

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

Order Instituting Rulemaking  
to Advance Demand Flexibility Through Electric  
Rates

Rulemaking 22-07-005  
(Filed July 14, 2022)

Rebuttal Testimony of  
Brian Turner on Behalf of  
Advanced Energy United

June 2, 2023

1 **I. Introduction and Summary**

2 **A. Introduction**

3 Advanced Energy United (“United”) appreciates the opportunity to submit this rebuttal  
4 testimony. United is an industry association that represents the full range of advanced energy  
5 technologies and services, both grid-scale, distributed, and consumer. Our membership includes  
6 over 100 companies with substantial presence in California. United member companies have  
7 substantial interest in this proceeding, especially as providers of energy efficiency technologies  
8 and services, distributed generation and storage resources, advanced electric appliances and  
9 electric transportation, load management technologies and services, advanced grid hardware and  
10 software, and other offerings that impact California ratepayers’ electricity consumption and  
11 costs.

12  
13 **B. Purpose of This Rebuttal Testimony**

14 The purpose of my rebuttal testimony is to respond to the Opening Testimony presenting  
15 Income graduated fixed charge (“IGFC”) proposals from Pacific Gas & Electric Company,  
16 Southern California Edison Company, and San Diego Gas & Electric Company (collectively  
17 “Joint IOUs”), The Utility Reform Network and Natural Resources Defense Council  
18 (“TURN/NRDC”), and the Sierra Club, and to critique the energy policy justifications  
19 underlying these proposals. I suggest that these testimonies err in proposing too many rate  
20 components be treated as fixed costs, and that they neither demonstrate that their proposals  
21 support beneficial electrification nor avoid injury to existing energy efficiency (“EE”) and  
22 distributed energy resource (“DER”) incentives and programs as required by Assembly Bill 205.

1 Finally, I believe these proposals err in not addressing potential consumer confusion and  
2 backlash against high fixed charges.

3 In contrast, I note general support for the IGFC approach and, to a certain extent, cost  
4 components proposed by the California Public Advocates Office (“CalAdvocates”) and Solar  
5 Energy Industries Association (“SEIA”) as more reasonable and gradual steps less likely to  
6 distort the existing incentives for EE and DERs and other state policy goals and programs,  
7 including the planned implementation of the CalFUSE dynamic rates framework.

8 This testimony does not address the important economic and social equity arguments  
9 regarding the IGFC. United is strongly supportive of these goals but does not offer specific  
10 expertise into whether or how they should be pursued through electric ratemaking.

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12 **C. Reason for Rebuttal Testimony**

13 Advanced Energy United did not submit Opening Testimony in Phase 1 of Track A.  
14 United had heretofore been focused on engaging in Track 2 of this proceeding concerning  
15 demand flexibility rate design proposals.

16 However, like many external stakeholders, United was surprised and taken aback by the  
17 degree and pace of change suggested in parties’ opening testimony regarding the IGFC, and the  
18 relative paucity of analysis to support the purported objectives of electrification and climate  
19 change mitigation.

20 United and its members believe electrification as a critical pillar of climate mitigation, in  
21 energy efficiency and load management as key strategies to reduce consumer costs and system  
22 costs, and in distributed energy resources as crucial to improving customers’ control over their  
23 electricity bills and improving grid efficiency. However, we are concerned about the effect that

1 overly high fixed charges and indiscriminate reductions in volumetric rates could have on these  
2 goals. United is engaging on this issue now to highlight the potential threat that these IGFC  
3 proposals pose to demand-side innovation, DER adoption, and general public support for  
4 advanced technologies, electrification, and the clean energy transition.

5

6 **D. Summary of Recommendations.**

7 I recommend that the Commission:

- 8 1. Reject the unreasonably high fixed charge proposals of the Joint IOUs, TURN/NRDC,  
9 and Sierra Club as contrary to Assembly Bill (“AB”) 205 and the Commission’s rate  
10 design principles.
- 11 2. Focus the IGFC components on Marginal Customer Access Charges (MCAC), such as  
12 what was proposed by SEIA and as a starting point in the CalAdvocates proposal,<sup>1</sup> as a  
13 reasonable first step toward establishing fixed charges for residential customers.
- 14 3. Conduct research and pilots to examine the effects of fixed charges on EE, DERs, load  
15 management, and electrification. Over time, as the Commission is able to develop its own  
16 and customers’ understanding of fixed charges and their effects, these charges may be  
17 revisited, and increased if warranted.

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19 **II. Errors and Omissions of Parties’ Opening Testimony**

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21 **A. Parties Fail to Address that High Fixed Charges Are Contrary to California’s**  
22 **Energy Policy Goals**

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<sup>1</sup> Advanced Energy United supports the gradualist approach, focused on MCAC, put forward by CalAdvocates, though not the additional costs (non-bypassable charges and scaled non-marginal distribution costs) that CalAdvocates includes.

