

# Stakeholder Comments Template

## Review TAC Structure Stakeholder Working Groups

This template has been created for submission of stakeholder comments on the Review Transmission Access Charge (TAC) Structure Working Group Meetings that were held on August 29 and September 25, 2017. The working group presentations and other information related to this initiative may be found on the initiative webpage at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/ReviewTransmissionAccessChargeStructure.aspx>

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Upon completion of this template, please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com). Submissions are requested by close of business on **October 13, 2017**.

**Please provide your organization's comments on the following issues and questions.**

NOTE: See last page for definitions of some key acronyms and terms.

NCPA is pleased to provide comments on the working group presentations in this stakeholder process. There were a number of presentations made during the working groups, but that of Clean Coalition was the only one that provided much detail, so it is the focus of NCPA's comments. NCPA has not formed an opinion as to other TAC rate changes discussed at the meetings.

NCPA agrees with Clean Coalition on one important point—the CAISO Transmission Access Charge (TAC) is far too high. If NCPA believed that the Clean Coalition proposal would bring about meaningful reductions in TAC, it would be far more likely to support it. Unfortunately, the proposal is based on fundamental confusion over 1) the way the energy determinants used in the denominator for the TAC rate are derived, 2) the way those same energy determinants are used in the development of project recommendations in the CAISO TPP, 3) interrelationships between Transmission Owner Tariff rate development and CAISO's TAC rate development, and 4) end use meter data submission to the CAISO that forms the basis for revenue collection under the TAC rate, all of which results in unrealistic assumptions about the potential for broader deployment of DG to reduce the TAC. It also ignores the additional costs DG would add to the TAC or to PTO distribution system costs.

Clean Coalition underestimates the disruptive impact such a change would have on existing PTO rates structures. Further, although Clean Coalition frames its proposal as a way to further incent

development of clean distributed generation, NCPA believes that the proposal fails to recognize that the transmission benefits described (even if genuine) could be achieved by all generation technologies. It therefore is clear that the proposal will have to be fuel neutral to be approved by the Federal Energy Regulatory Commission (FERC). Clean Coalition may not be aware that a material portion of the existing generation fleet is already connected to the Low Voltage transmission network or to the distribution systems. For example, on-site diesel generators and other emitting resources are also often connected to the distribution systems of LSEs, and have the same impact on load measured at the T/D interface. A number of generation assets that NCPA manages are also connected to the PG&E distribution system. Moreover, if CAISO is successful in its push for regionalization, other states with different environmental priorities could maintain and promote different types of generation on their distribution systems.

1. One concept for allocating the costs of the existing transmission infrastructure is to charge each user of the grid in accordance with their usage of or benefits received from the grid. What do you believe is the most appropriate way to measure each end-use customer's or load-serving entity's (LSE) benefits or usage of the grid? What specific benefits should be considered? Please explain your answer.

NCPA believes that a holistic approach should be taken to the problem of paying for the existing transmission grid and new transmission upgrades that might be added to it. NCPA has previously discussed the broad categories of benefits that the system provides and will not further elaborate on those comments here. However, one aspect of benefit that should be considered is the question of who benefits from the spreading of costs to others.

NCPA has noted in the past that the installation of any generation can have very different impacts on the grid, depending on its location. Simply put, some generation can relieve congestion, other generation can worsen it, and some may have no impact. This proceeding has so far made little note of the upgrade costs DG may impose on the grid and the impact of spreading those costs to others. As further discussed below, a build-out of DG could impose significant costs on the transmission grid, depending on location. Clean Coalition prefers to ignore these costs.

