



California Wind Energy Association

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California Energy Commission
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1516 Ninth Street
Sacramento, CA 95814-5512
Via email: docket@energy.ca.gov

California Energy Commission

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RE: Comments of the California Wind Energy Association following August 8, 2014, Workshop on Incorporating Land Use and Environmental Considerations in Energy Infrastructure Planning

I. INTRODUCTION & SUMMARY

The California Wind Energy Association (CalWEA) was pleased to be invited to participate in the Commission's August 8, 2014, Workshop on Incorporating Land Use and Environmental Considerations in Energy Infrastructure Planning. The following comments elaborate on the oral remarks made at the workshop.

In summary, it is important to recognize that California has already devoted considerable resources to integrate environmental considerations into energy infrastructure planning, most notably transmission planning. These efforts – the Renewable Energy Transmission Initiative (RETI) and the conceptual transmission planning component of the Desert Renewable Energy Conservation Plan (DRECP) process – have already considered high-level environmental factors and identified five conceptual, foundational transmission upgrades that will be necessary to the efficient expansion of renewable energy beyond currently established goals. Many stakeholders have likewise invested significant time and resources into these transmission planning efforts, each of which has taken place over a period of several years.

The California Independent System Operator (CAISO) has secured from the Federal Energy Regulatory Commission (FERC) the authority to plan for these transmission upgrades, which by the nature of the methodologies used to identify them, are highly unlikely to result in unused, "stranded" transmission assets, regardless of the specific patterns of renewable energy development that unfold. All that remains is for the state's energy agencies to collectively adopt the plan and to implement it. Given the seven-to-ten-year lead time required to resolve the identified transmission constraints, this foundational energy infrastructure should be adopted within the next year to facilitate the achievement of the state's post-2020 clean-energy goals.

If such a plan is adopted, there would be no need for the California Public Utilities Commission (CPUC) or this commission to develop a specific, environmentally-screened, renewable energy portfolio to inform the CAISO's transmission planning process, because the major upgrades required for virtually

any renewable build-out scenario (including imports from out-of-state) will already be planned for. Further, any such scenario would almost certainly prejudice the land-use permitting process and produce a transmission plan that is more vulnerable to leaving transmission assets stranded. A proactive foundational plan, put in place prior to the next “big wave” of renewable energy development, would avoid the chaotic, reactive situation that we have found ourselves in with regard to transmission planning and development during the first (post-RPS) wave of renewable energy development.

II. THE CAISO HAS THE AUTHORITY TO IDENTIFY AND BUILD “POLICY-DRIVEN” UPGRADES

In 2010, the FERC approved the CAISO’s proposed tariff changes to support its revised TPP process, under which the CAISO may identify “policy-driven” transmission upgrades. To plan these upgrades, the CAISO pledged to take “a more comprehensive, holistic approach to transmission planning and approval, rather than the [then-]current project-by-project approach,” in order to minimize the risk of stranded transmission investment.¹ FERC accepted these revisions to the CAISO’s tariff on the premise that the CAISO will use a “series of engineering sensitivity studies . . . to identify a common set of transmission elements that are needed under the renewable scenarios most likely to occur.”² The identification of a “common set” of transmission elements is essential to achieving the goal of minimizing the risk of stranded transmission investment. In the TPP process, this common set of transmission upgrades should then be prioritized and sequenced based on which provides the most system reliability and economic benefits. The result will be a “least-regrets” transmission plan that supports the achievement of the state’s policy goals while addressing the economic and reliability needs of the CAISO-controlled grid in a rational and systematic fashion.

The CAISO essentially used a least-regrets practice when it planned for the Tehachapi Renewables Transmission Project and the Sunrise Powerlink, even though the protocols set forth in the CAISO’s revised tariff were not yet in place.³ After that, however, the CAISO had to grapple with a tidal wave of renewable energy developments, with an interconnection queue that exceeded the state’s RPS goal by more than 10-fold. Now that the rush has slowed down, the CAISO can use the authority that it received in 2010 to systematically plan for policy-driven, least-regrets upgrades. If it does so, the CPUC would not need to fret about which PPAs to plan transmission for. Indeed, it would not need to submit any scenario to the CAISO for its TPP because many, if not all, of the major and truly necessary upgrades would all already be planned for. Most renewable energy projects would be able to achieve the CAISO’s “full capacity deliverability status” upon the completion of all or a portion of the plan, and could operate with “energy only” status until that time. If and when additional upgrades become necessary, those upgrades, likely smaller in scope, can be built based on the specific needs that materialize. For example, if additional system resource adequacy capacity is needed, and if further upgrading the transmission system to get it from available renewable resources is the most cost-effective (as compared, e.g., to gas or storage resources in load centers), then those upgrades can be built.