1 California has a longstanding and consistent policy of energy conservation, and the  
2 Commission specifically has historically placed high priority on energy conservation as a policy  
3 goal. This policy focus has taken the form of substantial and consistent ratepayer-funded  
4 investments in energy efficiency, customer-sited DERs, and demand response (“DR”) dating  
5 back to the 1970s.<sup>2</sup> These efforts have been spurred both by the state legislature’s long-standing  
6 recognition of the importance of such programs in promoting customer affordability, system  
7 reliability, and environmental benefits,<sup>3</sup> and by the Commission’s own commitment to designing  
8 workable solutions to address the risks and constraints of the modern grid.<sup>4</sup>

9 The legislature has made clear not only that conservation-related programs should be  
10 generously funded, but also that conservation should be prioritized in the state’s loading order.  
11 In 2005, it established the statutory requirement that utilities “shall first meet [their] unmet  
12 resource needs through all available energy efficiency and demand reduction resources that are  
13 cost effective, reliable, and feasible.”<sup>5</sup>

14 AB 327 empowered the Commission to establish a fixed charge of up to \$10/month for  
15 residential customers, but maintained that rates should not “unreasonably impair incentives for  
16 conservation and energy efficiency.” The Commission has a long history of rejecting fixed

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<sup>2</sup> See *Energy Efficiency*, California Public Utilities Commission, <https://www.cpuc.ca.gov/energyefficiency/>;  
*Customer-Sited Renewable Energy Generation*, California Public Utilities Commission,  
<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering>;  
*Demand Response*, California Public Utilities Commission, <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr>.

<sup>3</sup> See, e.g., Assembly Bill No. 1890 (Brulte, 1996) (requiring that utilities collect revenues to fund cost-effective energy efficiency and conservation activities, among other public interest programs); Senate Bill No. 656 (Alquist, 1995) (requiring utilities to develop a standard contract or tariff providing for net energy metering).

<sup>4</sup> See, e.g., *Emergency Load Reduction Program*, California Public Utilities Commission, <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/emergency-load-reduction-program>; *DR Provided by Utilities*, California Public Utilities Commission, <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/dr-provided-by-utilities>.

<sup>5</sup> Cal. Pub. Util. Code § 454.5(b)(9)(C). Added by Senate Bill No. 1037 (Kehoe, 2005).

1 charges specifically because of its concern regarding the potential impact on the conservation  
2 price signal.<sup>6</sup> This policy stance, and the Commission’s recognition of the potential for even a  
3 modest fixed charge to have negative effects on conservation signals, continued after the  
4 legislature’s passage of this language in AB 327.<sup>7</sup>

5 While AB 205 clearly indicates the Commission *should* depart from these past decisions  
6 to an extent by adopting a reasonable residential fixed charge, the Commission should not and  
7 cannot discard its longstanding emphasis on maintaining the conservation price signal. The  
8 language of Section 739.9 still reads that a fixed charge shall, “not unreasonably impair  
9 incentives for conservation [and] energy efficiency.”<sup>8</sup>

10 Instead, the Commission should adopt fixed charges that appropriately balance the  
11 Commission’s core goals of promoting affordability, decarbonization, electrification, and  
12 conservation—goals which are at times in tension with one another. Fixed charges that prioritize  
13 achieving the lowest possible volumetric rate in the name of promoting electrification, over all  
14 other state goals, are at odds with the law and the Commission’s longstanding commitment to,  
15 and significant investment in, encouraging energy efficiency and conservation.

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17 **B. Parties’ Emphasis on IGFC as a Tool for Electrification is Misplaced**

18 The Joint IOUs suggest that AB 205 has shifted California’s and the Commission’s  
19 ratemaking policy prioritization away from conservation and toward electrification. While it is  
20 true that the State of California has begun the important effort of emphasizing and encouraging  
21 programs that will accelerate transportation electrification and support other residential and

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<sup>6</sup> See D.15-07-001, pp. 194-195 (discussing precedent in D.11-05-047 and D.14-06-007).

<sup>7</sup> D.14-06-007, Finding of Fact 22; D.15-07-001, p. 214.

<sup>8</sup> Cal. Pub. Util. Code § 739.9(d).

1 commercial applications for fuel switching (*i.e.*, beneficial electrification), the legislature has not  
2 – through AB 205 or otherwise – changed the fundamental ratemaking directives that have  
3 applied to the Commission for many decades. AB 205 modifies the list of existing incentives that  
4 any new fixed charges should not “unreasonably impair,” adding “beneficial electrification” to  
5 this list. As amended, the provision now states that new fixed charges cannot “unreasonably  
6 impair incentives” for a broader set of policy goals: conservation, energy efficiency, beneficial  
7 electrification, and greenhouse gas emissions reduction. This provision does not state that the  
8 Commission should *create new* incentives for electrification through this new fixed charge.<sup>9</sup>  
9 Rather, the plain language of the statute conveys that the fixed charge should not disrupt the  
10 incentives for these beneficial policy goals that the Commission has worked hard to achieve –  
11 and invested significantly in – through other policies, programs, and rate design.