While Clean Coalition insists that it is entitled to the same rate treatment accorded to Non-PTOs, it has not shown a willingness to assume the financial obligations that Non-PTOs have assumed with respect to the transmission grid. Although a substantial amount of NCPA's generation predates the CAISO, NCPA and its members had to pay all costs related to connecting the vast majority of its generation to the system, whether it was central station power plants or DG located on a member distribution system. If the generation worsened congestion, NCPA or its members were required to pay to build any transmission facilities necessary to relieve congestion on the PG&E transmission system, and to recover those costs from their own ratepayers rather than spreading them to others.<sup>1</sup> If the new generation created problems on their own distribution systems, NCPA members and their retail customers bore the costs of upgrading their distribution systems, and could not spread those costs beyond their respective city limits. By contrast, upgrades to the large PTO distribution systems to accommodate DG can be spread to that LSE's

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<sup>1</sup> These requirements still apply to DG or NEM on member systems if the resource would cause a flow of power back out to the grid. The PG&E Interconnection Agreement requires NCPA to mitigate Significant Operational Changes, which can include a requirement to construct new transmission facilities.

other customers, while costs associated with upgrading the transmission system are spread to all interconnected LSEs (regardless of their participation in the DG procurement) in the case of the LV system, and to all TAC ratepayers in the case of the HV system.

Clean Coalition seeks to exempt its associated loads from TAC charges while continuing to use the TAC mechanism to spread any costs it creates to others.

2. The example the ISO presented at the August 29 working group meeting (slides 21-22 of the ISO presentation) illustrated how using transmission energy downflow (TED) as the high-voltage TAC billing determinant (instead of end-use metered load) affects all ratepayers of each utility distribution company (UDC) irrespective of which LSE serves that load. If the ISO were to adopt TED as the billing determinant for the high-voltage TAC, what further procedures would be needed to ensure that the benefits of reduced TAC payments go to the correct LSEs that make the decisions to procure DG? Please explain your answer.

Under PG&E's current rate structure,<sup>2</sup> the Clean Coalition proposal will cause a revenue shortfall. For the purpose of developing the TAC rate, PG&E submits a load forecasts based on retail sales figures that has been adjusted for the forecasted impact of energy efficiency, demand response, NEM and DG.<sup>3</sup> However, TAC is collected based on actual meter readings of retail customers, and while reflective of the sales forecast, it is subject to forecast error. If CAISO shifts to an arrangement where retail customers purchasing from DG or outflow NEM on their own distribution system are exempted from TAC, PG&E will collect less than the forecasted amount. Further difficulties would be caused in an attempt to reallocate unrecovered costs among PG&E customer classes, some of which may not have the option of choosing CCAs or Direct Access to avoid them. Any change to the TAC would have to be worked back through the TO Tariff rates of all of the PTOs, which would substantially add to complexity. One particularly tricky question would be whom to credit for DG or NEM outflow to the grid, which would not respect LSE boundaries.

Additionally, there is a material amount of generation (clean and conventional) already interconnected on the PG&E distribution system. A number of NCPA's generation assets are connected this way. As a technical matter, that generation would reduce the TED on those circuits, but that would be credited to PG&E rather than to NCPA, the generation owner. There would be substantial accounting complexity associated with properly crediting all entities with their distribution system investments. CAISO should not have to track individual DG contracts across LSE boundaries in order to ensure proper accounting.

3. The ISO could (a) continue to use the end-use metered load (EUML) or customer energy downflow (CED) as the basis for assessing high-voltage TAC, or (b) propose a change to assess HV TAC based on downflow at the transmission-distribution interface (T-D TED), or (c) assess HV TAC based on downflow at the interface between the high-voltage and low-voltage transmission systems (HV-LV TED). Does your organization prefer one of these approaches at this time? Please explain the reasons for your preference.

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<sup>2</sup> NCPA uses PG&E rates as an example, unless specifically referring to all PTOs.

<sup>3</sup> Docket No. ER17-2154-000, PG&E Exhibit PGE-007, p.2, ll. 25-28.

NCPA does not advocate any change in the current TAC methodology, nor the point of measurement, nor does it believe that Clean Coalition has made the case that the current system is unjust and unreasonable. Creation of a third measurement for the individual PTO LV systems also seems problematic and unlikely to advance the goals Clean Coalition espouses.

