to help increase customer enrollments in the 2018 Demand Response Auction Mechanism. The Energy Division and the Assigned Office believed that OAuth Solution 3 could be implemented more quickly because it built on existing systems.

#### 14.1 Utility Proposals for API Solution 1

The Utilities raised concerns about the privacy implications of API Solution 1. PG&E believes that API Solution 1 would allow the third party to store confidential authentication information on their servers and does not allow PG&E to maintain control over customer authentication.<sup>196</sup> SCE believes that API Solution 1 would violate Commission Privacy Rules because the customer would be authenticated on an API controlled by the third-party DR provider, not the utility.<sup>197</sup>

Further, all three utilities believe that the Commission should not pursue API Solution 1 unless OAuth Solution 3 is determined to be inadequate.<sup>198</sup> PG&E noted that developing both solutions at the same time could “prolong the completion of [OAuth] Solution 3,” because both solutions utilize the same staff resources. All three utilities also believe the development of API Solution 1 could take longer to develop than OAuth Solution 3.

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<sup>195</sup> PG&E Advice Letter 4992-E at 22.

<sup>196</sup> *Id.* at 16-17.

<sup>197</sup> SCE Advice Letter 3541-E at 18-19.

<sup>198</sup> PG&E Advice Letter 4992-E at 22-23; SCE Advice Letter 3541-E at 18-19; and SDG&E Advice Letter 3030-E at 9.

The Utilities all believe that the cost recovery method available for API Solution 1 is unclear, especially since by the time API Solution 1 is scoped, the 2018-22 DR portfolio applications would likely be decided. This means that the Tier 3 Advice Letter funding mechanism authorized in D.16-06-008 may be unavailable. SCE pointed out that other options could include the Rule 24/32 mass market application or the 2020-2022 demand response portfolio application for “New Models.”<sup>199</sup>

Finally, SCE and PG&E suggest allowing the third-party Demand Response Providers and other non-Utility stakeholders to meet and develop comprehensive business requirements for API Solution 1. The Utilities would only be required to begin work on API Solution 1 after other stakeholders have met separately to develop a detailed list of requirements.<sup>200</sup>

#### 14.2 Protests to Utility Proposals for API Solution 1

Olivine, Inc. and the Joint Protesting Parties protested this issue and support the expeditious development of API Solution 1. Olivine objects to the Utilities’ suggestion that the Commission should wait until OAuth Solution 3 has been deemed unsuccessful before moving forward with API Solution 1. Olivine points out that all non-IOU stakeholders supported developing API Solution 1 in parallel or subsequently to OAuth Solution 3. The consent agreement was not to develop one solution over the other. Further, Olivine believes that enough information has been provided to the utilities to develop the business requirements of API Solution 1.<sup>201</sup>

The Joint Protesting Parties protest this issue on the basis that the utilities mischaracterize the need for API Solution 1, misunderstand privacy concerns, and have not followed Energy Division guidance.<sup>202</sup> The Joint Protesting Parties

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<sup>199</sup> SCE Advice Letter 3541-E at 19.

<sup>200</sup> SCE Comments on the Draft Resolution at 3; and PG&E Comments on the Draft Resolution at 8.

<sup>201</sup> Olivine, Inc. Protest at 3.

<sup>202</sup> Joint Protesting Parties Protest at 5-7.

believe that the three utilities should follow Energy Division guidance and begin stakeholder workshops to scope API Solution 1 after OAuth Solution 3 has been implemented. There is no basis in fact that API Solution 1 would take longer to develop in a working group or in the implementation phase. Further, the development of API Solution 1 technically overlaps OAuth Solution 3 by 50 or 90%, so the work would not be duplicative, it would build upon work already completed by the working group.<sup>203</sup>

The Joint Protesting Parties believe the failure to develop API Solution 1 following the implementation of OAuth Solution 3 goes against Energy Division guidance and the consensus of the working group. Third-party stakeholders agreed to adopt OAuth Solution 3 first and wait, but not abandon the development of API Solution 1. This was a concession made in order to reach a mutual agreement. The Joint Protesting Parties believe that Commission action is needed because it is not a good use of stakeholders' time if the agreements made during a working group are not honored in the Advice Letter filings.<sup>204</sup>

The Joint Protesting Parties further argue that the development of API Solution 1 should not be contingent upon a determination that OAuth Solution 3 is inadequate. The Joint Protesting Parties believe that there is enough evidence to show that API Solution 1 is needed now. They state that OAuth Solution 3 will not result in the successful completion of residential customer authorizations because it does not achieve the same customer experience.<sup>205</sup>

The Joint Protesting Parties argue that the Utilities mischaracterize the features of API Solution 1 and related privacy concerns.<sup>206</sup> The Joint Protesting Parties disagree with the utility contention that third parties should not store authentication information, and that authentication must take place on a utility

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<sup>203</sup> *Id.* at 4, footnote 11.

<sup>204</sup> *Id.* at 5.

<sup>205</sup> *Id.* at 3.

<sup>206</sup> *Id.* at 5-7.

site.<sup>207</sup> They cite examples where the customer is not authenticated on the utility website, including where third parties running IOU programs authenticate customers via File Transfer Protocol data exchange not on the IOU website. There, the third party stores the authentication data. Another example is that third party DR providers participating in the demand response auction mechanism often store data that participants enter to submit the paper CISR-DRP forms. Further, the Joint Protesting Parties state that the issue of authentication was already litigated and decided in D.16-06-008.

Finally, the Joint Protesting Parties point out that third party demand response providers are already obligated to follow many rules regarding privacy and the handling of customer data. These include Commission rules, California Independent System Operator rules, contract obligations, as well as federal and state requirements that allow for electronic signatures to provide customer authorization. Privacy concerns used to refute the legitimacy of API Solution 1 should not stand in the way of a customer sharing their data when, where and if they see fit with ease.<sup>208</sup>

### 14.3 Discussion

The Commission finds that it is more prudent to begin evaluating API Solution 1 now instead of waiting until an evaluation of OAuth Solution 3 is complete. The determination of whether Utilities should develop API Solution 1 depends upon many factors including whether the solution makes efficient use of ratepayer funds. The Utility concerns regarding customer privacy are well-intentioned, but stakeholders may be able to develop technical solutions to these concerns in a working group process, the Customer Data Access Committee described in Section 18. Further, without developing the specific business requirements and estimating costs, the Commission does not have enough information to determine whether the development of API Solution 1 would be an efficient use of ratepayer resources.

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<sup>207</sup> *Id.* at 5-6, citing SCE Advice Letter 3541-E at 9-10 (Section IV.G.), and PG&E Advice Letter 4992-E at 11.

<sup>208</sup> *Id.* at 6-7.

*Whether to Wait Until an Evaluation of OAuth Solution 3 is Complete.* All three Utilities propose waiting until OAuth Solution 3 can be evaluated and only pursue API Solution 1 if OAuth Solution 3 is determined to be inadequate. In the hypothetical presented here, the Utilities would only begin planning API Solution 1 once OAuth Solution 3 has been deemed a failure. This fails to recognize the differences between the solutions and the preferences of third-parties. If OAuth Solution 3 is unsuccessful or inadequate, then third-party demand response providers may be in a worse position than they are in now. In the hypothetical, customers would be using a failed system to authorize the Utility to share their data with the third-party with the likely result that program enrollments would be lower than desired. Third-party providers would be forced to wait until the Utilities plan, request funding, and implement API Solution 1.

We find it more prudent to begin planning and developing business requirements for API Solution 1 now instead of waiting. Waiting, as the Utilities propose also fails to consider the reason third-parties advocated for API Solution 1. Generally, third-parties prefer API Solution 1 because the provider can adjust the look and feel of the solution quickly, which allows it to have more control over the user experience. Several third-parties prefer API Solution 1 because of the close link between enrollments, the performance of the click-through solution, and the provider's ability to perform in the market. Because enrollments are so dramatically affected by the customer's ability to easily share data with the third-party demand response provider, several third parties prefer to design the customer experience themselves.<sup>209</sup>

*Customer Privacy Concerns.* The Utilities' assert that API Solution 1 would have detrimental impacts impact on privacy and on ratepayers without the benefit of a stakeholder process to first scope out the business requirements. Even in the October 12, 2016 Informal Status Report, the Utilities recognized that the

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<sup>209</sup> See *Id.* at 14, explaining that third-party demand response providers "should be enabled, but not required to design [their] own solution end to end if [they] so desire," because the chosen solution impacts customer enrollments and thus performance of the third-party program.



“inherent lack of detail significantly limits the [U]tilities’ ability to assess the full scope of cybersecurity risks.”<sup>210</sup> The Commission takes customer privacy seriously. However, without understanding the details or technical specifications of the solution, it is impossible to determine whether API Solution 1 comports with Commission Privacy Rules. Further, stakeholders have already suggested features of API Solution 1 that could alleviate privacy concerns including (a) the potential use of alternative authentication credentials (instead of utility account username and password), and (b) the use of an established architecture similar to credit card processing.<sup>211</sup> During the working group stakeholder process for OAuth Solution 3, both Utilities’ and third-parties gained a greater understanding of their respective interests and technical capabilities, and we expect the same will be true for API Solution 1. Therefore, we direct the Utilities to collaborate with stakeholders and other interested parties in the Customer Data Access Committee to evaluate technical solutions to address any privacy concerns.

*Ratepayer Resources.* Finally, the Utilities believe that the cost of building API Solution 1 would be unreasonably high for ratepayers, , but third-parties believe the costs could be low because API Solution 1 could be “added on” to OAuth Solution 3.<sup>212</sup> The Customer Data Access Committee established herein will help the Utilities’ scope out the technical requirements for the solution, and only after that process is complete, will the Utilities be able to estimate costs. As described in Section 19, the Utilities shall file an application seeking recovery for API Solution 1. The Commission will determine at that time whether the solution is an efficient use of ratepayer funds.

*Process for Developing API Solution 1.* We find SCE and PG&E’s suggestion for conserving staff resources to be reasonable. Non-Utility participants of the Customer Data Access Committee should develop detailed business

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<sup>210</sup> *Id.* at 4 and 6, arguing that API Solution 1 must be “scoped out in technical detail,” prior to jumping to conclusions.

<sup>211</sup> *Id.* at 6.

<sup>212</sup> *Id.* at 14.

requirements for API Solution 1. The Utilities need not work on the business requirements for API Solution 1 until the non-Utility stakeholders have developed a detailed list of requirements. This proposal is reasonable because that is similar to the approach taken for developing the requirements for OAuth Solution 3.

## 15 Expanding Solution(s) to Other Distributed Energy Resources

Throughout the Working Group meetings, Commission staff, including the Assigned Commissioner's office discussed the Commission's interest in expanding access of the click-through solution(s) to customers of other third-party distributed energy resource providers such as solar, storage, and energy efficiency. In the October 18, 2016 presentation providing guidance for the Advice Letters, Energy Division stated that, "[f]eatures for streamlining customer access for other Distributed Energy Resources are desirable and will be considered."<sup>213</sup>

### 15.1 Utility Proposals for Expanding Solution(s) to Other Distributed Energy Resources

In their Advice Letter filings, all three Utilities argued that more work is needed in a broader forum before the solutions(s) can be expanded to incorporate additional use cases besides direct participation demand response.<sup>214</sup> All three Utilities explained the uncertainty around whether the Commission will begin to explore these ideas in one of its integrated proceedings. One option is the Distribution Resources Plan proceeding where parties are determining locations throughout the electrical system where distributed resources are needed the most. Customer data access issues remain in scope of the proceeding, but the

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<sup>213</sup> Energy Division Advice Letter Guidance October 18, 2016, available at: <http://www.cpuc.ca.gov/General.aspx?id=7032>.