12         The history of this statutory language provides additional context for its interpretation.  
13 The requirement that fixed charges “[n]ot unreasonably impair incentives for conservation” was  
14 added through AB 327 (2013), at a time when the rate structure of residential customers had  
15 been geared toward communicating and reinforcing the conservation price signal. In this  
16 context, this provision of AB 327 should be understood as *preserving* the Commission’s historic  
17 focus on conservation in rate design in light of the potential addition of modest fixed charges,  
18 which the Commission had previously rejected, in part due to potential impacts on conservation  
19 price signals.<sup>10</sup> At the time of AB 205’s adoption, the Commission had begun the important work  
20 of encouraging beneficial electrification in its rate design via electrification rates. This revision  
21 of the statutory language should therefore be understood as responsive to and reinforcing of this

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<sup>9</sup> Cal. Pub. Util. Code § 739.9(d)(2).

<sup>10</sup> See D.11-05-047, p. 33.

1 shift in policy: now, the Commission is *not only* focused on encouraging conservation via rate  
2 design; it is also balancing conservation goals with electrification goals. Thus, any new fixed  
3 charge proposal should be cognizant of this balance and should not unreasonably impair  
4 incentives for either of these efforts. The imposition of graduated fixed charges should not upset  
5 existing incentives in rate design for conservation, or existing rate designs that support customer  
6 electrification. And surely, new fixed charges should not work a cross purposes to incentives that  
7 are provided for beneficial electrification outside of rate design, either.

8

9 **C. Parties’ testimony does not establish that proposed IGFCs do “not unreasonably**  
10 **impair incentives for conservation, energy efficiency, and beneficial electrification**  
11 **and greenhouse gas emissions reduction.”<sup>11</sup>**

12 To assess conservation impacts in particular, the Commission should utilize two primary  
13 tools that it has recognized in the past as helpful in evaluating the degree to which changes in  
14 rate design will impact incentives for conservation: price elasticity (the measure of how much  
15 customer demand for energy will change in response to price) and payback periods (the amount  
16 of time it takes to pay for an energy efficiency or DER investment).<sup>12</sup>

17 Unfortunately, the opening testimony in Track A presented very little of this type of  
18 analysis. Only the Sierra Club testimony presented any mention of price elasticity in the context  
19 of the expected increase in electricity use from lower volumetric rates.<sup>13</sup> This testimony cited  
20 U.S. Energy Information Administration (“EIA”) national average elasticity estimates to  
21 conclude that the 10-25% reduction in volumetric rates allowed by their proposed IGFC would

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<sup>11</sup> Section 739.9 (d) (2)

<sup>12</sup> D.15-07-001, p. 32.

<sup>13</sup> R.22-07-005, *Direct Testimony of John D. Wilson on Behalf of Sierra Club* at p. 56, lines 10-17 (April 7, 2023) (“Wilson Testimony”).

1 result in a “modest” short-run increase in electricity use of only 2-3%. However, estimates of the  
2 price elasticity of electricity of demand vary widely, and the Sierra Club’s estimate was just one-  
3 third of the -0.35 value cited by Sherwin and Azevedo (2020)<sup>14</sup> as the median of many recent  
4 estimates (and incidentally also nearly one-third of the -0.34 estimate cited elsewhere in the same  
5 report by the US EIA<sup>15</sup>). With California’s extensive AMI data now available, even more  
6 detailed elasticity estimation is possible to determine how much rebound – specific to region and  
7 time period – to expect from volumetric rate reductions. For instance, Sherwin and Azevedo  
8 examined AMI data and CARE enrollment to estimate that a 42% rate reduction led to a 13%  
9 electricity use increase, including 3% increase during peak periods.

10           Given the reliability challenges facing California, it is not only contrary to previous  
11 practice to propose a fundamental shift in rate design without considering the impact on  
12 conservation; it is irresponsible, given that it could materially increase non-electrification  
13 demand (including peak demand). The Commission was specifically charged in the language of  
14 Section 739.9 with ensuring that an IGFC does not impair conservation and EE incentives. The  
15 opening testimony in Track A does not provide an adequate basis to fulfill this duty.