Although Clean Coalition seemed very much in favor of expanding its proposal beyond measurement at the transmission-distribution interface to measurement at both that location and at the HV-LV interface, creating separate HV and LV TAC relief categories, NCPA assumes that Clean Coalition is unaware of how much of the current thermal fleet is connected to the LV grid, or of the number of behind the meter diesel generators that would be covered. Nor has the study Clean Coalition provided taken into account the amount of fossil fuel generation that would be similarly exempted. The Clean Coalition does seem to be aware that its proposal is not and cannot be limited to “clean” resources.

While most of the FERC Commissioners are new, and some still await confirmation, all have expressed support for the concept of fuel neutrality. It is not at all clear that the Commission will find the Clean Coalition proposal reasonable, but if it were to do so, the Commission would likely not see any difference in benefits provided to the grid as between emitting or non-emitting DG. Accordingly, any proposal requiring the approval of the Commission will have to offer the same treatment to emitting and non-emitting DG. This proposal would provide load located on the same circuits as fossil fuel fired generation with the same advantage of avoiding TAC payments that new clean DG would enjoy. Moreover, if CAISO succeeds in its avowed goal of regionalizing beyond current state borders, the same tariff provisions would apply there as well. While California may control what new generation can be sited within its borders, the same tariff rules will apply to other states, which could use them to maintain existing or encourage new distributed generation according to their own fuel preference priorities.

4. Does your organization believe that any of the options in the previous question present any potential problems or issues that have not been identified or explained during the stakeholder process thus far? If so, please explain. Also, please indicate what other analyses could be done to help understand the impacts of changing the point of measurement?

For rate design, cost recovery, and to properly assign planning responsibilities, the transmission network has been separately categorized as HV and LV facilities. Notwithstanding this accounting structure, the transmission network, including both HV and LV facilities, is designed to operate as one highly integrated machine. An analysis or discussion that could help with understanding the impacts of measuring usage at different points would be an explanation/description of CAISO’s observations of how energy is actually flowing across its system during normal operating conditions, and a study to confirm the reasonableness (or unreasonableness) of the general assumption that generators connected to LV transmission and/or distribution systems do not use the HV transmission system.

5. Does your organization believe that the ISO should change *only* the point of measurement utilized for assessing TAC apart from considering other changes to the TAC structure? Alternatively, should the ISO change the point of measurement in conjunction with other changes to the TAC structure? Please explain your position.

NCPA does not believe that a change to the point of measurement utilized for assessing TAC is necessary or warranted based on the evidence presented to date. In the absence of concrete proposals regarding other potential changes to the TAC structure, NCPA has not formed an opinion at this time.

6. Does your organization believe that changing the point of measurement for assessing TAC to use TED instead of metered customer demand will result in increased procurement of DG by LSEs? Please explain your position.

Not significantly. During the last working group session, Clean Coalition claimed that revisions to the TAC billing structure will spur significant investment in distributed generation. Clean Coalition argued that the proposed change to the TAC billing structure will have a direct and meaningful impact on utility procurement decisions and behaviors. As a utility that is directly involved in these types of investment decisions, NCPA does not agree that the proposed change will have a material impact on DG procurement behaviors. At this time, state policy objectives and mandates are the key variable driving forward-looking procurement decisions. Many of the mandates and requirements that have been adopted in California, including RPS and carbon emissions reduction goals, are multifaceted and complex, and have a much stronger influence on long term planning and investment decisions, as compared to what Clean Coalition itself claims will be a relatively small change in the TAC rate.