<sup>214</sup> PG&E Advice Letter 4992-E at 16, SCE Advice Letter 3541-E at 17, and SDG&E Advice Letter 3030-E at 6-7.

Commission has not issued a ruling to determine whether the proceeding will address these issues in the near term.<sup>215</sup>

Despite procedural uncertainty, SDG&E explained that it has incorporated flexibility into the click-through architecture and design. Initially, customers will be able to authorize third-parties for the purpose of receiving demand response services. In the future, SDG&E plans on allowing multiple purposes per provider such that customers could authorize one third-party (or one partnership), that offers a variety of services for example energy efficiency and demand response.<sup>216</sup>

### 15.2 Protests to Utility Proposals for Utility Proposals for Expanding Solution(s) to Other Distributed Energy Resources

OhmConnect and UtilityAPI protested this issue. OhmConnect supports expanding the solution(s) to incorporate other distributed energy resource providers, but not at the expense of ensuring that OAuth Solution 3 is ready in time to impact the demand response auction mechanism customer enrollments.<sup>217</sup> UtilityAPI believes that SCE and SDG&E should provide more detail in the Advice Letters regarding whether OAuth Solution 3 incorporates the UtilityAPI Guiding Principles.<sup>218</sup> UtilityAPI explained that the six UtilityAPI Guiding Principles were developed by a wide range of energy industry leaders, including distributed energy resource providers. By adhering to these principles, UtilityAPI believes that the Utilities will be able to more effectively expand the solution(s) to other distributed energy resource providers in the future.<sup>219</sup> They include:

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<sup>215</sup> See Assigned Commissioner Ruling on Track 3 Issues, October 10, 2016 in Rulemaking 14-08-013 at 11, stating “a forthcoming ruling will resume consideration of unresolved data access issues...”

<sup>216</sup> *Id.* at 7.

<sup>217</sup> OhmConnect Protest to SDG&E at 10, and Protest to PG&E and SCE at 10.

<sup>218</sup> UtilityAPI Protest at 4-5.

<sup>219</sup> *Id.* at 4-5.

- (1) Full Data Set;
- (2) Synchronous Data;
- (3) Instant, Digital Authorization;
- (4) Instant, Consumer-Centric Authorization;
- (5) Seamless Click-Through; and
- (6) Strong Security Protocols.<sup>220</sup>

In its reply, SCE responded that the guiding principles have not been adopted by the Commission, so SCE need not incorporate them into the Advice Letter Filing.<sup>221</sup>

### 15.3 Discussion

SDG&E's approach of incorporating flexibility is reasonable. We find that supporting one third-party that provides multiple services is consistent with many of the Commission policies and findings of research studies around resource integration. For example, since 2007 and the Commission's adoption of D.07-10-047 and, subsequently, the California Long-term Energy Efficiency Strategic Plan,<sup>222</sup> which points to the benefits of integrated approaches and lays out strategic priorities. Further, the 2025 California Demand Response Potential Study found that "EE and DR integration could be an overall increase in ... DR availability for meeting system capacity needs, with supply DR at a lower cost compared to DR-only technology investments."<sup>223</sup> By integrating demand response and energy efficiency, the potential study found that demand response could be achieved at a lower cost, which could lead to more available demand response.

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<sup>220</sup> *Id.* at 2-3.

<sup>221</sup> SCE Reply at 8.

<sup>222</sup> D.08-09-040 at 11, explaining the importance of demand-side coordination; and Attachment A, the California Long-Term Energy Efficiency Strategic Plan.

<sup>223</sup> 2025 California Demand Response Potential Study at 8-3, available at: <http://www.cpuc.ca.gov/General.aspx?id=10622>.

We restate the Commission’s interest in expanding the click-through solution(s) to other distributed energy resource providers. We find that it is reasonable to take steps to plan for future expansion to other distributed energy resource and energy management providers now, in order to “future-proof” the solution(s) and protect the ratepayer investment. Like SDG&E, SCE and PG&E shall incorporate flexibility into the architecture and design of the solutions(s). These flexibilities are likely easy to plan for since the Utilities already provide customers the opportunity to share their data with third-party distributed energy resource providers through their Green Button platforms.<sup>224</sup>

In addition to SDG&E’s approach of allowing multiple use cases per provider, the Utilities shall first ensure that the click-through process accommodates different use cases by customizing the data set that each type of provider would receive. Different providers are approved to receive different data sets; for example, energy efficiency providers may not receive gas data unless they install gas efficiency measures. To receive data through the Green Button platform, distributed energy resource providers must pre-register with the Utility. Section 6 describes how a third-party Demand Response Provider can choose its preferred length of authorization when it pre-registers with the Utility for OAuth Solution 3. In order to “future-proof” the click-through solution(s), the Utilities shall ensure that the different data sets available to each different distributed energy resource can be included as an option in the pre-registration process.

We order the Utilities to hold a meeting open to all distributed energy resource, energy management, and other third-party providers to ensure that the data sets that these resources need are included in the architecture of the solution(s). “Future-proofing” the solution(s) will ensure an efficient use of ratepayer funds by preventing expensive re-architecture of systems. The meeting shall be held no later than ninety days from the approval of this Resolution and shall be noticed

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<sup>224</sup> These platforms are the Customer Energy Network for SDG&E, Green Button Connect for SCE, and ShareMyData for PG&E.

to Commission proceeding service lists that addresses distributed energy resources, integration, or third-party service providers.<sup>225</sup>

Beyond “future-proofing” the proposed solution(s), we order the Utilities to include a proposal for expanding the solution(s) to other distributed energy resource and energy management providers in the application for future improvements described in Section 19 below. Allowing other types of providers to utilize the authorization solution(s) will enable their customers to easily share their data, facilitating increased choice. Further, including a proposal to expand the solution(s) to other distributed energy resource providers will alleviate procedural uncertainty. A new application proceeding will provide a broader forum for addressing customer data access issues. Notwithstanding other Commission action, such as potential actions taken in the Distribution Resources Plan proceeding, the Utilities shall work with the Customer Data Access Committee, established herein, and develop a proposal for expanding the solution(s) to other distributed energy resource and energy management providers.

We recognize the importance of ensuring that OAuth Solution 3 remains on schedule, so the click-through authorization process can help to positively impact enrollments in third-party programs for the 2018 demand response auction mechanism. Progress must first be made with demand response use cases. The Utilities shall stick to the schedule of phasing described in Section 17 and implement the solution(s) for demand response use cases.

#### 16 Application of the Click-Through Authorization Process to CCA/DAs

PG&E and SCE propose using the click-through authorization process for Community Choice Aggregation (CCA) or Direct Access (DA) customers when the Utility is the Meter Data Management Agent (MDMA). No party protested

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<sup>225</sup> Including but not limited to: R.03-10-003; R.12-11-005; R.1309011; R.13-11-005; R.13-11-007; R.14-07-002; R.14-08-013; R.14-10-003; R.15-02-020; R.15-03-011; R.16-02-007; A.17-01-012; ...18, ...19; A.17-01-013, ...14, ...15, ...16, ...17; A.17-01-020; ...21, ...22; and A.17-04-018.

this proposal. This is the status quo because the Utilities currently use the paper CISR-DRP Request Form for customers of this type today. We find this reasonable and allow the Utilities to continue the status quo for the click-through authorization process. Further, CCA and DA customers shall be able to release the expanded data set, including billing elements to third-party Demand Response Providers. Practically, the provision of data may depend upon CCA or Energy Service Provider provision of certain data.<sup>226</sup> However, since no Community Choice Aggregators or Direct Access customers participated in the working group process or protested these Advice Letters, we recognize that this may need to change in the future.

## 17 Budgets and Phasing

Several requests were made in comments on the Draft Resolution for adjustments in Phasing.

### 17.1 Utility Proposals for Budgets and Phasing

Each Utility requests funding within the funding cap as modified by D.17-06-005. There, the Commission found that it was necessary to modify the funding authorized in D.16-06-008 because at the time the original Decision was released, the cost of the click-through authorization process was not known. D.17-06-005 approved click-through funding caps of \$5.6 million (m.) for PG&E, \$1.5 m. for SCE and \$4.9 m. for SDG&E. PG&E requested “flexibility between capital and expense categorization to allow flexibility and reduce implementation delays.”<sup>227</sup> PG&E plans to use Generally Acceptable Accounting Principles and internal software capitalization.<sup>228</sup>

The Utility funding requests are as follows:

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<sup>226</sup> PG&E Comments on the Draft Resolution at 4-5.

<sup>227</sup> *Id.* at 6.

<sup>228</sup> *Id.*, especially footnote 19.

- PG&E requests \$5.6 million total, \$1.2 m. for data delivery and \$4.4 m. for OAuth Solution 3. PG&E developed these estimates within a 50% margin of error.
- SCE requests \$1.5 m., \$500,000 for system functionality, \$100,000 for user experience design, \$150,000 for training and organizational management, \$250,000 for the project team, and a \$500,000 buffer because the Advice Letter was filed within a 50% confidence level.
- SDG&E requests \$4.9 m., including \$4 m. for building OAuth Solution 3 and other information technology and data delivery costs, and an additional \$900,000 to accommodate additional requirements that may be ordered by this Resolution, or during project development. SDG&E estimated these costs at a 75% confidence level.

In order to accomplish these ambitious improvements to the click-through authorization process, the Utilities are requesting approval to implement OAuth Solution 3 in phases. PG&E believes three phases can be completed within 18 months. PG&E proposes completion of Phase 1 within nine months after the issuance of the Resolution. It would include dual authorization, a streamlined customer authorization flow, a design for mobile and desktop devices, and the ability for the third-party provider to revoke authorization. PG&E estimates Phase 2 can be completed six months following the first phase. It would include alternative authentication, forgot password, redirection page updates, and re-authorization tokens. Finally, PG&E believes Phase 3 can be completed 3 months after the completion of the second phase. It would include basic performance reporting and any outstanding requirements.<sup>229</sup>

SCE believes that the initial implementation of OAuth Solution 3 can be completed by the fourth quarter of 2017; however, this likely took into account a March or April 2017 approval of this Resolution.<sup>230</sup> Therefore, SCE may need to take a phased approach as well.

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<sup>229</sup> PG&E Advice Letter 4992-E at 18-19.

<sup>230</sup> SCE Advice Letter 3541-E at 16-17.



SDG&E believes OAuth Solution 3 can be completed within nine months of the approval of the Resolution, but could take a phased approach so that Phase 1 could be completed sooner. Phase 1 would therefore include authentication, authorization and data provisioning. Phase 2 would include performance monitoring and reporting, Rule 32 dataset expansions or enhancements, and alternative authentication.<sup>231</sup>

### 17.2 Protests to Utility Proposals for Budgets and Phasing

No parties protested the budget or funding requested. Only OhmConnect and the Joint Protesting Parties commented on phasing. OhmConnect requests that the Commission clarify that the Utilities are expected to complete implementation by January 1, 2018. The Joint Protesting Parties request that alternative authentication be included as part of Phase 1.