¹ California Independent System Operator Corporation, Revised Transmission Planning Process Proposal, Filed June 4, 2010 (FERC Docket No. ER10-1401-000).

² *California Independent System Operator Corp.*, 133 FERC ¶ 61,224, PP 191-92 (2010).

³ One of us, Dariush Shirmohammadi, can attest to this, having served as the CAISO’s Director of Regional Transmission when these two upgrades were planned.

With regard to any “collector” lines necessary to connect specific renewable resource areas to the transmission-system backbone, developers can be expected to share in the cost of these lesser upgrades based on CAISO’s existing tariff and protocols (as discussed in section V below).

III. “POLICY-DRIVEN” UPGRADES HAVE ALREADY BEEN IDENTIFIED VIA THE DRECP AND RETI

This type of policy-driven, “least-regrets,” transmission planning analysis has already been performed, with differing treatment of the underlying technical studies, in two separate, major, California initiatives: the RETI process⁴ and the DRECP process.⁵ The DRECP process evaluated five different development scenarios in the California desert, while the RETI process identified upgrades that would facilitate development in most renewable resource areas across the state. Interestingly and significantly, the five DRECP scenarios and the RETI effort all had five major transmission upgrades in common:

- Devers to Vincent 500-kV line
- Vincent to Lighthipe 500 kV line⁶
- Vincent to Mesa 500 kV line
- Two Midway to Tesla/Tracy 500 kV lines, and
- Whirlwind to Midway 500 kV line

Resolving constraints in these transmission corridors⁷ would facilitate development in planned/preferred DRECP areas, as well as areas outside of the DRECP, without presuming any specific development patterns. The state should make use of the results of these major planning efforts, which consumed (and continue to consume) significant state and stakeholder resources, on the order of multiple millions of dollars. These five system-core upgrades, which provide for system reliability while delivering renewable energy, would facilitate development in virtually any area in the state, dramatically reducing the upgrade burden on most any project.

⁴ See Renewable Energy Transmission Initiative (RETI) Phase 2B, Conceptual Transmission Segments. Available at:

http://www.energy.ca.gov/reti/documents/phase2B/CA_CREZ_Conceptual_Transmission_Segments_Phase_2B_final.pdf.

⁵ See “Appendix A – Transmission Technical Group (TTG) Report,” to the *Description and Comparative Evaluation of Draft DRECP Alternatives* (December 17, 2012). Available at:

http://www.drecp.org/documents/docs/alternatives_eval/Appendices/Appendix_A_TTG_Report.pdf.

⁶ While there is no direct line from Vincent to Lighthipe in the RETI conceptual plan, RETI’s Vincent to Mesa upgrades were by and large equivalent to that upgrade.

⁷ While the listed upgrades are identified as transmission lines between two points, the constraints between these two points could be resolved in other ways, which would be determined by the CAISO and its PTOs as they develop plans of service. Any line routing would be considered under the CPUC’s transmission siting authority.

It is essential that California get out in front of the next wave of renewable development, which will require near-immediate action. The CPUC, Energy Commission and the CAISO should together adopt these five conceptual upgrades as elements of a policy-driven transmission plan.⁸ The CAISO and its Participating Transmission Owners (PTOs) should then develop a detailed plan of service, and prioritize the upgrade components in sequence based on (among other criteria) which provides the most system reliability and economic benefits, independent of renewables development.⁹ These five upgrades are “no-brainers” in that, in addition to having been identified by two major multi-agency planning efforts, they are generally recognized by experienced transmission planners as “obvious targets” for upgrading California’s transmission system, not only to meet its policy goals but also to improve the reliability and economics of California’s transmission system. In view of the fact that California’s post-2020 clean-energy policies, while widely anticipated, have not been specifically established, significant progress could be made on permitting these upgrades (as permitting is relatively inexpensive but by far the most time-consuming), with the actual construction of upgrades awaiting clear policy direction signaling the need for substantial renewable energy expansion.