While the generality of this concept could be debated at length, if the ultimate goal of the Clean Coalition is to modify the procurement policies and requirements set forth by each applicable jurisdictional authority, NCPA strongly believes that any further consideration of Clean Coalition's proposal should be taken up in the proper venue, as compared to the current back ended approach that is the immediate subject of this initiative. Establishment of long term procurement goals and requirements is a major component of the planning efforts that take place under the jurisdiction of the CPUC (including the current Integrated Resource Planning proceeding) and other Local Regulatory Authorities. These planning efforts take into consideration many variables, including state laws and policies and the cost of transmission investments. The fact that transmission investment costs make up a material share of the total cost of production has not been lost or forgotten. The Clean Coalition's proposal seems to imply that these costs are not currently accounted for or considered by decision makers. NCPA strongly believes that each respective authority that is responsible for establishing procurement requirements and targets for its jurisdictional entities, has sufficient information and data to take transmission related costs into consideration as they set policy. Simply changing the CAISO TAC billing structure will not result in a newfound understanding of costs associated with transmission investment decisions.

In addition, Clean Coalition's proposal would not appear to create a reliable economic incentive for LSEs to procure more DG. A TED-based TAC allocation will reduce the overall TAC allocation for LSEs that procure *relatively* more DG than other LSEs. If one LSE procures extra DG, but no other LSEs procure extra DG, the first LSE will pay a smaller share of the overall TRR. But if all LSEs procured proportionately the same amount of additional DG, all LSEs would then pay the same TAC as if none of them had procured additional DG (at least in the

immediate future).<sup>4</sup> So the amount of TAC savings a particular LSE will gain from procuring an extra MW of DG capacity is highly uncertain: the savings depend on how much DG other LSEs procure. Since LSEs cannot accurately predict the amount of TAC savings from purchasing extra DG, the TAC savings do not provide a reliable incentive to purchase extra DG when compared to lower-cost, but transmission-dependent, generation.

The proposal seems to gloss over the distinction between DG and NEM. Clean Coalition says the proposal would apply to both. According to the Clean Coalition's TAC Fix Impact Analysis, a majority of the DG resources that are accounted for are defined as NEM DG exports. It is NCPA's understanding that NEM DG exports represent what NCPA has been calling NEM outflow – the amount of generation that is produced by a NEM customer generator that is not otherwise consumed by the host load (excess to the host load). Load associated with NEM, of course is already receiving the net treatment Clean Coalition is seeking, because it is not reflected in the customer meter readings.

The value added proposition the Clean Coalition is seeking to create through its proposal relies on the assumption that installation of DG in an LSE portfolio will reduce the LSE's TAC costs. In the case of NEM DG exports, if there are in fact excess amounts of NEM DG that are exported to the grid, the host load's exposure to TAC costs would already be zero dollars (\$0). In that scenario, what load in the system would be given credit for the offset provided by the NEM export? If installing an amount of DG that is in excess to the host load's need provides no additional TAC savings benefits, as compared to installing an amount of DG that is equal to the host load's need, then what incentive would the host load have to install up to 50% more capacity than is needed (as is suggested in the Clean Coalition's analysis). This complexity is very important because the Clean Coalition's proposal is based on the simple assumption that measuring Gross Load at the Transmission Energy Downflow point will create a direct incentive for increased development and investment in DG. If the host load that is installing the NEM DG is only provided an offset of its transmission costs for generation produced up to its load requirements, why would a customer be incented to install significantly more capacity than it needs?

Even if the proposal would encourage LSEs to acquire more DG, that result would not necessarily be a cost-effective result for all ratepayers, because it ignores the costs that greater deployment of DG would create in some areas. LSEs would still have to consider the costs of upgrading their distribution systems and possibly the transmission system, depending on location. PTOs would spread distribution costs to its entire distribution system, but transmission costs would be spread to all other TAC ratepayers. LSEs are also likely to be differently situated in terms of whether they can cost-effectively deploy DG or not. Indiscriminate encouragement of DG deployment will cause cost-shifts throughout the transmission rate base.

7. Does your organization believe that increased procurement of DG by LSEs will reduce the need for future investment in transmission infrastructure? Please explain your position.

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<sup>4</sup> See Clean Coalition Spreadsheet, TAC\_Impact\_Immediate tab.