### 17.3 Discussion

We find the requested budgets reasonable given the ambitious improvements that the Utilities will be making in the click-through authorization process. The Utilities shall report the money spent on both OAuth Solution 3 and API Solution 1 in the Quarterly Rule 24/32 Report using Generally Accepted Accounting Principles. Based on PG&E's Comments on the Draft Resolution, we grant all three Utilities the flexibility to account for a portion of the project as a capital expense for software if the applicable requirements under Commission rules are met.<sup>232</sup>

We also find reasonable the proposals for phasing implementation, but we direct the Utilities to complete the work at a faster pace in order to have a sufficient impact on third-party demand response enrollments for the 2018 demand response auction mechanism. We also believe that completing the entire click-through OAuth Solution 3 implementation is possible within fifteen months, especially since Utilities indicated at the January 9, 2017 workshop that work would begin prior to the approval of the Resolution. Therefore, an aggressive

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<sup>231</sup> SDG&E Advice Letter 3030-E at 8-9.

<sup>232</sup> PG&E Comments on the Draft Resolution at 6-7, and D.11-05-018.

implementation schedule is needed to ensure that progress is made on the additional improvements ordered in this Resolution.

All three Utilities requested a three-month extension for Phase 3.<sup>233</sup> SCE requested a two-month extension for Phase 2, and PG&E requested a one-month extension for Phase 2.<sup>234</sup> Further, PG&E and SCE requested moving Performance Monitoring Reporting to Phase 3.<sup>235</sup> These requests for more time for Phase 3 are reasonable. PG&E's request for extension of Phase 2 by one month is reasonable. Therefore, we grant a one-month extension for Phase 2 and a three-month extension for Phase 3 for all three Utilities.

SCE proposes to move the complete implementation of Alternative Authentication to Phase 3, but will provide a one-time data transfer functionality to Demand Response Providers by Phase 2. SCE requests this modification because Alternative Authentication implementation depends upon the deployment of its "enterprise software solution."<sup>236</sup> We find that providing a one-time data transfer functionality is not needed at this time, nor did stakeholders in the working group request it.<sup>237</sup> Therefore, SCE shall implement complete Alternative Authentication functionality by Phase 3.

Additional changes are reflected in Table 1, below based on items discussed throughout the Resolution. As described in Section 9, SCE and SDG&E shall build in functionality to OAuth Solution 3, which will allow the third-party Demand Response Provider to customize the length of authorization at an individual customer level. PG&E will complete this functionality by Phase 2.<sup>238</sup>

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<sup>233</sup> PG&E Comments on the Draft Resolution at 7; SCE Comments on the Draft Resolution at 4-5 and Attachment at A-5; and SDG&E Comments on the Draft Resolution at 4.

<sup>234</sup> *Id.*

<sup>235</sup> PG&E Comments on the Draft Resolution at 7; and SCE Comments on the Draft Resolution at 4-6 and Attachment at A-5.

<sup>236</sup> SCE Comments on the Draft Resolution at 4.

<sup>237</sup> See Olivine Protest at 2, explaining that "it does not serve the ongoing data requirements of Rule 24[/32] nor was it requested by the non-[Utility] parties in the workshops."

<sup>238</sup> PG&E Comment on the Draft Resolution at 4 and Appendix B.

As discussed in Section 10, PG&E and SDG&E shall provide the Customer Class Indicator by Phase 3. SCE already planned to include the customer Class Indicator by Phase 1 in its original Advice Letter.<sup>239</sup>

In sum, the adoption of this Resolution, Phase 1 shall be completed within six months. Phase 2 shall be completed within ten months. Phase 3 shall be completed within fifteen months. We adopt the Utility proposals for what shall be included in each phase with certain modifications as indicated in Table 1 with an asterisk “\*.” These modifications include moving the reporting performance metrics activity to Phase 2 instead of Phase 3, adding activities not included in the Advice Letters but ordered herein, and a schedule of phases for SCE. SCE did not originally propose a phased approach.

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<sup>239</sup> SCE Advice Letter 3541-E at Appendix A.

**TABLE 1***Adopted Implementation Phasing (Months)*

Asterisk \* Indicates Modification to Original Utility Proposal

Phase	PG&E	SCE	SDG&E
<b>1</b> <b>6 mo.</b>	<ul style="list-style-type: none"> <li>• Authentication</li> <li>• Authorization with streamlined design</li> <li>• Design with 2 screens &amp; 4 clicks for quick path</li> <li>• Display of Terms &amp; Conditions</li> <li>• Dual Authorization</li> <li>• Expanded Data Set</li> <li>• Mobile friendly design</li> <li>• Shorter Data Set Synchronously</li> <li>• Email Notification*</li> <li>• “Future-Proof” click-through architecture*</li> </ul>	<ul style="list-style-type: none"> <li>• Authentication</li> <li>• Authorization with streamlined design</li> <li>• Demand Response Provider revocation</li> <li>• Design with 2 screens &amp; 4 clicks for quick path</li> <li>• Display of Terms &amp; Conditions</li> <li>• Dual Authorization</li> <li>• Expanded Data Set including Customer Class Indicator</li> <li>• Length of authorization options.</li> <li>• Mobile friendly design</li> <li>• Shorter Data Set Synchronously</li> <li>• Email Notification*</li> <li>• “Future-Proof” click-through architecture*</li> </ul>	<ul style="list-style-type: none"> <li>• Authentication</li> <li>• Authorization with streamlined design</li> <li>• Demand Response Provider revocation</li> <li>• Design with 2 screens &amp; 4 clicks for quick path</li> <li>• Display of Terms &amp; Conditions</li> <li>• Dual Authorization</li> <li>• Length of authorization options.</li> <li>• Mobile friendly design</li> <li>• “Future-Proof” click-through architecture*</li> </ul>
<b>2</b> <b>10 mo.</b>	<ul style="list-style-type: none"> <li>• Alternative Authentication</li> <li>• Demand Response Provider revocation</li> <li>• Individual length of authorization customization</li> </ul>	<ul style="list-style-type: none"> <li>• Customer revocation through SCE MyAccount*</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative Authentication</li> <li>• Expanded Data Set*</li> </ul>
<b>3</b> <b>15 mo.</b>	<p><u>Final Implementation for OAuth Solution 3:</u></p> <ul style="list-style-type: none"> <li>• Revocation using click-through authorization*</li> <li>• Expanding the click-through authorization solution(s) to other distributed resources*</li> <li>• Performance monitoring/reporting*</li> <li>• Individual length of authorization customization (SCE &amp; SDG&amp;E only)*</li> <li>• Inclusion of the Customer Class Indicator in the Expanded Data Set (PG&amp;E &amp; SDG&amp;E only)*</li> <li>• Alternative Authentication (SCE only)*</li> <li>• Shorter Data Set Synchronously (SDG&amp;E only)*</li> </ul> <p><u>All Three Utilities, Application for:</u></p> <ul style="list-style-type: none"> <li>• Additional improvements as determined through the Customer Data Access Committee that cannot be achieved within the Advice Letter Funding Cap*</li> <li>• API Solution 1*</li> </ul>		

## 18 Forum for Ongoing Feedback and Dispute Resolution

Throughout the working group process, stakeholders have expressed the need for their feedback to be considered as the click-through solution is being designed and built. Stakeholders also requested that Utilities include in the Advice Letters, a proposal for a mechanism for stakeholder feedback to be incorporated on an ongoing basis.<sup>240</sup> Further, stakeholders have occasionally come to the Energy Division requesting informal assistance in resolving minor disputes like problems with the quality of data delivered to demand response providers including gaps or missing data, as well as concerns with the way third-parties are accessing data.

### 18.1 PG&E's Proposal for Ongoing Feedback

PG&E was the only Utility to include a proposal for stakeholder feedback. PG&E proposes hosting focus groups where stakeholder feedback can be solicited and incorporated. PG&E's proposal came as a response to stakeholder's protests which requested that the Utilities' file additional Advice Letters to clarify details of the development of solutions.<sup>241</sup> PG&E believes that imposing additional regulatory requirements could result in the delay of the implementation of the solution due to waiting time for decisions on Advice Letters. A stakeholder focus group would allow for more flexibility.

### 18.2 Customer Data Access Committee

The Commission must balance the need for the Utilities to incorporate ongoing stakeholder feedback with the need to quickly make changes to the click-through authorization solution(s). At the same time, the Commission must ensure that the click-through solution evolves and improves as time goes on. The click-through working group's purview was limited to the development of the consensus proposal and the January 3, 2017 Advice Letters,<sup>242</sup> so no forum

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<sup>240</sup> Informal Status Report at 11.

<sup>241</sup> PG&E Reply at 5-6, citing OhmConnect Protest to PG&E and SCE at 3-4, and Joint Protesting Parties Protest at 10-11.

<sup>242</sup> D.16-06-008 ordered parties and interested stakeholders to develop a consensus proposal, but no process for ongoing implementation issues was established. See D.16-06-008 at 10-14, 19-23, and Ordering Paragraph 10.

currently exists to address implementation issues beyond the Advice Letter filings. Parties and stakeholders need a forum to discuss ongoing click-through issues and resolve disputes informally. Therefore, we direct the Utilities to form a Customer Data Access Committee as specified below, for the purpose of receiving stakeholder feedback and resolving on-going issues.

The Energy Data Access Committee (EDAC) provides a good model for the Customer Data Access Committee (CDAC). The EDAC was established under the Smart Grid Proceeding<sup>243</sup> as a technical committee. Its goal “is to serve as a forum for evaluating progress, informally resolving disputes, considering next steps, introducing new ideas, and identifying problems with the utilities implementation of the orders in this decision.”<sup>244</sup> Further, the EDAC, “unlike a regular mediator, may issue a recommendation or diverging recommendations concerning whether to provide access to data.”<sup>245</sup> The EDAC provides research institutions and governmental entities a forum to informally resolve disputes regarding access to aggregated customer data.<sup>246</sup> While EDAC is led by Energy Division, Energy Division does not determine the outcome; instead, parties and stakeholders raise issues and make agreements on their own. Further, EDAC can at its option provide an informal recommendation. Because the Committee is informal, parties retain their right to file formal complaints, expedited complaints, seek Alternative Dispute Resolution, participate in proceedings, file comments, and petition the Commission to clarify any policy matters.<sup>247</sup>

Unlike EDAC which addresses issues of access to aggregated customer data, the goal of the CDAC will be to address data access issues associated with customer authorizations to third-party providers, i.e. customer consent for the Utility to

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<sup>243</sup> Rulemaking 08-12-009. The EDAC was established in D.14-05-016.

<sup>244</sup> D.14-05-016 at Ordering Paragraph 11.

<sup>245</sup> *Id.* at 97-98.

<sup>246</sup> *See Id.* at 99, explaining that the goal of the EDAC is to identify “problems with the implementation of the orders in this decision,” which include the methods for parties to request aggregated data. The decision did not address the process for gaining access to non-anonymized, customer specific data.