16           Further, no party addressed the impacts on payback periods of demand-side energy  
17 efficiency, or DER investments by customers. Sierra Club Witness John Wilson did indicate that  
18 he may address this in reply testimony, and recommended that “the Commission could remove  
19 some cost elements from the IGFC” if the proposals “unreasonably impair the payback period for  
20 distributed energy resources.”<sup>16</sup>

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<sup>14</sup> Evan D Sherwin and Inês M L Azevedo “Characterizing the association between low-income electric subsidies and the intra-day timing of electricity consumption” Environmental Research Letter Vol. 15 Number 9, 2 September 2020

<sup>15</sup> U.S. Energy Information Administration; Price Elasticity for Energy Use in Buildings in the United States January 2021

<sup>16</sup> Wilson Testimony at p. 21, lines 6-10.

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**D. Lack of evidence for IGFC (and across-the-board rate reductions) as an electrification incentive**

One primary reason that Advanced Energy United is submitting this rebuttal testimony is to point out that nearly all of the opening testimony errs in not presenting evidence and analysis of the potential effect of an IGFC, and/or any volumetric rate reductions, on beneficial electrification.

Instead of analysis, parties’ testimony is filled with conclusory statements or argumentation such as, “it is also imperative that the overall average fixed charge across all four income categories be sufficient to enable meaningful reductions in volumetric rates that incentivize customer electrification efforts.”<sup>17</sup> Yet nowhere in this testimony, or that of other parties, is this “sufficient” level of IGFC defined or substantiated, nor the mechanism or degree by which rate reductions incentivize electrification.

First, it is important to distinguish “electrification” as the adoption of new electric technologies in place of previous technologies that use other energy sources (generally natural gas or petroleum). Economic analysis of electrification involves a wide array of non-price constraints in addition to price. Price analysis of “fuel switching” involves long-run cross-price elasticities of demand for different fuels, indicating the propensity of consumers to switch from natural gas or gasoline to electricity given a change in the price of one fuel. In general, these elasticities are substantially lower than the own-price elasticity discussed above. For example,

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<sup>17</sup> Joint IOUs, p. 5, lines 7-9

1 the EIA estimate that a 25% decrease in electricity price would result in a 0.75% decrease in  
2 natural gas demand through fuel switching in the long term.<sup>18</sup>

3 Yet several parties appear to conflate cross-price elasticity for own-price in suggesting  
4 lower volumetric rates will incentivize electrification. For example CalAdvocates' testimony  
5 cited David Rapson's presentation to the Commission en banc in 2021.<sup>19</sup> This presentation  
6 presented on the own-price elasticity of demand for electricity to argue that higher electricity  
7 prices are associated with lower electric vehicle miles driven – but not EV adoption. Thus, this  
8 evidence is not indicative of electrification, which is the decision to adopt new electric  
9 technology instead of conventional, but rather the decision to use more or less of existing  
10 technology (which is energy conservation or efficiency).

11 This theoretical estimate of elasticity is aligned with empirical evidence of the actual  
12 determinants to electrification adoption. Real-world analyses of adoption choices for such  
13 technologies as electric vehicles or heat pumps reveal a wide array of influences and factors,  
14 only some of which are economic or even rational. Among the factors that are significant along  
15 with electricity rates are up-front costs, the cost of incumbent fuel (i.e., consumers demonstrate a  
16 400-600% higher sensitivity to gasoline cost changes than they do to lower electricity cost  
17 changes when choosing an EV<sup>20</sup>), and service attributes like range or fueling availability.

18 Sierra Club discusses that the Fixed Charge Tool does not perform economic analysis of  
19 electrification (e.g., cross-price elasticities) but rather presents savings calculations to represent

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<sup>18</sup> U.S. Energy Information Administration; Price Elasticity for Energy Use in Buildings in the United States  
January 2021

<sup>19</sup> CalAdvocates, p. 7, citing February 24, 2021 En Banc on Energy Rates and Costs, Presentation of David Rapson  
Slide 36

<sup>20</sup> Bushnell, James & Muehlegger, Erich & Rapson, David, 2021. "Do Electricity Prices Affect Electric Vehicle  
Adoption?," Institute of Transportation Studies, Working Paper Series, Institute of Transportation Studies, UC  
Davis.

1 the kind of analysis that consumers may go through to decide whether to electrify. Fair enough,  
2 such comparative fueling cost analysis is one way a consumer might approach an electrification  
3 decision. Sierra Club argues that these results should at best be viewed as “directionally useful  
4 information” but not an indication that consumers “will or will not be incentivized en masse to  
5 invest in electrification.”<sup>21</sup>

6 The specific strength of potential fuel cost savings as an electrification incentive is not  
7 addressed in the E3 Fixed Charge Tool, or in any Party’s testimony. Also unaddressed, is the  
8 array of other influences, from principal-agent disconnect to high personal discount rates, that  
9 may overwhelm the potential fuel cost savings. Without an understanding of the relative  
10 strength of any reduction in rates on electrification propensity, versus the other determinants of  
11 electrification adoption and the effect on other policies of concern including EE and DG, the  
12 Commission cannot make an informed decision about the IGFC.