Not significantly. Any benefits attributable to existing DG are already incorporated in the CAISO Transmission Planning Process. The PG&E load forecast<sup>5</sup> CAISO uses as the basis for recommended Capital Expenditures is a “Net” load forecast which consists of the forecasted load for all retail load within PG&E’s footprint, after accounting for Energy Efficiency, Demand Response, and Distributed Energy Resources.<sup>6</sup> As CAISO detailed in its most recent set of TPP Unified Planning Assumptions:<sup>7</sup>

As in the 2015-2016 planning cycle, reliability assessments in the current planning cycle will consider a range of existing demand response amounts as potential mitigations to transmission constraints. The reliability studies will also incorporate the incremental uncommitted energy efficiency amounts as projected by the CEC, distributed generation based on the CPUC Commercial-Interest RPS Portfolio and a mix of preferred resources including energy storage based on the CPUC LTPP 2012 local capacity authorization. These incremental preferred resource amounts are in addition to the base amounts of energy efficiency, demand response and “behind the meter” distributed or self-generation that is embedded in the CEC load forecast.

Clean Coalition’s argument that DG benefits are not recognized, is simply wrong. The DG contributions that reduce the need for transmission capital additions are fully available to the CAISO and PG&E transmission planning processes.

While load reductions attributed to NEM and DG are included in the CAISO TPP process for the purpose of establishing the need for new transmission facilities, it is important to understand that transmission facilities that go through the CAISO TPP represent only the tip of the iceberg when it comes to the rising TAC rates. As further explained below, a far larger portion of the TAC capital spending is claimed by the PTOs to be associated with the management, upgrading and modernization of existing transmission facilities. Even if DG were to significantly reduce the construction of new transmission facilities, the largest share of the TAC, which is associated with the existing transmission facilities, would remain.

While Clean Coalition claims credit for a handful of transmission facilities for which construction has been cancelled or postponed, it studiously ignores the costs DG will impose for the construction of new facilities in the transmission and distribution systems to serve its need. PG&E Vice President of Electric Asset Management Kevin J. Dasso testified in PG&E’s recently filed TO19 Transmission case that:<sup>8</sup>

Approximately 25 percent of all privately-owned rooftop solar generation in the United States is connected to PG&E’s electric distribution system, which necessitates upgrades to the ET [Electric

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<sup>5</sup> NCPA uses PG&E for illustrative purposes, because it is most familiar with PG&E’s rate structure and TRR. There is no reason to assume that the situation is significantly different with the other PTOs.

<sup>6</sup> The forecasts for wholesale loads in PG&E territory are handled separately.

<sup>7</sup> 2017-2018 Transmission Planning Process Unified Planning Assumptions and Study Plan, March 31, 2017, at p. 30.

<sup>8</sup> Testimony of Kevin J. Dasso, Docket No. ER17-2154-000, Exhibit PGE0002, p. 2, ll. 22-

Transmission] system to support continued safe, reliable and compliant electric system operations.

A recent study of the costs of integrating DG on the Southern California Edison SCE system suggested<sup>9</sup> that costs of upgrading the grid to accommodate DG participation in the CAISO markets will vary considerably depending on where the projects are located. This conclusion makes intuitive sense because all generation, whether distributed or central station, has impacts on the grid, and those impacts are very much a product of location. As noted earlier, when it comes to congestion, location matters. Congestion often leads to the need for transmission or distribution upgrades, which increases the costs to ratepayers. In the case of the SCE study, total transmission system and distribution system buildout costs were estimated between approximately \$1 billion and \$6 billion, depending on whether DG placement was directed to locations where it would fit easily into the existing grid structure, or was built in places where upgrades would be costly. Thus, regardless of its impact on new transmission expenditures, it seems that expanded DG is likely to increase the need for new transmission and distribution expenditures. CAISO, or any other planning authority, should consider the full picture of costs and benefits associated with DG integration.