<sup>247</sup> *Id.* at 99.

release non-anonymized data to third-party providers, including, but not limited to the click-through authorization process(es) for demand response direct participation. While both Committees address similar issues, the issue of customer-specific authorization is different enough that the CDAC will not duplicate efforts of the EDAC. We find it efficient for the two committees to coordinate closely, especially if issues arise that relate to the work of both groups. The goal of the CDAC shall be to address implementation issues arising in the development of the click-through solution(s), considering next steps, informally resolving disputes, introducing new ideas, and other customer data access issues.

The implementation issues the CDAC should address include, but are not limited to:

- providing timely input into design of OAuth Solution 3 including – the overall design, the connectivity to mobile devices, the links to terms and conditions, the user experience and other technical features;
- developing proposals for Advice Letter filings requesting funding within the caps including performance metrics for the Utility websites, and additional improvements;
- developing proposals for the application filing including forming the business requirements for API Solution 1, expanding the click-through solution(s) to other distributed energy resource and energy management providers, and additional improvements beyond what can be accomplished in the funding caps; and
- informally resolving dispute that may arise among stakeholders.

The CDAC shall be comprised of representatives from each Utility, Energy Division staff, and any interested stakeholders or parties regardless of their status as providers of demand response. Energy Division staff will have oversight responsibility of the Committee, but it shall be managed by the Utilities and interested stakeholders on an interim basis. The Energy Division may at its discretion assume direct management of the Committee or appoint a working group manager. To facilitate public participation and transparency, meeting notes prepared by stakeholders shall be posted on the Energy Division's website or other website as determined appropriate.

The Committee shall be non-adjudicatory, and is not a formal advisory committee. Therefore, any party or stakeholder with an interest in non-anonymized customer data access is eligible to serve on the committee, but shall do so without compensation. Any recommendations made by CDAC shall be non-binding because stakeholders and parties retain formal dispute resolution options at the Commission.<sup>248</sup>

In comments on the Draft Resolution, the Joint Commenting Parties suggested the use of an enforcement mechanism to address issues that may arise regarding data delivery.<sup>249</sup> We find that additional enforcement mechanisms are not needed at this time because the Customer Data Access Committee ordered here could address issues of data delivery. By discussing any problems that arise in a group setting, parties will be able to discuss and propose solutions for any issues that arise. The Commission's Energy Division will oversee the Committee.

PG&E, SCE, SDG&E, with Energy Division guidance, shall host the first Customer Data Access Committee meeting no later than 45 days after this Resolution is issued, and will, at a minimum, meet quarterly for the first two years and as needed thereafter. We expect the Committee will need to meet more often during the first year to address the additional improvements ordered and the implementation issues arising in this Resolution. However, the Committee may also address related issues not directly raised in this Resolution.

## 19 Cost Recovery for Additional Improvements

Decision 17-06-005 increased the flexibility in the funding mechanisms for the implementation of direct participation demand response including streamlining the process for authorization of customer data (the click-through) to facilitate

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<sup>248</sup> See D.13-12-029 discussing expedited dispute resolution in the direct participation context and the Rules of Practice and Procedure, California Code of Regulations, Title 20, Division 1, Chapter 1, Article 4 describing formal complaint options.

See also Resolution ALJ-185, approving the Alternative Dispute Resolution program administered by the Administrative Law Judge division of the Commission. More information available at: [http://www.cpuc.ca.gov/alternative\\_dispute\\_resolution/](http://www.cpuc.ca.gov/alternative_dispute_resolution/)

<sup>249</sup> Joint Commenting Parties Comments on the Draft Resolution at 9.



enrollment in third-party Demand Response Provider programs, and increasing the registrations in the CAISO wholesale market. In accordance with that Decision, here we order PG&E, SCE, and SDG&E to file Advice Letters to implement additional improvements as discussed in this Section and throughout this Resolution. Further, we order the Utilities to file an application seeking cost recovery for additional improvements to the click-through authorization process, including API Solution 1, and any additional improvements.

Originally, D.16-06-008 ordered the Utilities to file a consensus proposal to improve the click-through authorization process,<sup>250</sup> but the Decision left ambiguous how the Utilities could recover costs. The Decision allowed the Utilities to request funding through a Tier 3 Advice Letter process for “increasing customer participation registrations,” and set a cap for each utility.<sup>251</sup> The decision required that any funding for “advancements” of direct participation demand response that were needed beyond these caps should be requested in the 2018-22 portfolio applications, the mid-cycle review, or subsequent program year applications.<sup>252</sup>

D.17-06-005 clarified the purposes for which Utilities could request funding through and removed the limitation that required requests for funding be included in the demand response portfolio applications. D.17-06-005 PG&E, SCE, and SDG&E may file Tier 3 Advice Letters to recover costs related to the click-through authorization process. The cap for this purpose is \$5.6 million for PG&E, \$1.5 million for SCE, and \$4.9 million for SDG&E.<sup>253</sup> These caps represent costs included in the Advice Letters, and the caps have already been reached through the approvals in this Resolution.

In addition, D.17-06-005 specified other purposes for which Utilities may request Tier 3 Advice Letter cost recovery are:

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<sup>250</sup> D.16-06-008 at Ordering Paragraph 10.

<sup>251</sup> *Id.* at Ordering Paragraph 13.

<sup>252</sup> *Id.* at Ordering Paragraph 12.

<sup>253</sup> D.17-06-005 at Ordering Paragraph 2, modifying Ordering Paragraph 12 of D.16-06-008.

“funding for additional improvements in Rule 24/32 implementation beyond the improvements requested in the Advice letter ordered in Ordering Paragraph 10, including but not limited to enrollment process improvements and increasing customer participation registrations in the California Independent System Operators [CAISO] market.”<sup>254</sup>

Therefore, given the increased flexibility of the funding cap, we order PG&E, SCE and SDG&E to file one or more Advice Letter(s) as described in Table 3 below, to implement the modifications to OAuth Solution 3, the performance metrics, and other minor improvements that were not scoped in the extant Advice Letters and are ordered in this Resolution. The Utilities shall work with the parties and any other interested stakeholders in the Customer Data Access Committee to scope out requirements, and develop a consensus proposal(s).

Finally, D.17-06-005 removed limitations in D.16-06-008 that would have required all activities related to third-party demand response and Rule 24/32 direct participation to be requested in the demand response portfolio program cycle, and removed the requirement that the Utilities wait for Commission directive before filing mass market applications to increase customer participation registrations in the CAISO wholesale market.<sup>255</sup> These flexibilities will allow the Utilities to make improvements to the click-through authorization process, increasing Rule 24/32 registrations, and implement other changes to support a robust third-party market.

Table 2 below provides additional clarity.<sup>256</sup>

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<sup>254</sup> *Id.* at Ordering Paragraph 13, modifying Ordering Paragraph 13 of D.16-06-008.

<sup>255</sup> *Id.* at Ordering Paragraph 3, modifying Ordering Paragraph 12 of D.16-06-008.

<sup>256</sup> Figure 1, “Explanation of Funding Sources,” D.17-06-005 at 16.

**TABLE 2**  
*Funding Mechanisms and Budgets Remaining*

<b>Purpose for Funding D.16-06-008 as Modified by D.17-06-005</b>	<b>Funding Mechanism</b>	<b>Funding Caps (in Millions)</b>	<b>Remaining Budgets<sup>257</sup></b>
<i>Ordering Paragraph 10:</i> To implement the click-through authorization process, as approved in this Resolution.	Tier 3 Advice Letters: PG&E 4992-E SCE 3541-E SDG&E 3030-E	PG&E: \$ 5.6 SCE: \$ 1.5 SDG&E: \$ 4.9	None
<i>Ordering Paragraph 13:</i> Improvements for direct participation beyond those requested in the Advice Letters. <sup>258</sup>	Additional Tier 3 Advice Letters <sup>259</sup>	PG&E: \$ 10.39 SCE: \$ 3.2 SDG&E: \$ 4.9	PG&E: \$ 8.476 SCE: \$ 3.2 SDG&E: \$ 1.847
<i>Ordering Paragraph 12:</i> Increasing enrollments with click-through improvements not possible within Advice Letter caps and mass market requirements.	New Application (No need to wait for Commission directive)	None	Subject to Commission approval through an application proceeding.

As discussed throughout this Resolution, we find it necessary to improve the click-through authorization process beyond what was proposed in the Advice

<sup>257</sup> Without prejudging the outcome, budgets remaining described here assume pending CAISO registration Advice Letters are approved as proposed. PG&E AL 5014-E requested \$1.914 million; SDG&E AL 3041-E requested \$3.053 million; and SCE AL 3553-E requested no additional funds.

<sup>258</sup> These purposes include but are not limited to (1) improvements to the click through authorization process, (2) activities to increase enrollments in third-party programs, and (3) increases in customer registrations in the CAISO wholesale market.

<sup>259</sup> The CAISO registration Advice Letters (PG&E AL 5014-E, SCE AL 3553-E, and SDG&E AL 3041-E) are examples of those filed for additional improvements.

Letters. Table 3 below describes the timing for the meetings and Advice Letter filings ordered in this Resolution. Advice Letter filings requesting cost recovery shall be Tier 3. All others shall be Tier 2.

**TABLE 3**<sup>260</sup>*Schedule of Advice Letter Filings and Meetings*

	<b>45 Days</b>	<b>60 Days</b>	<b>90 Days</b>	<b>120 Days</b>
<b>Filings</b>		<ul style="list-style-type: none"> <li>• Expansion of the Data Set (SDG&amp;E)</li> <li>• Short Synchronous Data Set (SDG&amp;E)</li> <li>• Email Notification (if needed, SDG&amp;E, SCE)</li> </ul>	<ul style="list-style-type: none"> <li>• Proposal for Performance Metrics Website</li> </ul>	<ul style="list-style-type: none"> <li>• CISR-DRP and Rule 24/32 Updates</li> <li>• Revocation in My Account or Green Button platform (if needed, SCE)</li> <li>• Revocation in click-through within cap</li> <li>• Other technical features or improvements within cap</li> </ul>
<b>Meetings</b>	First meeting Customer Data Access Committee		Meeting with Distributed Energy Resource providers to “future-proof” solution(s)	

<sup>260</sup> These activities are in addition to the phasing described in Section 17 - Phase 1 in six months, Phase 2 in nine months, and Phase 3 in fifteen months. Activities refer to all three Utilities unless otherwise noted. Some filings are optional as indicated, depending upon if the Utility needs additional funding.

PG&E AL 4992-E, SCE AL 3541-E, and SDG&E AL 3030-E/KJS

The Utilities shall also include additional improvements in the Advice Letter filings within the budget caps. All other improvements as determined by the Customer Data Access Committee shall be included in an application filed no later than fifteen months from the approval of this Resolution.

The applications shall contain:

- a proposal to expand the click-through solution(s) to other distributed energy resource and energy management providers;
- a cost estimate and proposal for API Solution 1;
- a cost estimate and proposal for Synchronous data of the complete and expanded data set within ninety seconds;
- improvements to the authorization process that may have the effect of increasing customer enrollment in third-party demand response programs;
- improvements in data delivery processes;
- upgrades to the information technology infrastructure needed for click-through authorization processes;
- additional functionalities for click-through authorization processes proposed in the Customer Data Access Committee;
- resolution of implementation issues related to OAuth Solution 3 or API Solution 1 raised by stakeholders in the Customer Data Access Committee;
- costs for integrating the CISR-DRP Request Form terms and conditions into the Utility Green Button platforms – ShareMyData, Green Button Connect, or Customer Energy Network;<sup>261</sup> and

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<sup>261</sup> Currently, all three Utilities provide customers the option to authorize through their Green Button platform, but the CISR-DRP terms and conditions are not included. Including the CISR-DRP Request Form terms and conditions would limit customer confusion in cases where a customer seeks to authorize multiple Distributed Energy Resource providers, and advance the D.16-09-056 principle of promoting customer choice.