13

14 **E. IGFC may frustrate economically-efficient electrification**

15 Economically-efficient electrification also requires that new electrical demand utilize  
16 existing low-cost energy and capacity and avoid adding to extremely high-cost peak hours.<sup>22</sup> A  
17 highly time-differentiated rate design that charges higher rates during peak times, and lower rates  
18 during times of low grid stress can incentivize electrification, for example. Customers that adopt  
19 electric vehicles (“EVs”) and other DERs with load management or storage capabilities can use  
20 these resources to shift their demand in response to time-differentiated price signals, so it follows  
21 that a highly time-differentiated rate design would incent greater adoption of these technologies.

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<sup>21</sup> Direct testimony of John D. Wilson, p. 52, line 19-22

<sup>22</sup> Billimoria, Sherri, Mike Hennen, Leia Guccione, and Leah Louis-Prescott. “The Economics of Electrifying Buildings: How Electric Space and Water Heating Supports Decarbonization of Residential Buildings.” Rocky Mountain Institute, 2018

1 These goals are the focus of the Commission and California Energy Commission’s current  
2 CalFUSE framework. This kind of rate design, along with explicit subsidies for EVs and other  
3 electrification technologies, is likely to be more effective than the imposition of high fixed  
4 charges.

5         Conversely, unreasonably high fixed charges would make it more difficult to establish a  
6 broader rate design that encourages demand flexibility, as customers would not be able to avoid  
7 the substantial fixed charge by shifting their demand. High fixed charges that cannot be avoided  
8 by demand shifting, coupled with very low volumetric rates, would weaken incentives for  
9 demand flexibility. Especially given that this very proceeding in Track B is considering dynamic  
10 rates to encourage flexible demand, the potential for conflicting and undermining signals should  
11 be another reason for the Commission to take a cautious and gradual approach to an IGFC.

12         Another economic benefit of electrification that may be undermined by an IGFC that  
13 includes long-run marginal costs is the broad reduction in costs that electrification entails. Under  
14 the current rate regime, electrification results in a reduction in non-marginal per-kWh costs for  
15 all consumers. Stated otherwise, all consumers benefit from increased electricity use because the  
16 same long-run marginal costs of grid infrastructure or non-bypassable charges are spread among  
17 more kWh. Under an IGFC, this benefit of electrification is privatized. Each household or  
18 account holder that adopts electric technology realizes the benefit of spreading their fixed cost  
19 among greater kWh, but there is less benefit to non-adopters. And in fact, as mentioned, under an  
20 IGFC, the personal cost of energy efficiency, conservation, and distributed generation becomes  
21 incrementally higher. Not only does the lower volumetric rate decrease the benefit of these  
22 technologies, but the personal cost includes the relatively higher burden of the IGFC.

1           Lastly, any per-kWh reduction in volumetric prices is likely to result in increases in  
2 electric use, both endogenous and electrification-induced, that occurs at peak hours,<sup>23</sup> thus  
3 exacerbating peak generation, transmission, and distribution costs and peak hour reliability risks.

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5           **F. Parties’ testimony does not examine how high IGFC would impact other**  
6           **Commission programs and goals**

7           High fixed charges would complicate and frustrate efforts in ongoing Commission  
8 proceedings concerning demand-side solutions. Among many others, the Commission’s High  
9 DER docket, R.21-06-017, is focused “on preparing the grid to accommodate what is expected to  
10 be a high DER future and capture as much value as possible from DERs.”<sup>24</sup> One focus of the  
11 High DER proceeding is distribution system planning, and specifically the optimal deployment  
12 of DERs to defer and avoid infrastructure investments, both through the near-term Distribution  
13 Investment Deferral Framework (DIDF) and through long-term Distribution Planning Process  
14 (DPP). Parties’ proposals, including those of Joint IOUs, NRDC/TURN, and to an extent  
15 CalAdvocates, that suggest moving non-marginal distribution costs into fixed charges,  
16 undermine the goals of the DIDF and DPP. The promise of a longer-term, more integrated DPP,  
17 as is under discussion in R. 21-06-017, is that even those distribution infrastructure costs that  
18 appear non-marginal can be affected and reduced through DER and load flexibility decisions  
19 made at the individual and community level. And those individual, business, and community  
20 decisions are in turn influenced by whether these costs are reflected in rates. Unreasonably high

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<sup>23</sup> Evan D Sherwin and Inês M L Azevedo “Characterizing the association between low-income electric subsidies and the intra-day timing of electricity consumption” Environmental Research Letter Vol. 15 Number 9, 2 September 2020

<sup>24</sup> R.21-06-017, *OIR to Modernize the Electric Grid for a High Distributed Energy Resources Future*, pp. 9-10 (July 2, 2021).