IV. WITH A PROACTIVE TRANSMISSION PLAN IN PLACE, THE CPUC AND CEC NEED NOT CONCERN THEMSELVES WITH SCREENING PPAS, BASED ON ENVIRONMENTAL OR ANY OTHER CRITERIA

If California puts in place a proactive transmission plan, it will not be necessary to attempt to incorporate environmental considerations into the renewable energy procurement and transmission planning processes, because the transmission planning that has been done has already considered high-level environmental factors. We can, and should, rely on California’s very extensive and complex environmental review processes, as well as those of several federal government agencies, to approve or reject proposed projects as appropriate, rather than seek to pre-judge proposed projects in non-siting processes based on insufficient and incomplete information. To do otherwise would tamper with the due process that is built into the permitting processes.

Further, conducting this type of least-regrets planning would be far more productive and efficient than continuing current practice, wherein (now as a part of the LTPP process) the CPUC submits to the CAISO a single portfolio of resources based on somewhat arbitrary and subjective criteria (some of which come from the CPUC’s “RPS Calculator,” which has not been subject to a public-comment process; even if it were, the comments would generally be subjective). The CPUC strongly favors projects that have secured contracts with the IOUs, but assumes that deliverability status is a necessary attribute of any additional renewable energy projects needed to meet the 33% goal (i.e., to fulfill the RPS “net short”), and systematically eliminates any projects that are suspected of triggering “deliverability” upgrades. The CAISO then produces its annual transmission plan based on this CPUC-developed portfolio. Unlike a least-regrets transmission plan, a plan resulting from this single scenario

⁸ Alternatively, the CAISO could immediately conduct another least-regrets analysis. This should be done in three steps: (1) identify several plausible renewable resource development scenarios (one transmission base case for each scenario) that each cost-effectively achieve the state’s policy goals; (2) determine the most suitable transmission expansion upgrade plans for each base case; and (3) identify the upgrades that are common to these transmission expansion plans.

⁹ For example, SCE’s Mesa Loop-in project, proposed in this year’s TPP in the course of addressing LA basin reliability in the wake of SONGS’ closure, is a component of one the five least-regrets upgrades identified above.

does little to promote competition or prevent stranded transmission assets. Indeed, it bolsters the competitive position of those who have secured contracts (even if they may be in a very early stage of development) and any resource areas where deliverability status happens to be available, regardless of the cost of the resources and the value of their deliverability status (which, in an over-capacity situation, will be low). Meanwhile, in the generation-interconnection process, the CAISO has necessarily focused on planning transmission upgrades for specific clusters of renewable projects, which has frequently lead to very large and costly upgrade estimates that, in turn, have led to the demise of many projects, some of which are very promising from overall cost and environmental-impact standpoints. Thus, current practice is tied to transmission status, and discourages competition based on the attributes of the renewable energy projects themselves.

As compared to the current piecemeal process, adopting a least-regrets transmission plan would enable the competitive process (rather than transmission status, and whether costs will be covered by the TPP) to determine winners and losers based on all attributes of the projects. The overall process would be more efficient for that reason, and because major system upgrades would be known in advance, thus simplifying the generation-interconnection process and reducing development lead-time because major upgrades would be planned and paid for, with at least some upgrades underway. Thus, competition among generators (not just those with the financial wherewithal to post enormous deposits) would be more robust.

V. DEVELOPERS CAN BE EXPECTED TO FULLY OR PARTIALLY PAY FOR ANY ADDITIONAL – LIKELY MORE MINOR – UPGRADES BEYOND THE FOUNDATIONAL PLAN

As noted above, developers can be expected to fully or partially pay for any additional – likely more minor – upgrades that are not addressed in the least-regrets transmission plan for several reasons. These reasons also help to explain why the CPUC’s planning assumptions related to deliverability status, noted above, are both unnecessary and problematic.¹⁰