- publication of customer friendly information on the Utility website including, information about Rule 24/32, and instructions on how to authorize data access or revoke authorization.

## **COMMENTS**

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this Resolution was neither waived nor reduced. Accordingly, this draft Resolution was mailed to parties for comments on July 11, 2017.

The Draft Comment Resolution E-4868 was published on July 11, 2017. The Joint Commenting Parties,<sup>262</sup> OhmConnect, Inc. (“OhmConnect”), and all three Utilities timely submitted comments on the Draft Resolution on July 31, 2017. Comments are addressed here and throughout the resolution as indicated.

*Alternative Authentication Credentials:* The Joint Commenting Parties urge the Commission to make a decision on the precise credentials that should be used, with a preference for the customer name, account number and zip code.<sup>263</sup> SDG&E and PG&E urge the Commission to reconsider the prohibition on the use of the Social Security or Federal Tax Identification numbers.<sup>264</sup> Further, SDG&E suggests that the issue be considered in a stakeholder working group.<sup>265</sup>

We decline to determine the specific credentials. We reaffirm that the Social

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<sup>262</sup> The Joint Commenting Parties include the Joint Demand Response Parties (CPower, EnerNOC, and EnergyHub), as well as the California Efficiency + Demand Management Council, Mission:Data Coalition, and Olivine, Inc..

<sup>263</sup> Joint Commenting Parties Comment on Draft Resolution at 4-5.

<sup>264</sup> SDG&E Comment on the Draft Resolution at 1-3; and PG&E Comments on Draft Resolution E at 3-4.

<sup>265</sup> SDG&E Comments on Draft Resolution at 3.

Security Number and Tax Identification Number are numbers, which generally, should only be used for purposes of employment, not for enrollment in a demand response program.

*Cost of Data:* The Joint Commenting Parties request again that the Commission declare that the Utilities provide at no charge to third-party Demand Response Providers, all “usage and related information necessary for increasing customer participation in EE or DR.”<sup>266</sup> We decline to make a determination on this issue because insufficient information was provided regarding the current charges and costs that third-party Demand Response Providers must pay now. It is not possible to assess the reasonableness of a cost without more information.

*Reporting Performance Metrics:* PG&E and SCE prefer monthly reporting. PG&E explains that it has sought to resolve issues quickly and therefore does not need to report the performance of the click-through solution(s) on a daily basis.<sup>267</sup> SCE objects to the requirement that data delivery performance be reported daily, and believes that the costs of implementation are too high.<sup>268</sup> We find that the frequency of performance reporting on data delivery can be determined by stakeholders in the Customer Data Access Committee, and then filed in a consensus report as directed in Section 19. However, we affirm that reporting of performance metrics is necessary to protect the ratepayer investment in the click-through solution(s). We therefore only adjust the timing and allow PG&E and SCE to implement their websites by Phase 3 as described in Section 17.

*API Solution 1 and “Decoupling” the Solutions:* The Joint Commenting Parties request a faster timeline for filing the Application with a cost estimate on API Solution 1.<sup>269</sup> Both PG&E and SCE expressed concerns about staff resources and working on OAuth Solution 3 and API Solution 1 concurrently.<sup>270</sup> PG&E is

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<sup>266</sup> Joint Commenting Parties Comment on the Draft Resolution at 9-10.

<sup>267</sup> PG&E Comments on the Draft Resolution at 3.

<sup>268</sup> SCE Comments on the Draft Resolution at 5-6.

<sup>269</sup> Joint Commenting Parties Comment on the Draft Resolution at 10-11.

<sup>270</sup> PG&E Comments on the Draft Resolution at 8; and SCE Comments on the Draft Resolution at 2-3.

concerned about timing and requests that the Application for API Solution 1 be “decoupled” from the Application for improvements to OAuth Solution 3.<sup>271</sup> Additionally, SCE requests indemnification from liability because of security concerns.<sup>272</sup> We decline to indemnify the Utilities because the Customer Data Access Committee may be able to find technical solutions to address any security concerns as described in Section 14. Further, API Solution 1 will not be implemented until the Commission makes a determination in the Application ordered by this Resolution as described in Section 19. Therefore, SCE may raise the issue of indemnification there. We decline to decouple the Application for API Solution 1 from the improvements to OAuth Solution 3 and expanding the solution to other distributed energy resource providers. We also decline to move up the required filing date for the Application on API Solution 1. It will be more efficient to file one Application given that the solutions are so related.

*Customer Friendly Information on Rule 24/32 Websites:* PG&E requests the removal of a requirement for the Applications ordered in Section 19 regarding customer friendly information about Rule 24/32. PG&E states that the requirement is very similar to the OhmConnect Marketplace proposed in the 2018-22 Application 17-01-012 et. al.<sup>273</sup> We decline to remove the section entirely, but revise the requirement because we find that more customer friendly Rule 24/32 websites will help inform customers about Rule 24/32, and about how to revoke authorization. Therefore, we change the requirement from:

“publication of customer friendly information prominently on the Utility website including, a list of Commission-registered third-party demand response providers with contact information, and instructions on how to authorize data access or revoke authorization.”

to:

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<sup>271</sup> PG&E Comments on the Draft Resolution at 2.

<sup>272</sup> SCE Comments on the Draft Resolution at 2.

<sup>273</sup> PG&E Comments on the Draft Resolution at 11.



“publication of customer friendly information on the Utility website including, information about Rule 24/32 and instructions on how to authorize data access or revoke authorization.”

*Other Granted Requests for Modifications:* There were several other minor requests for modifications in the Comments on the Draft Resolution that were granted, but not discussed throughout the Resolution including:

- “Enrollment”: PG&E and SCE requested the removal of language that imposes a responsibility on the Utility to increase enrollments in third-party programs<sup>274</sup> in Section 19, “improvements to increase customer enrollment in third-party demand response programs.” The Resolution therefore clarifies that these improvements would better the click-through authorization process, which could have the effect of increasing enrollment.
- Customer Data Access Committee Feedback “in time”: PG&E is supportive of the ongoing feedback mechanism through the Customer Data Access Committee described in Section 18, but is concerned about receiving feedback after it has already developed the requirements of a particular technical feature, because this could lead to delay and going outside of the budget.<sup>275</sup> Therefore, we added “timely” throughout the Resolution wherever the issue of stakeholder input was discussed in order to clarify that input must be timely in order to be properly incorporated by the Utility.

## **FINDINGS**

1. PG&E AL 4992-E, SCE AL 3541-E and SDG&E AL 3030-E require improvements beyond the proposals in the filings as described herein.

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<sup>274</sup> PG&E Comments on the Draft Resolution at 10; and SCE Comments on the Draft Resolution at 6.

<sup>275</sup> PG&E Comments on the Draft Resolution at 11.

2. The general principle that alternative authentication credentials shall be limited to information that is easily available to the customer and the specific credentials should be no more onerous than those required for a similar online utility transaction is reasonable.
3. Providing any part of a social security number or a federal tax identification number is overly burdensome and would create additional barriers for joining third-party demand response programs.
4. All customer classes must have the ability to use the alternative authentication credentials function of the click-through authorization process.
5. The customer should be able to authorize ongoing data transfers to the Demand Response Provider of their choice regardless of whether the customer identity is verified using the utility login and password or alternative authentication credentials.
6. Dual authorization of two third-party demand response providers is reasonable and consistent with both D.16-06-008 and D.16-09-056.
7. SCE's request to roll out dual authorization on the CISR and the online process at the same time is reasonable.
8. There has not been sufficient information provided to support a requirement for more than two authorized parties within a single authorization transaction.
9. PG&E, SCE, and SDG&E proposals to minimize clicks and screens in the OAuth Solution 3 click-through authorization process, as modified in the reply comments are reasonable.
10. Minimizing clicks and screens in the click-through authorization process creates a streamlined process as ordered by D.16-06-008.
11. The user experience requirements in Appendix E of the Informal Status Report are reasonable.
12. Pre-populating the click-through authorization process will reduce customer fatigue and drop off in compliance with D.16-06-008.
13. Displaying the terms and conditions with a scroll bar or requiring customers to click on a link with pop-out terms and conditions will likely lead to increased customer abandonment.

14. Customer fatigue is reduced if the click-through authorization screens are written in clear and concise language, with less formal legal language.
15. Existing ShareMyData, Customer Energy Network, and Green Button Connect authorization platforms do not provide a seamless user experience and cause customer fatigue.
16. The parties concern about the mobile user experience is reasonable.
17. Third-party providers and other interested parties should be able to provide meaningful and timely input on the mobile application for the click-through solution. Focus groups and content sharing will not provide sufficient opportunities for ongoing feedback.
18. There is a difference between websites that are “mobile device capable” and websites that are “optimized for mobile devices.”
19. The customer, not the Utility is in the best position to determine whether the length of authorization offered by the Demand Response Provider suits their needs.
20. SDG&E’s technical specifications for the length of authorization described in Section 6 herein most coincide with the options discussed in the working group.
21. Allowing customers to choose between either a specific end date or an indefinite timeframe for authorization increases customer choice, removes barriers to customer data access, and demonstrates a preference for third-party demand response providers.
22. SDG&E’s proposal for notifying all parties of the successful completion of the authorization with a system generated email, including up to two demand response providers and the customer, is reasonable.
23. Accepting three different forms of notification of successful authorization could be confusing, burdensome, and inefficient for third-party demand response providers.
24. It is reasonable to allow both customers and demand response providers to revoke authorization and stop the flow of data from the Utility to the third-party.

25. Creating a variety of methods for customers and third-party demand response providers to revoke authorization promotes customer choice by allowing a customer to easily un-enroll from one demand response provider.
26. A customer should be able to revoke authorization using their Utility MyAccount, the Utility Green Button platform, the click-through authorization process, on the third-party demand response providers' website, using the paper Customer Information Service Request Demand Response Provider form, or by contacting the Utility.
27. Online solutions including the click-through authorization process are dynamic and therefore may need future updates and improvements. The Customer Data Access Committee established herein, is an appropriate place to address technical improvements.
28. The OAuth 2.0 standard or subsequent standard agreed upon by the Customer Data Access Committee will provide all parties with a uniform approach which will allow third-party Demand Response Providers to more efficiently utilize the click-through authorization process.
29. Customizing the timeframe of any particular customer is a useful feature.
30. The approaches taken by SCE and PG&E to expand the Rule 24/32 data set are reasonable.
31. It is reasonable to exclude PDF copies of customers' bills, payment information, data that is not typically stored, and gas service data.
32. It is reasonable to require all three Utilities to include the Customer Class Indicator in order to comply with D.16-09-056, Resolution E-4838, and Demand Response Auction Mechanism requirements.
33. The comment SDG&E made at the January 9, 2017 workshop describing data beyond "customer usage data" as proprietary ignores the customer's own interest in their energy related data.
34. The customer's interest in accessing and determining to whom their energy-related data should be disclosed could be limited if the Utility only releases "usage data."
35. The grammatical placement of "a customer's" in Public Utilities Code § 8380 implies that the customer has an interest in their energy related data.