1 fixed charges that include these costs would counteract and undermine this work and these  
2 substantial state investments by drastically undermining the value proposition of DER adoption.

3

4 **G. Parties do not examine the cost-shift from existing high-use customers to existing**  
5 **low-use customers**

6 Also erroneously absent from Parties' testimony is an examination of differential bill  
7 impacts by electricity usage, and the policy implications thereof. CalAdvocates does break out  
8 bill impacts by low and high usage,<sup>25</sup> showing that the greatest savings are realized by high  
9 usage households across all income groups, while the greatest bill increases are for low use  
10 households across all income groups (except low income). Relatedly, but less transparently, both  
11 Joint IOUs and TURN/NRDC<sup>26</sup> report higher costs and/or smaller savings for coastal customers  
12 vs. inland/desert/mountain customers, a difference that the TURN/NRDC report is generally due  
13 to the higher usage of air conditioning in inland regions. Together, these data reveal important  
14 equity and fairness implications across geography and usage patterns. Namely, it appears that a  
15 substantial portion of bill savings under high IGFC proposals involve a transfer from low-usage  
16 customers, primarily in temperate climates, to high-use customers in hotter or colder climates.  
17 For a policy focused on equity and energy goals, we believe it important for the Commission to  
18 examine the equity implications of such a transfer, and the energy policy implications of  
19 subsidizing existing high users of electricity.

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21 **H. Customer acceptance and social and political reaction could undermine broader**  
22 **policy goals.**

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<sup>25</sup> CalAdvocates at p. 21

<sup>26</sup> TURN/NRDC p. 27-28

1 High fixed charges are in conflict with the core policy objectives of gradualism and  
2 customer acceptance, which have guided the Commission’s rate design policy for decades. The  
3 Commission has demonstrated its commitment to these principles in a few key ways. First, the  
4 Commission has explicitly adopted rate design principles that emphasize the importance of  
5 prioritizing customer understanding and minimizing bill impacts associated with rate design  
6 transitions.<sup>27</sup> Second, the Commission has consistently rejected prior fixed charge proposals due  
7 to its concerns about customer acceptance.<sup>28</sup>

8 Joint IOUs’ opening testimony includes customer research that report customer reactions  
9 including feelings of “confusion and distrust,” “helplessness, anger, and/or confusion,” “unfair,”  
10 and “not fair.”<sup>29</sup> Unexamined in Joint IOUs’ testimony is the effect this distrust and resentment  
11 may have on the very goals the program is nominally intended to pursue. Is a customer who feels  
12 the IGFC is “effectively a tax, and another way for SCE to make higher profits” or that “energy  
13 conscious lower users... are being penalized”<sup>30</sup> more or less likely to invest in EE, DERs, or  
14 beneficial electrification? This question is unanswered in any Party’s testimony.

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### 16 **III. Advanced Energy United Recommendations**

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#### 18 **A. A reasonable fixed charge is appropriate and should be based on marginal customer** 19 **access costs**

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<sup>27</sup> D.23-04-040, p. 2 (adopting the principle: “Customers should be able to understand their rates and rate incentives and should have options to manage their bills”); D.14-06-029, Ordering Paragraph 4 (adopting the principle: “Transitions to new rate structures should emphasize customer education and outreach that enhances customer understanding and acceptance of new rates, and minimizes and appropriately considers the bill impacts associated with such transitions”).

<sup>28</sup> See D.89-12-057; D.93-06-087; D.15-07-001, pp. 214-216.

<sup>29</sup> Joint IOUs at p. 111-114

<sup>30</sup> *ibid*

1           Advanced Energy United recognizes that AB 205 requires the implementation of some  
2 form of IGFC, and United supports the general contention that, all else being equal, lower  
3 electricity rates that tend toward social marginal cost will, directionally, improve the incentive  
4 for necessary and beneficial electrification.

5           However, the Commission should ensure that its fixed charge reasonably balances the  
6 legislature’s and the Commission’s goals of promoting affordability, decarbonization,  
7 electrification, and conservation. This can be achieved through fixed charges based on marginal  
8 customer access costs, as discussed in further detail in the following section.

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10           **B. Optimal rate design for future electrification should be pursued through**  
11           **electrification rates**

12           As discussed in II.(C) and II.(H) above, one of the primary and certain (though unfortunately  
13 unquantified by Parties) impacts of implementing a high IGFC for all residential rates will be to  
14 reward existing high electricity use households and penalize low-use households – potentially  
15 including those that have done the most to implement the EE, DG, and storage that state policy  
16 has explicitly encouraged. Also unquantified, and unfortunately far more uncertain, are the  
17 impacts of a high IGFC and lower volumetric rates on future electrification rates.