Finally, even if we concede that a few recently postponed or cancelled transmission construction projects were due to DG (and not to flat load growth, energy efficiency or the proliferation of NEM behind the retail meters, for example), such claimed benefits are a mere drop in the bucket compared with the range of expenditures that make up the TAC.

The handful of lines Clean Coalition claims to have postponed pales in comparison to the size of the existing CAISO TRR, which is approximately \$2.2 billion at the present time. It is important to understand that the majority of capital expenditures by the three largest CAISO PTOs are claimed to be projects focused on management of existing transmission facilities, by improving or replacing outdated or aging infrastructure, rather than for construction of large new transmission projects. Many of these investments will be made to maintain existing system transfer capability, rather than expanding system transfer capability. For example, roughly 80% of PG&E's capital transmission projects, accounting for 60% of PG&E's capital transmission expenditures in 2016, were for upgrade and replacement projects not developed through the TPP or any other stakeholder process.<sup>10</sup> Likewise, the numbers for SCE and SDG&E indicate that at least 64% and 30% of their respective capital transmission expenditures last year were for similar transmission projects not vetted through the CAISO TPP or any other type of stakeholder process. While these expenditures are subject to *post hoc* review by FERC, FERC does not habitually disallow costs for capital expenditures when money has been spent.

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<sup>9</sup> Distributed Generation Integration Cost Study (CEC-200-2013-007-REV);

<http://www.energy.ca.gov/2013publications/CEC-200-2013-007/CEC-200-2013-007-REV.pdf>

<sup>10</sup> NCPA and other CAISO stakeholders have filed a complaint against PG&E, pending before FERC in Docket No. ER17-45-000 (California Public Utilities Commission, et al. v. Pacific Gas & Electric Company), seeking the development of an open and transparent planning process for these projects that will afford ratepayers an opportunity to review and understand PG&E's planning process for projects not vetted through the CAISO TPP. Complainants had more data on PG&E projects than on Southern California Edison or San Diego Gas and Electric Company projects, so only PG&E is named in the complaint.



Thus, even if the CAISO makes some sort of distinction in allocation between the treatment of costs related to the existing grid and costs related to new transmission projects, the cost of maintaining the existing grid shows every sign of rising for the foreseeable future, regardless of the addition of DG.

8. The Clean Coalition provided a spreadsheet and documentation (available at the ISO's TAC initiative web page link on page 1) showing their approach for estimating the savings from avoided future transmission investment that could result from increased DG procurement in response to the ISO adopting TED as the point of measurement for assessing TAC. Does your organization believe that Clean Coalition's analysis provides a reasonable projection of transmission cost savings as a result of DG growth? Please explain your position.

NCPA believes the Clean Coalition analysis is flawed. Clean Coalition claims in its proposal that increasing DG production will directly offset the projected rate of increase of the TAC rates going forward. Specifically, slide 32 of Clean Coalition's presentation<sup>11</sup> claims that increasing DG production by a factor of three (3) over the next 20 years will generate savings of approximately \$63.9 billion. Based on NCPA's understanding of the supporting materials provided by Clean Coalition<sup>12</sup>, NCPA believes that Clean Coalition's claims are significantly overstated. Clean Coalition's analysis suggests that all increases in the TAC rates going forward will be directly attributed to new transmission investments, and that by increasing DG production the need for these new transmission investments will be reduced (if not eliminated). This is simply not the case. As further described in the response to question 7, the types of costs included in the TRR filed by each respective PTO include significant expenditures attributed to operating, managing and maintaining existing transmission infrastructure, including a significant rate of return. A significant portion of the projected increase in the TAC rate is directly attributed to these costs that are not related to new transmission investment.