36. Expanding the data set helps achieve the goal and principles identified in D.16-09-056 of increasing customer choice, eliminating barriers to customer data access, developing a competitive market with a preference for third-party demand response providers, and supporting renewable integration and emission reductions.
37. Rule 24/32 already requires the Utilities to release data beyond “customer usage data.”
38. Limiting the definition of data that Utilities must release to data used for “direct participation” imposes barriers to data access.
39. D.16-06-008 found that direct participation is evolving and should be improved. Expanding the data set will improve direct participation.
40. D.16-06-008 directed Utilities to streamline and simplify the direct participation enrollment process, including adding more automation, mitigating enrollment fatigue, and resolving any remaining electronic signature issues. Expanding the data set adds more “automation” and is within the scope of the Rule 24/32 Application 14-06-001 et. al. proceeding and the Advice Letter implementation ordered in D.16-06-008, and the Customer Data Access Committee established in this Resolution.
41. Progress must be made for demand response use cases before the click-through authorization process(es) can be expanded to other distributed energy resource and energy management providers.
42. Limiting data set to data only for “direct participation” is contrary to the D.16-09-056 principle of eliminating barriers to data access. The adopted principle of eliminating barriers to data access necessitates expanding the Rule 24/32 data set.
43. The expanded data set provides data to third-party demand response providers that is needed for (1) direct participation integration into the CAISO wholesale market, (2) essential Demand Response Provider business practices, and (3) providing a successful customer experience.
44. Requiring third-party demand response providers to obtain data from other sources including directly from the customer is extremely unreasonable and burdensome. Requesting data from the customer does not “streamline and

simplify the direct participation enrollment process,” nor does it add more automation, or mitigate enrollment fatigue as directed by D.16-06-008.

45. Ratepayers paid for the cost of Advance Metering Infrastructure, as well as collecting, storing, and managing customer data. An expanded data set will allow customers to benefit from these existing investments and provide them with more choices for demand response.
46. PG&E, SCE, and SDG&E propose reasonable budgets for expanding the data set.
47. Timely data delivery is necessary for providing a positive customer experience, integrating with the CAISO wholesale market and determining eligibility for third-party demand response programs.
48. The cost of providing ninety second expanded data delivery is unknown.
49. PG&E and SCE’s proposals for providing a shorter data set within an average of ninety seconds from when the Demand Response Provider requests the data are reasonable.
50. Two days is a reasonable timeframe for delivering the complete expanded data set in the vast majority of cases.
51. The Commission has approved various fees that PG&E, SCE, and SDG&E may recover from third-party demand response providers as described herein.
52. This Resolution does not approve any additional fees that the PG&E, SCE, or SDG&E can recover from third-party demand response providers.
53. Insufficient information was provided regarding the charges that third-party Demand Response Providers pay now in order for the Commission to assess the reasonableness of those charges.
54. Fees by PG&E, SCE, or SDG&E to third-party demand response providers that are not already formally approved require Commission review through an Advice Letter or some other Commission process.
55. SDG&E’s proposal for reporting performance metrics of OAuth Solution 3 is reasonable.
56. A webpage would act as a self-enforcement mechanism because Utilities will be motivated to resolve any reported problems quickly. A webpage is

reasonable because it would provide performance metrics on a real-time or near real-time but no less frequently than daily basis.

57. Monthly or quarterly reporting would not meet the objective of flagging any performance issues and quickly resolving these problems.
58. Utility webpages meet the objectives of D.16-06-008 by ensuring the performance of the solution is effective which adds to a streamlined customer experience, and a more automated solution.
59. The reporting metrics listed in the Informal Status Report and in Section 13 are reasonable.
60. It is efficient to report monthly aggregated performance data as part of the Quarterly Report Regarding the Status of Third-Party Demand Response Direct Participation in order to capture performance data over time, and it is reasonable to continue to file the report through 2020.
61. It is reasonable to monitor other aspects of Rule 24/32 operations such as data delivery time, the frequency of ongoing data delivery, and delivery time for missing or gaps in data or other metrics as determined by the Customer Data Access Committee.
62. It is more prudent to begin evaluating API Solution 1 now, instead of waiting until an evaluation on OAuth Solution 3 is complete.
63. In order to determine whether API Solution 1 comports with Commission Privacy Rules, the details and technical specifications of the solution must be developed.
64. It is reasonable for the non-Utility participants of the Customer Data Access Committee to develop detailed business requirements for API Solution 1. The Utilities need not begin work on the business requirements until non-Utility stakeholders have developed a detailed list.
65. Once cost estimates for API Solution 1 are filed in an application, the Commission can properly evaluate whether API Solution 1 would be an efficient use of ratepayer resources.
66. It is more efficient to file only one application for API Solution 1, additional improvements to OAuth Solution 3, and expanding the solutions to other distributed energy resources.

67. The issue of indemnification need not be determined now and would be more appropriately addressed in the Application proceeding ordered in this Resolution.
68. SDG&E's approach of incorporating flexibility into the architecture and design of the click-through solution(s) for application to distributed energy resource and other third-party providers in the future is reasonable.
69. Supporting one third-party that provides multiple services is consistent with Commission policy around integration including D.07-10-032 and D.08-09-040, as well as research studies such as the Demand Response Potential Study.
70. Taking steps now to plan for the potential future expansion of the click-through solution(s) to other distributed energy resources will protect the ratepayer investment and "future-proof" the solution(s).
71. Incorporating flexibilities into the architecture of the click-through solution(s) are likely easy to plan for since Utility Green Button platforms already allow customers to share data with third-party distributed energy resource providers.
72. Holding a meeting to ensure that the data sets needed by distributed energy resource and energy management providers are incorporated into the click-through authorization solution(s) is reasonable.
73. Clarifying a pathway for expanding the solution to other distributed energy resource and energy management providers will alleviate procedural uncertainty and allow issues of customer data access to be discussed in a broader forum.
74. Remaining on schedule for the initial roll-out of the click-through authorization solution for Demand Response Providers will allow progress to be made on demand response and positively impact enrollment in third-party demand response provider programs for the 2018 demand response auction mechanism.
75. It is reasonable to use the click-through authorization process for Community Choice Aggregation and Direct Access customers when the Utility is the Meter Data Management Agent.



76. It is reasonable to allow the Utilities to provide the expanded data set to Demand Response Providers for Community Choice Aggregation and Direct Access customers.
77. The Utilities proposals to phase their click-through solutions are reasonable, but a more aggressive timeline and certain modifications are needed to ensure sufficient progress is made.
78. The use of Generally Applicable Accounting Procedures, and the categorization of a portion of the costs as capital expense for software is reasonable.
79. It is reasonable for Phase 1 to be completed within six months of the approval of this Resolution; Phase 2 within ten months; and Phase 3 within fifteen months.
80. SCE's proposal of one-time data transfer functionality is not needed at this time.
81. The complete implementation of Alternative Authentication for ongoing data is reasonable by Phase 3.
82. The parties and stakeholders need a forum to discuss concerns with the implementation of the click-through authorization solution(s), incorporate ongoing and timely feedback into the design and development of the solution(s), and resolve disputes informally.
83. The Energy Data Access Committee addresses technical issues related to access to aggregated customer data, especially the processes for requesting data outlined in D.14-05-016.
84. D.16-06-008 ordered PG&E, SCE and SDG&E to form the click-through working group and develop consensus proposals in order to file the January 3, 2017 Advice Letters, but no forum or process for ongoing implementation was established in that Decision.
85. The Energy Data Access Committee provides a good model for the Customer Data Access Committee.
86. Because the Energy Data Access Committee only deals with issues of requests for aggregated customer data, and the Customer Data Access Committee will deal with issues of customer specific data, the Committee will not duplicate

efforts. Close coordination on issues that relate to the work of both groups will ensure efficiency.

87. It is reasonable for the Utilities to manage the Customer Data Access Committee, with oversight by the Commission's Energy Division.
88. Publishing meeting notes will facilitate public participation.
89. The Customer Data Access Committee shall be neither adjudicatory, nor advisory, so participation will not be compensated.
90. No additional enforcement mechanism is needed to address issues of data delivery because the Customer Data Access Committee, overseen by the Commission's Energy Division, may help parties address any issues that arise and come to agreements regarding potential solutions.
91. Parties retain formal dispute or policy resolution options at the Commission and recommendations made by the Customer Data Access Committee are non-binding and informal.
92. The Customer Data Access Committee will likely need to meet more than once a quarter during the first year because of the additional improvements addressed in this Resolution, but need not be limited by issues herein.
93. Prior to modification, D.16-06-008 left ambiguous how PG&E, SCE and SDG&E could recover costs for the click-through authorization process, and the Utilities were limited to request additional funding for advancements in direct participation to the 2018-22 portfolio application or mid-cycle review.
94. D.17-06-005 clarified that PG&E, SCE, and SDG&E may file Tier 3 Advice Letters to recover costs related to the click-through authorization consensus proposals at a cap of \$5.6 million for PG&E, \$1.5 million for SCE, and \$4.9 million for SDG&E. The caps for the click-through authorization consensus proposals have been reached.
95. D.17-06-005 clarified that PG&E, SCE, and SDG&E may file Tier 3 Advice Letters up to a cap to recover costs related to "additional improvements" in direct participation demand response implementation including the click-through authorization process, activities to help increase enrollments in third-party demand response programs, and costs for increasing customer registrations in the CAISO wholesale market. From the caps for additional improvements, assuming Tier 3 Advice Letters for PG&E 5014-E requesting

\$1.914 million and SDG&E 3041-E requesting \$3.053 million are approved, PG&E has \$8.476 million remaining; SCE has \$3.2 million remaining; and SDG&E has \$1.847 million remaining.

96. D.17-06-005 increased the flexibility of future funding requests by removing the requirement that PG&E, SCE, and SDG&E wait for Commission directive before filing an application to support CAISO registrations for the mass market, or wait until the 2018-22 mid-cycle review before filing an application for funding requests for additional improvements.
97. It is necessary to improve the click-through authorization process beyond the proposals in Advice Letters PG&E AL 4992-E, SCE AL 3541-E and SDG&E AL 3030-E.

**THEREFORE IT IS ORDERED THAT:**

1. PG&E AL 4992-E, SCE AL 3541-E and SDG&E AL 3030-E and included budgets are approved as modified herein. The Utilities shall use Generally Accepted Accounting Principles. The Utilities may categorize a portion of costs as capital expenditures where applicable under Commission rules.
2. In addition to an authentication process that utilizes the Utility login and password, PG&E, SCE and SDG&E shall incorporate alternative authentication credentials into the click-through authorization process. Alternative authentication shall be available to all customer classes, and customers must be able to authorize ongoing data for purposes of direct participation demand response. The alternative authentication credentials shall be limited to information that is easily available to the customer, and the specific credentials shall be no more onerous than those required for a similar online utility transaction. Authentication credentials shall not include any part of the social security or federal tax identification numbers.
3. PG&E, SCE, and SDG&E shall incorporate dual authorization for their online click-through authorization process(s) whether the customer uses a Utility login and password, or alternative authentication credentials. PG&E and SDG&E shall continue to make available dual authorization on the paper CISR-DRP Request Form. SCE may wait to implement dual authorization on the CISR-DRP Request Form until Phase 1 of the click-through has been implemented.