18           In rebuttal to the Joint IOUs, TURN/NRDC/ and Sierra Club, United suggests that the  
19 proper vehicle for rate structures to support future electrification efforts are, intuitively,  
20 electrification rates. The Commission, Load-Serving Entities, parties and stakeholders have some  
21 experience to date with the performance of both EV-specific and whole-home electrification  
22 rates. This experience should be tapped to revise and expand these programs. Though the  
23 determinants of electrification adoption are multi-faceted and complex, electrification-specific

1 proceedings would be able to explore and address these much more transparently and effectively  
2 than this proceeding. For instance, while Parties in this proceeding have made generalized  
3 statements about electricity rates and EV adoption, empirical evidence suggests that the relative  
4 electricity price vs. gasoline (rather than absolute price) is a much more powerful incentive,<sup>31</sup>  
5 and one that can be addressed much more directly through an EV rate proceeding than indirectly  
6 by modifying the level of an IGFC. Further, these proceedings can better consider the kind of  
7 electrification that is desired by considering the interactive effects of time of use prices and  
8 dynamic rates to incentivize electrification that is grid efficient and not exacerbating of reliability  
9 challenges and extraordinary high-cost hours.

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11 **C. A fixed charge based primarily on marginal customer access costs is a reasonable**  
12 **first IGFC that satisfies the requirements of AB 205.**

13 Both SEIA and CalAdvocates start their analysis and construction of an IGFC with the  
14 Marginal Customer Access Costs (MCAC). This makes intuitive sense as literally a basic  
15 customer grid access charge, which aids in customer understanding and acceptance.

16 CalAdvocates<sup>32</sup> point out that its proposal is comparable to the other existing fixed  
17 charges in California<sup>33</sup>. While we do not support the specific costs included in CalAdvocates’  
18 proposal, United would like to highlight this point as also relevant to the concern regarding

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<sup>31</sup> Bushnell, James & Muehlegger, Erich & Rapson, David, 2021. "Do Electricity Prices Affect Electric Vehicle Adoption?," Institute of Transportation Studies, Working Paper Series qt5f80503b, Institute of Transportation Studies, UC Davis.

<sup>32</sup> CalAdvocates p. 7 line 20-21

<sup>33</sup> “For example, SMUD residential fixed charge is \$23.50 for all customers. Modesto Irrigation District’s fixed charge is \$30/month for all customers. City of Riverside features... a monthly flat charge of \$12.06 and a “reliability charge” which accounts for residence size.” CalAdvocates footnote 15, p. 7-8

1 gradualism and consumer acceptance. Comparable examples from proximate communities are an  
2 important component of customer and political acceptance.

3           Advanced Energy United suggests that the Commission should focus primarily on  
4 MCAC as a place to start, as detailed by SEIA and as a starting point for CalAdvocates'  
5 proposal,<sup>34</sup> and revisit IGFC in the future after collecting more data and insight into whether and  
6 how the fixed charge inhibits or furthers the Commission's goals. Though United does not  
7 suggest specific income tiers or allocation among tiers, we note that under SEIA's proposal a  
8 MCAC-based IGFC would result in fees ranging from \$4.93 to \$13.14.

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<sup>34</sup> United supports the gradualist approach, focused on MCAC, that CalAdvocates puts forward, though we do not support the inclusion of other costs such as non-bypassable charges and scaled non-marginal distribution costs, in CalAdvocates' proposal.

1 **IV. Witness Statement of Qualifications**

2 Q. Please state your name, occupation, and business address.

3 A. My name is Brian Turner and I am Policy Director, Western States, for Advanced Energy  
4 United (“United”). My business address is 1010 Vermont Ave. NW, Suite 1050, Washington,  
5 D.C. 20005.

6

7 Q. On whose behalf are you testifying?

8 A. I am testifying on behalf of United, an industry association that represents the full range  
9 of advanced energy technologies and services, both grid-scale and distributed. Our membership  
10 includes over 100 companies with substantial presence in California. United member companies  
11 have substantial interest in this proceeding, especially as providers of energy efficiency  
12 technologies and services, distributed generation and storage resources, advanced electric  
13 appliances and electric transportation, load management technologies and services, advanced  
14 grid hardware and software, and other offerings that impact California ratepayers’ electricity  
15 consumption and costs.

16

17 Q. Please summarize your professional and educational background.

18 A. I have specific training in electricity policy and economics and over fifteen years’  
19 experience in California energy and climate policy. I have both a Master of Science in Energy  
20 and Resources degree and a Master of Public Policy degree from the University of California at  
21 Berkeley, and I received my Bachelor of Arts degree from Sonoma State University in both  
22 Economics and Urban Planning. From 2008 to 2017, I was employed by the State of California  
23 in senior executive policy positions focused on coordinating energy and climate policy between

1 state agencies and with other states and the federal government. These positions included Deputy  
2 Director of the Governor’s Office in Washington DC, Assistant Executive Officer for Federal  
3 Climate Policy at the California Air Resources Board, Deputy Executive Director for Policy at  
4 the California Public Utilities Commission, and Director of the Renewable Energy Transmission  
5 Initiative 2.0 at the California Resources Agency. In these roles, I was intimately involved in  
6 planning the design and implementation of multiple simultaneous clean energy initiatives for the  
7 State of California.