For example, in PG&E's TO18 transmission rate filing, PG&E shows that approximately \$546 million of its requested \$1.7 billion annual transmission revenue requirement is attributable to a return on capital. The balance is associated with expenses to maintain and operate the transmission system, including taxes and franchise fees. The \$546 million return on capital is based on a 2017 network transmission gross plant in service value of \$11.4 billion. In the TO18 rate case, expected capital additions from 2016 to 2017 were \$341 million, or stated another way, the capital improvement project (CIP) forecast of \$1.3 billion in the 2017 rate forecast was expected to result in \$341 million in new plant in service in 2017. Additionally, only 40% of the \$1.3 billion in CIP's consists of projects that are reviewed through the CAISO's TPP, with the other 60% being self approved through PG&E's internal review processes. While it is difficult to state if the forecast \$341 million in new plant in service forecast for 2017 follows the same 40%/60% split, it is indisputable that less than one third of the TRR is associated with planned capital projects, and further, that less than half of those capital projects in TO18 were reviewed through the CAISO's TPP. When you consider that CC's proposal assumes that the TRR is reduced by the cost of avoided projects in a year, which is not the case, it becomes clear that the CC's estimates of TAC savings are significantly overstated. Eliminating or postponing a few

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<sup>11</sup> [http://www.caiso.com/Documents/CleanCoalitionPresentation-ReviewTransmissionAccessChargeStructureWorkingGroup-Aug29\\_2017.pdf](http://www.caiso.com/Documents/CleanCoalitionPresentation-ReviewTransmissionAccessChargeStructureWorkingGroup-Aug29_2017.pdf)

<sup>12</sup> <http://www.caiso.com/Documents/CleanCoalition-TACFixImpactAnalysis.xlsx>

transmission projects simply does not have the large effect on the TAC rate that Clean Coalition appears to assume.

Of course, any true savings associated with avoided transmission investments must be accounted for as part of CAISO's formal transmission planning process. While NCPA has a number of other questions regarding the reasonableness of certain assumptions within Clean Coalition's analysis, NCPA provides this observation as an example of why the validity of certain claims that have been made by Clean Coalition should be considered more fully as part of this initiative.

It is also worth noting that Clean Coalition has not demonstrated a causal relationship between an increase in DG and other factors that drive expenditure on new facilities. Transmission facilities required to serve public policy initiatives (which include, but are not limited to more DG) will not necessarily decrease as a result of increased DG. California is pursuing multiple policy initiatives, and there is no indication that accomplishing the installation of more DG will prevent expenditures on other alternatives, such as long lines to access cheaper remote renewable resources. California is also pursuing policy goals such as its California High Speed Rail project, which is expected to result in \$ 737 million of new transmission construction for just that project. While PG&E has stated that the CHSR should bear the cost of such construction for its benefit, PG&E is not certain that will be the case,

Clean Coalition has also failed to show any causal link between DG and reliability upgrades. Although it claims that DG will mean less wear and tear on the grid, it prefers to tout alleged benefits without discussing projected costs.

9. If you do not agree with Clean Coalition's projections of transmission cost savings, what approach would you suggest for estimating savings from reduced need for future investment in transmission that could result from increased DG development?

NCPA believes that any analysis that considers alleged savings without associated costs is by itself unreasonable. The CAISO and/or the large PTOs should undertake a holistic study that looks at benefits and costs and that fully elaborates on underlying assumptions and traces the causal links for claimed TAC reductions through the impact on the planning process.

10. The ISO must decide what types of analyses to perform to evaluate alternative TAC approaches, and how to prioritize them. Please provide your organization's view on what analyses would be most useful, and indicate the relative importance of each analysis you recommend to assist the ISO in determining which analyses should take precedence.

No comment at this time.

11. How can the ISO evaluate the downstream financial impacts of potential changes to the TAC structure? What data would best inform the ISO and stakeholders of the potential impacts to various entities? Does your organization believe the ISO should focus on this question now, or wait until potential TAC structure options are better defined (e.g., after the ISO issues a straw proposal)? Please explain your position.