4. PG&E, SCE, and SDG&E shall design and implement the OAuth Solution 3 click-through authorization process to have a maximum of two screens and four clicks for the “quick path” authorization flow. The “quick path” shall be defined as a user flow in which the customer:

- 1) was not already logged into the utility account;
- 2) Does not click the “forgot your password” link;
- 3) Does not initiate a new online Utility account registration;
- 4) Has a single service account, or intends to authorize all service accounts;
- 5) Accepts the default timeframe for authorization;
- 6) Does not click to read the detailed terms and conditions; and
- 7) Uses either utility login credentials or alternative authentication.

Further, in all cases except for when the customer clicks the “forgot your password” link or initiates a new online Utility account registration, the click-through authorization process shall be completed in two screens. The Utilities shall ensure that there is a clear path back to the authorization flow wherever possible, in cases where a customer somehow gets out of the flow. The Utilities shall adhere to the OAuth 2.0 standard or subsequent standard agreed upon by the Customer Data Access Committee in the implementation of OAuth Solution 3.

5. PG&E, SCE, and SDG&E shall ensure that the authorization screens and the terms and conditions are written in clear and concise language. The terms and conditions shall be summarized, preferably, with a link to the full terms and conditions, and shall not make use of a scroll bar, or pop-out that a customer is required to view before approving the authorization. The Utilities shall incorporate timely feedback about the display of terms and conditions from the parties and any other interested stakeholders in the Customer Data Access Committee. The Utilities and stakeholders shall work together to reduce the potential for customer abandonment resulting from user experience problems. There shall be a clear path back to the authorization screen after the customer has completed reading the terms and conditions.

6. The click-through authorization solution(s) shall perform seamlessly on mobile devices and be optimized for mobile applications. The Utilities shall incorporate timely feedback from participants in the Customer Data Access Committee established herein, when assessing the final design and determining whether the authorization process(s) are sufficiently optimized for mobile devices.
7. PG&E, SCE and SDG&E shall allow customers to choose an indefinite timeframe for authorization on both the paper CISR-DRP Request Form and the click-through authorization solution(s).
8. Demand response providers shall be given the option of pre-registering or pre-selecting their preferred timeframe to present to their customers. This may include a minimum end date, a preferred end date, or indefinite. Either end date can include a specification of an indefinite timeframe. PG&E shall provide the options described herein by Phase 3. Like PG&E, SCE and SDG&E shall develop a feature that allows the Demand Response Provider to customize the length of authorization of any individual customer. If additional funding is needed, Utilities may file a Tier 3 Advice Letter as described in Ordering Paragraph 28 or 29.
9. PG&E, SCE, and SDG&E shall send an automatically generated electronic notification such as email, upon successful completion of a customer authorization or upon modification of an existing authorization to the third-party demand response provider(s) and to the customer. The customer shall not be required to respond to the email as part of the authentication process unless required to do the same for a similar utility as described in Section 1 and Ordering Paragraph 1.
10. PG&E, SCE, and SDG&E shall build into existing infrastructure, the MyAccount and/or the Green Button platform, the ability for customers to revoke authorization for sharing data with third-party demand response providers. If additional funding is required, the Utilities may request funding for improvements as described in Table 3 herein and Ordering Paragraph 28.
11. Third-party demand response providers that utilize the click-through authorization solution(s), shall provide their customers with information about how to revoke authorization, which could include a link and instructions on how to revoke online with the Utility. The instructions shall

be subject to Energy Division review in order to ensure customer protection, as is within the authority and jurisdiction of the Commission.

12. PG&E, SCE, and SDG&E shall permit third-party demand response providers to revoke authorization if they no longer wish to receive customer data, both online and on the paper CISR-DRP Request Form. The Utilities shall file a Tier 2 Advice letter as described in Ordering Paragraph 28 to adopt any changes in Rule 24/32 or the CISR-DRP Request Form that are needed to facilitate Demand Response Provider revocation.
13. PG&E and SCE shall provide an expanded data set to third-party demand response providers after receipt of a valid customer authorization as described in Attachment 1 to this Resolution and in Advice Letters PG&E 4992-E and SCE 3541-E, and Replies to Protests. PDF copies of customer bills, payment information, data that is not typically stored, and data relating to gas service shall be exempt from inclusion in the expanded data set. However, all three Utilities shall include the Customer Class Indicator in order to ensure third-party compliance with Commission rules on prohibited resources, as well as Demand Response Auction Mechanism requirements. If additional funding is required, the Utilities may file Tier 3 Advice Letters in accordance with Ordering Paragraph 28.
14. PG&E, SCE and SDG&E shall expand the data set so that customer's may exercise their interest in accessing and determining to whom their own energy-related data should be disclosed. The expanded data set allows the customer to exercise their right to disclose their data to third-party Demand Response Providers. Customer energy-related data is needed for:
  - 1) direct participation integration into the wholesale market;
  - 2) essential Demand Response Provider business practices; and
  - 3) a successful customer experience.<sup>276</sup>
15. SDG&E's expanded data set shall include the data points described Attachment 1 to this resolution, except those related to PDF copies of customer bills, payment information, data that is not typically stored, and

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<sup>276</sup> OhmConnect Protest to SDG&E at 6 and Appendix A of the Protest.

data relating to gas service. However, SDG&E shall include the Customer Class Indicator in order to ensure third-party compliance with Commission rules on prohibited resources, as well as Demand Response Auction Mechanism requirements. If SDG&E needs to deviate from the list in Attachment 1, it may file a Tier 2 Advice Letter. If additional funding is required, SDG&E may file a Tier 3 Advice Letter in accordance with Ordering Paragraph 28.

16. PG&E shall provide the current Rule 24/32 data set synchronously, within ninety seconds on average, after completion of the click-through authorization process.
17. SCE shall provide a summarized data set as described in its Advice Letter synchronously, within ninety seconds on average, in order to determine a customer's eligibility. SCE is encouraged to provide additional data points within ninety seconds as is feasible. SCE may request additional funding as described in Ordering Paragraph 28 if needed.
18. SDG&E shall file an Advice Letter as described in Table 3 and Ordering Paragraph 28, with a proposal for the delivery of a smaller data set synchronously, within ninety seconds on average. SDG&E should use PG&E and SCE's approaches as a model and provide data that is available on systems integrated with the Customer Energy Network platform.
19. PG&E, SCE, and SDG&E shall deliver a complete expanded data set within two business days after a customer completes the click-through authorization. In each case, the Utility will provide the Demand Response Provider an explanation and an estimated time of resolution for data that cannot be delivered within two business days. The Commission expects that in the overwhelming majority of cases, data will be delivered within two business days. If parties experience persistent problems, the issue should be raised in the Customer Data Access Committee described in Ordering Paragraph 27.
20. PG&E, SCE, and SDG&E shall develop a cost estimate of delivering the entire and expanded data set within ninety seconds. These estimates shall be included in an application for improvements in accordance with this Resolution and Ordering Paragraph 29.
21. PG&E, SCE and SDG&E (the Utilities) shall develop websites for reporting performance metrics. The Utilities shall use the performance metrics listed

herein and in the Informal Status Report. The Utilities shall work with stakeholders in the Customer Data Access Committee to determine additional metrics to monitor Rule 24/32 operations, such as data delivery times. The data shall be reported in real-time or near real-time basis, but no less frequently than daily, with a day's delay. In order to capture performance data on an ongoing basis, the Utilities shall file compliance reports, in a format approved by the Energy Division as part of the Quarterly Report Regarding the Status of Third-Party Demand Response Direct Participation. We order the Utilities to continue filing this report through 2020. The report shall be filed in the most current demand response proceedings and service lists. The Utilities shall use remaining funding under the cap if necessary, and the Tier 3 Advice Letter process described in Table 3 and Ordering Paragraph 28.

22. Non-Utility participants of the Customer Data Access Committee shall begin developing the business requirements and specific technical features of API Solution 1. PG&E, SCE, and SDG&E shall begin work on the business requirements only after a detailed list is presented by non-Utility stakeholders. After the Customer Data Access Committee reaches a consensus, the Utilities shall file application for Commission approval of the proposal to develop API Solution , other improvements to OAuth Solution 3, and expanding the solutions to other distributed energy resources as described in Ordering Paragraph 29.
23. PG&E, SCE, and SDG&E shall take steps to plan for future expansion of the solution(s) to other distributed energy resource and energy management providers now, in order to "future-proof" the click-through authorization solution(s). The Utilities shall incorporate flexibility into the architecture and design of the solution(s) including ensuring that the different data sets available to each different distributed energy resource can be included as an option in the pre-registration process. Utilities shall hold a meeting within ninety days from the approval of this Resolution, that is open to all distributed energy resource, energy management and other third-party providers. The goal will be to ensure that the data sets that these resources need are thought through and built into the architecture of the click-through authorization solution(s).



24. PG&E, SCE, and SDG&E shall include a proposal for expanding the solution(s) to other distributed energy resource and energy management providers in the application for future improvements described herein and in Ordering Paragraph 29. The Utilities shall stick to the phasing schedule described in Ordering Paragraph 26 in order to ensure that progress is first made on demand response.
25. PG&E, SCE, and SDG&E shall allow Community Choice Aggregation and Direct Access customers to use the click-through authorization process including the expanded data sets.
26. PG&E, SCE and SDG&E shall complete OAuth Solution 3 and related data delivery improvements to the click-through authorization process within fifteen months of the approval of this Resolution. Following the adoption of this Resolution, Phase 1 shall be completed within six months; Phase 2 shall be completed within ten months; and Phase 3 shall be completed within fifteen months. The activities that shall be completed by the end of each phase vary by Utility and are given in Table 1 herein.
27. PG&E, SCE, SDG&E, shall host the first Customer Data Access Committee (CDAC) meeting within ninety days from the approval of this Resolution, inclusive of any interested stakeholders regardless of status as providers of demand response. Energy Division staff will have oversight responsibility of the Committee, but it shall be managed by the Utilities and interested stakeholders. The Energy Division may at its discretion assume direct management of the Committee or appoint a working group manager at any time. The objectives of the CDAC will be to address data access issues associated with customer authorizations to third-party providers, including, but not limited to:
- providing timely input into design of OAuth Solution 3 including – the overall design, the connectivity to mobile devices, the links to terms and conditions, the user experience and other technical features;
  - developing proposals for Advice Letter filings requesting funding within the caps including performance metrics for the Utility websites, and additional improvements;
  - developing proposals for the application filing including forming the business requirements for API Solution 1, expanding the click-

through solution(s) to other distributed energy resource and energy management providers, and additional improvements beyond what can be accomplished in the funding caps; and

- informally resolving dispute that may arise among stakeholders.

The CDAC will be separate from the Energy Data Access Committee, but shall coordinate closely on related matters. The CDAC shall meet no later than forty-five days after this Resolution is issued, and will meet, at a minimum, quarterly for the first two years and as needed thereafter. Meeting notes shall be prepared by Utilities and stakeholders and published on a website. The Committee shall meet more often during the first year in order to address the additional improvements ordered and the implementation issues arising in this Resolution.