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## Education

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University of California, Berkeley

Master of Science, Energy and Resources Group

May 2007

Master of Public Policy, Goldman School of Public Policy

May 2006

California State University, Sonoma

Bachelor of Arts, Urban Planning and Economics

May 2001

## Experience

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**Advanced Energy United**

Jan 2020-Present

Regulatory Director, Western States

Washington DC

- 9 • Engaged in regulatory proceedings with expert testimony in California, Arizona, Nevada, and  
10 Colorado

11 **Turner Energy Policy**

Mar 2017-Mar 2020

12 Independent Consultant

Berkeley, CA

- 13 • Advised renewable energy companies, financiers, and trade associations in electricity markets  
14 and policy and commercial opportunity in California and U.S.  
15 • Launched Western Resource Planners Forum with retail utilities, power marketers, system  
16 operators, utility regulators, and advocates across Western Interconnection to coordinate  
17 energy planning

- 1 **California Natural Resources Agency** Jan 2016-Mar 2017  
2 Director, Renewable Energy Transmission Initiative (RETI 2.0) Sacramento, CA
- 3 • Reporting directly to the Secretary of Natural Resources, President of the CPUC, Chair of the
  - 4 CEC, and CEO of the CAISO, spearheaded initiative integrating California’s renewable energy,
  - 5 electric transmission, and resource/land use objectives
  - 6 • Led stakeholder outreach and all public meetings; engaged participation of utilities, developers,
  - 7 advocates, and federal partners; coordinated technical input teams; directed technical
  - 8 consultants
  - 9 • Managed staff alignment with related regulatory proceedings at CARB, CPUC, CEC, and CAISO
- 10 **California Public Utilities Commission** Aug 2013-Dec 2015  
11 Deputy Executive Director for Policy and External Relations San Francisco, CA
- 12 • Chief executive responsibility for internal and external policy coordination and communication
  - 13 • Representative of the Commission to state and local governments, stakeholders, and public
  - 14 • Advisor to CPUC, CARB, CEC, CAISO leadership on 2030 GHG targets and post-2020 energy
  - 15 strategy
  - 16 • Oversaw policy coordination across agencies in integrated resource planning, energy efficiency,
  - 17 demand response, electric vehicle, low carbon fuels, facility permitting, and marketing
  - 18 programs
- 19
- 20 **California Air Resources Board** April 2008-Aug 2013  
21 Assistant Executive Officer for Federal Climate Policy Washington, DC and Sacramento, CA
- 22 • Advised Chairman Mary Nichols and CARB executive staff on federal affairs and policy strategy
  - 23 • Advocated for California clean energy policy before Obama and Bush Administrations, Congress,
  - 24 other states, foreign governments, and industry and NGO stakeholders
  - 25 • Led campaigns and coalitions of states and environmental, public health, and clean energy
  - 26 advocates
- 27 **Office of the Governor of California** April 2008-June 2012  
28 Deputy Director, Washington DC Office Washington, DC
- 29 • Represented both Governors Brown and Schwarzenegger on federal energy and environment
  - 30 matters
  - 31 • Designed and implemented strategic campaigns to achieve Governor’s and California agencies’
  - 32 priorities across wide range of venues, agencies, and issues
  - 33 • Built and leveraged coalitions with states, industry, and environmental NGOs
  - 34 • Frequent high-profile presentations and speeches, including testimony before U.S. Congress
- 35 **Bipartisan Policy Center (BPC) and** April 2007-April 2008  
36 **International Council on Clean Transportation (ICCT)** Washington, DC  
37 Policy Analyst
- 38 • Advised BPC’s National Commission on Energy Policy and Transportation Policy Project

- 1 • Supported ICCT Council of state, federal, and international air-quality regulators with policy  
2 and technical coordination in vehicle fuel economy, GHG standards, and Low Carbon Fuels  
3 Standards

4 **UC Berkeley Energy and Resources Group** January 2004-May 2007  
5 Researcher and Consultant Berkeley, CA

- 6 • Co-authored paper in *Science* magazine on lifecycle energy and GHG accounting for biofuels  
7 • Authored analyses and reports for US EPA, CARB, CA DWR, NRDC, and The Coca Cola Company

8 **Sonoma Land Trust** July 2000-August 2003  
9 Geographic Information Systems Specialist Santa Rosa, CA

- 10 • Provided GIS-based rapid resource analysis and long-term strategic planning for conservation  
11  
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