The current TAC structure has been found to be just and reasonable by FERC. Based on the discussions that have taken place during the working group sessions, and after considering the information and/or analysis provided to date as part of this initiative, NCPA believes the existing TAC structure is still just and reasonable, and should be retained. Beyond managing certain elements of the transmission planning process, CAISO's primary role regarding TAC is to act as a pass through billing agent, and to collect revenues to fund the Transmission Revenue Requirements established and filed by each respective PTO. Any changes to the TAC structure that may be proposed as part of this initiative cannot be considered in a silo. Ultimately the rate structures through which such costs are charged to ratepayers, and the various considerations that go into determining the composition of the transmission revenue requirements, are key factors for the development of a fair and equitable method for recovering such costs. Through this process, both stakeholders and the CAISO need to be mindful that simply modifying the TAC structure in the CAISO Tariff, without also addressing how such changes may impact or influence all of the downstream and upstream elements of the comprehensive transmission rate development process, could produce incentives that are misaligned and only result in cost shifts amount stakeholders.

12. How are transmission needs and costs driven by the delivery of energy versus the provision of capacity necessary to meet peak load conditions? Please explain your position.

No comment at this time.

13. In considering potential changes to the TAC structure, what kinds of changes would best align with the impacts of energy delivery, peak load and other drivers of new transmission investment? Please explain your answer.

No comment at this time.

14. What are the cost drivers of operating and maintaining the existing transmission system and what, if anything, could materially affect these cost drivers? In particular, does your organization believe that increasing the share of load served by DG can reduce any costs associated with the existing transmission system? Please explain your position.

No comment at this time.

15. Please offer any other comments your organization would like to provide on the material discussed in the two Review TAC Structure Working Group meetings (August 29 and September 25), or any other aspect of this initiative.

If CAISO were to proceed with the Clean Coalition proposal, NCPA believes that it could be reasonable to distinguish between the costs of the existing grid and the costs of new upgrades, provided impacts can be traced through the TPP.

If CAISO were to propose to adopt anything similar to the Clean Coalition proposal, it should allow a phase in period for LSEs and ratepayers to adjust. Clean Coalition admitted in the first working group meeting that the integration of DG projects would be a decades long process. It would therefore be appropriate to consider a transitional phase-in over a similar period of time of any major change in rate structure in order to phase in the imposition of additional rate burdens on other market participants. The original phase-in of the existing TAC methodology took place

over a period of ten years, and at least ten years seems to be a reasonable precedent for any such proposal.

**Related Acronym Definitions:**

- **Community Choice Aggregator (CCA):** One type of non-utility Load Serving Entity that can operate in an investor-owned utility service area.
- **Customer Energy Downflow (CED):** Metered energy delivered from the grid to an end-use customer measured at a customer meter, also referred to as end-use metered load (EUML). Customer energy consumption that is met by output of DG located behind the same customer meter is not included in CED. Also, CED does not include any production of DG behind the customer meter in excess of consumption behind the same meter during the same interval.
- **Distributed Energy Resources (DER):** Energy resources connected at distribution level, either on the utility side or the customer side of the customer meter, without regard to technology type or size. DERs include distributed generation (DG), energy storage of various types, EV charging stations, as well as demand response and energy efficiency.
- **Distributed Generation (DG):** Generating resources deployed at the distribution system level, either on the utility side or the customer side of the customer meter; DG is one type of DER.
- **Electric Service Provider (ESP):** One type of non-utility Load Serving Entity that can operate in an investor-owned utility service area.
- **End Use Metered Load (EUML):** Another term for customer energy downflow (CED).
- **High Voltage (HV):** Transmission system 200kV and above.
- **Low Voltage (LV):** Transmission system below 200kV.
- **Transmission Energy Downflow (TED):** Gross metered energy flow measured at specified transmission system interfaces, either (a) from high-voltage to low-voltage transmission (**HV-LV TED**), or (b) from transmission to distribution (**T-D TED**). TED measurements do not reflect energy flows in the opposite direction from LV to HV transmission or from distribution to transmission.