28. PG&E, SCE and SDG&E shall file Tier 3 Advice Letter(s) within sixty, ninety and one-hundred and twenty days as described in Table 3 herein to request funding for enhancements to OAuth Solution 3 and other improvements that were not scoped in the extant Advice Letters. If funding is not needed, a Tier 2 Advice Letter may be filed. The Utilities shall work with the parties and any other interested stakeholders in the Customer Data Access Committee to scope out requirements and develop consensus proposals.

29. PG&E, SCE, and SDG&E shall file an application no later than fifteen months from the approval of this Resolution seeking cost recovery for the following improvements to the click-through authorization process unless cost recovery was already sought via the Tier 3 Advice Letters in Ordering Paragraph 28:

- a proposal to expand the click-through solution(s) to other distributed energy resource and energy management providers;
- a cost estimate and proposal for API Solution 1;
- a cost estimate and proposal for Synchronous data of the complete and expanded data set within ninety seconds;
- improvements to the authorization process that may have the effect of increasing customer enrollment in third-party demand response programs;
- improvements in data delivery processes;

- upgrades to the information technology infrastructure needed for click-through authorization processes;
- additional functionalities for click-through authorization processes proposed in the Customer Data Access Committee;
- resolution of implementation issues related to OAuth Solution 3 or API Solution 1 raised by stakeholders in the Customer Data Access Committee;
- costs for integrating the CISR-DRP Request Form terms and conditions into the Utility Green Button platforms – ShareMyData, Green Button Connect, or Customer Energy Network; and
- publication of customer friendly information on the Utility website including information about Rule 24/32, and instructions on how to authorize data access or revoke authorization.

This Resolution is effective today.

I certify that the foregoing Resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on August 24, 2017; the following Commissioners voting favorably thereon:

/s/TIMOTHY J. SULLIVAN

TIMOTHY J. SULLIVAN

Executive Director

MICHAEL PICKER

President

CARLA J. PETERMAN

LIANE M. RANDOLPH

MARTHA GUZMAN ACEVES

CLIFFORD RECHTSCHAFFEN

Commissioners

**ATTACHMENT 1***Comparison of Current and Expanded Data Set  
Southern California Edison (SCE)*

<b>SCE CURRENT RULE 24 DATA ELEMENTS</b>	<b>SCE EXPANDED (FUTURE) RULE 24 DATA ELEMENTS</b>
<b>Account Elements</b>	<b>Account Elements</b>
Account name (ACME INC. or JOE SMITH)	Account address (123 OFFICE ST...)
	Account ID (2-xxx...)
<b>Service Elements</b>	<b>Outage block (A000)</b>
SCE Unique Identifier	<b>Service Elements</b>
Service ID (3-xxx...)	Known future changes to Status of Service
Service address (123 MAIN ST #100...)	Service tariff options (CARE, FERA, etc.)
	Known future changes to Sublap
Service tariff (D-TOU)	Known future changes to Pricing Node
Service voltage (if relevant)	Local Capacity Area
Service meter number (if any)	Known future changes Local Capacity Area
Meter Read Cycle	Customer Class Indicator
Sublap	<b>Bill tier breakdown (if any)</b>
Pricing Node	Name (Over Baseline 1%-30%)
<b>Billing Elements</b>	Volume (1234.2)
Bill start date	Cost (\$100.23)
Bill end date	<b>Bill TOU kwh breakdown (if any)</b>
Bill total charges (\$)	Cost (\$100.23)
Bill total kWh	<b>Bill demand breakdown (if any)</b>
<b>Bill TOU kwh breakdown (if any)</b>	Cost (\$100.23)
Name (Summer Off Peak)	<b>Bill line items (sum should equal bill total charges above)</b>
Volume (1234.2)	Charge name (DWR Bond Charge)
<b>Bill demand breakdown (if any)</b>	Volume (1234.2)
Name (Summer Max Demand)	Unit (kWh)
Volume (1234.2)	Rate (\$0.032/kWh)
	Cost (\$100.23)

**ATTACHMENT 1**

*Comparison of Current and Expanded Data Set  
Southern California Edison (SCE) (CONTINUED)*

<b>SCE CURRENT RULE 24 DATA ELEMENTS (CONTINUED)</b>	<b>SCE EXPANDED (FUTURE) RULE 24 DATA ELEMENTS (CONTINUED)</b>
<b>Historical Intervals</b>	<b>Tracked line items</b>
Start	Charge name (e.g. Net In/Net Out)
Duration	Volume (1234.2 in kWh)
Volume (1234.2)	Unit (kWh)
Unit (kWh)	Rate (\$0.032/kWh, if any)
<b>Utility Demand Response Programs</b>	Cost (\$100.23)
Program Name	<b>Utility Demand Response Programs</b>
Earliest End Date w/o penalty	Capacity Reservation Level (CRL) for CPP/PDP customers
Earliest End Date regardless of penalty	
<b>Service Providers</b>	DR Program Nomination if fixed
LSE	<b>Service Providers</b>
MDMA	Known future changes to LSE
MSP	
Contact Information for LSE, MDMA, MSP	
<b>DATA ELEMENTS NOT ADDING IN THE FUTURE (SCE)</b>	<b>Service Elements</b>
	<i># of Service Meters</i>
	<i>Standby Rate Option if On-Site Generation (but "S" indicated in rate schedule)</i>
	<b>Historical Bills (PDF)</b>
	<b>Payment Information</b>

**ATTACHMENT 1***Comparison of Current and Expanded Data Set**Pacific Gas & Electric (PG&E)*

<b>PG&amp;E CURRENT RULE 24 DATA ELEMENTS</b>	<b>PG&amp;E EXPANDED (FUTURE) RULE 24 DATA ELEMENTS</b>
<b>Account Elements</b>	<b>Account Elements</b>
Account name (ACME INC. or JOE SMITH)	Account address (123 OFFICE ST...)
<b>Outage block (A000)</b>	Account ID (2-xxx...)
<b>Service Elements</b>	<b>Service Elements</b>
PG&E Unique Identifier	Known future changes to Status of Service
Service ID (3-xxx...)	Service tariff options (CARE, FERA, etc.)
Service address (123 MAIN ST #100...)	Known future changes to Sublap
Service tariff (D-TOU)	Known future changes to Pricing Node
Service voltage (if relevant)	Local Capacity Area
Service meter number (if any)	Known future changes Local Capacity Area
# of Service meters	Standby Rate Option if On-Site Generation
Meter Read Cycle	Customer Class Indicator
Sublap	<b>Bill tier breakdown (if any)</b>
Pricing Node	Name (Over Baseline 1%-30%)
<b>Billing Elements</b>	Volume (1234.2)
Bill start date	Cost (\$100.23)
Bill end date	<b>Bill TOU kwh breakdown (if any)</b>
Bill total charges (\$)	Cost (\$100.23)
Bill total kWh	<b>Bill demand breakdown (if any)</b>
<b>Bill TOU kwh breakdown (if any)</b>	Cost (\$100.23)
Name (Summer Off Peak)	<b>Bill line items (sum should equal bill total charges above)</b>
Volume (1234.2)	
<b>Bill demand breakdown (if any)</b>	Charge name (DWR Bond Charge)
Name (Summer Max Demand)	Volume (1234.2)
Volume (1234.2)	Unit (kWh)
<b>Historical Intervals</b>	Rate (\$0.032/kWh)
Start	Cost (\$100.23)
Duration	
Volume (1234.2)	
Unit (kWh)	

**ATTACHMENT 1***Comparison of Current and Expanded Data Set  
Pacific Gas & Electric (PG&E) (CONTINUED)*

<b>PG&amp;E CURRENT RULE 24 DATA ELEMENTS (CONTINUED)</b>	<b>PG&amp;E EXPANDED (FUTURE) RULE 24 DATA ELEMENTS (CONTINUED)</b>
<b>Utility Demand Response Programs</b>	<b>Utility Demand Response Programs</b>
Program Name	Capacity Reservation Level (CRL) for CPP/PDP customers
Earliest End Date w/o penalty	
Earliest End Date w/o penalty	DR Program Nomination if fixed
<b>Service Providers</b>	<b>Service Providers</b>
LSE	MSP
MDMA	Known future changes to LSE
	Contact Information for LSE, MDMA, MSP
	<b>Tracked line items</b>
	Charge name (e.g. Net In/Net Out)
	Volume (1234.2 in kWh)
	Unit (kWh)
	Rate (\$0.032/kWh, if any)
<b>DATA ELEMENTS NOT ADDING IN THE FUTURE (PG&amp;E)</b>	<b>Historical Bills (PDF)</b>
	<b>Payment Information</b>

**ATTACHMENT 1***Ordered Current and Expanded Data Set**San Diego Gas & Electric (SDG&E)*

<b>ADOPTED SDG&amp;E CURRENT AND EXPANDED RULE 32 DATA ELEMENTS</b>	
<b>Account Elements</b>	<b>Bill tier breakdown (if any)</b>
Account name (ACME INC. or JOE SMITH)	Name (Over Baseline 1%-30%)
Account address (123 OFFICE ST...)	Volume (1234.2)
Account ID (2-xxx...)	Cost (\$100.23)
<b>Outage block (A000)</b>	<b>Bill TOU kwh breakdown (if any)</b>
<b>Service Elements</b>	Name (Summer Off Peak)
SDG&E Unique Identifier	Volume (1234.2)
Service ID (3-xxx...)	Cost (\$100.23)
Service address (123 MAIN ST #100...)	<b>Bill demand breakdown (if any)</b>
Service tariff (D-TOU)	Name (Summer Max Demand)
Service voltage (if relevant)	Volume (1234.2)
Service meter number (if any)	Cost (\$100.23)
# of Service meters	<b>Bill line items (sum should equal bill total charges above)</b>
Meter Read Cycle	
Sublap	Charge name (DWR Bond Charge)
Pricing Node	Volume (1234.2)
Known future changes Status of Service	Unit (kWh)
Service tariff options (CARE, FERA, etc.)	Rate (\$0.032/kWh)
Known future changes to Sublap	Cost (\$100.23)
Known future changes to Pricing Node	<b>Tracked line items</b>
Local Capacity Area	Charge name (e.g. Net In/Net Out)
Known future changes Local Capacity Area	Volume (1234.2 in kWh)
Standby Rate Option if On-Site Generation	Unit (kWh)
Customer Class Indicator	Rate (\$0.032/kWh, if any)
<b>Billing Elements</b>	Cost (\$100.23, if any)
Bill start date	<b>Historical Intervals</b>
Bill end date	Start
Bill total charges (\$)	Duration
Bill total kWh	Volume (1234.2)
	Unit (kWh)



**ATTACHMENT 1***Ordered Current and Expanded Data Set**San Diego Gas & Electric (SDG&E)*

<b>ADOPTED SDG&amp;E CURRENT AND EXPANDED RULE 32 DATA ELEMENTS (CONTINUED)</b>	
<b>Utility Demand Response Programs</b>	<b>Service Providers</b>
Program Name	LSE
Earliest End Date w/o penalty	MDMA
Earliest End Date regardless penalty	MSP
Capacity Reservation Level (CRL) for CPP/PDP customers	Known future changes to LSE
	Contact Information for LSE, MDMA, MSP
DR Program Nomination if fixed	
<b>DATA ELEMENTS NOT REQUIRED TO ADD IN THE FUTURE (SDG&amp;E)</b>	<b>Historical Bills (PDF)</b>
	<b>Payment Information</b>