- A policy-driven, least-regrets transmission plan will enable “full capacity deliverability status” (FCDS), once the upgrades are built,¹¹ for most renewable resources. For network reliability upgrades (“collector” lines, using RETI’s terminology) beyond the least-regrets upgrades, the CAISO has designed a process (reflected in its GIDAP tariff) in which the CAISO will partially reimburse developers (i.e., these costs are partially borne by ratepayers). The balance is shared among developers in the renewable resource area based on an adopted formula.
- Per the CAISO tariff, any renewable resources that will not obtain FCDS as a result of the transmission plan can pay for that status in the generation-interconnection process (which cost

¹⁰ These comments are drawn from CalWEA’s January 8, 2014, Comments on the Planning Assumptions and Scenarios For Use In the CPUC’s 2014 Long-Term Procurement Plan Proceeding and CAISO 2014-15 Transmission Planning Process, filed in CPUC R.13-12-010 (LTTP).

¹¹ FCDS projects need not wait for bulk upgrades to be completed before beginning operation; they can start as energy-only projects (assuming studies show that curtailments would be limited) and obtain FCDS when the upgrades are completed.

will likely be reduced as a result of the least-regrets plan having been approved), if the upgrade cost is justified by the capacity benefit that the project will receive.¹²

- Renewables are primarily a means to achieve environmental and fuel diversity goals, rather than system reliability goals. Thus, the RPS is an energy, not a capacity, requirement. The RPS statute, in the context of legitimate excuses for non-compliance, requires consideration of the delivery of renewables under the CAISO's *operational* protocols, not its interconnection protocols.¹³ Accordingly, the CPUC has, on more than one occasion, specifically rejected utility proposals to disallow energy-only bids.¹⁴
- At the current time, there is substantial Resource Adequacy (RA) overcapacity in the CAISO Balancing Authority Area.¹⁵ If any need is shown for added reliability in the coming decades, it likely will be for local or flexible capacity. Renewables typically do not provide, or are not competitive sources of, flexible and local capacity (these needs are more effectively filled by existing gas facilities, demand-response, and/or storage facilities). Thus, there should be little need for renewable energy projects with deliverability status.

VI. IN ANY CASE, CALIFORNIA NEED NOT AND SHOULD NOT IMPOSE AN ENVIRONMENTAL SCREEN IN THE PROCUREMENT PROCESSES OF STATE-REGULATED UTILITIES

As explained above, it is not necessary for the state's energy agencies to attempt to judge the environmental merits of proposed or potential renewable energy projects for the purpose of devising a transmission plan. For the following reasons (and others¹⁶), it also would not be wise to attempt to do so.

A. Low-impact projects will naturally benefit in the procurement process

¹² CalWEA has previously pointed out that generators need to know what credit they will receive for capacity in the utilities' LCBF processes in order to make an efficient judgment about whether it should pay for FCDS. See CalWEA's [comments](#) on the utilities' 2013 RPS Procurement Plans.

¹³ P.U. Code Sec. 399.15(b)(5)(A).

¹⁴ For example, in CPUC Decision 13-11-024 conditionally accepting the utilities' 2013 RPS plans, the Commission reiterated that the utilities must accept bids from energy-only projects and rejected SCE's proposal to require sellers with energy-only projects to bear the risk of negative CAISO market prices (but accepted SCE's proposal to apply a congestion adder to energy-only projects).

¹⁵ The local capacity additions that will result from the CPUC's 2012 LTPP Track 1 and 4 decisions, as well as capacity additions stemming from the CPUC's storage mandate, make it unlikely that any additional system or flexible resources will be required at least through 2030. The 2012 Track 2 studies were not showing any need for system or flexible resources, and the local capacity and storage additions will add system and flexible capacity to the system. The CPUC's adopted 2014 LTPP assumptions show no need for system resource adequacy capacity until 2030 at the earliest.

¹⁶ See the May 7, 2014, comments of CalWEA and many parties in the CPUC's Rulemaking 11-05-005 for additional arguments against inserting environmental criteria into the resource procurement process.

Projects in areas with fewer environmental issues to contend with, particularly in areas in which renewable energy development will be encouraged, such as the DRECP's envisioned "Development Focus Areas" (DFAs), will naturally benefit under the bid evaluation process, and under PPA terms, for several reasons:

- Lower environmental mitigation costs will reduce bid prices;
- Greater development certainty and lower likelihood of legal challenges will reduce bid prices; and
- Fewer site-study requirements will reduce development lead-time, and improve the ability to meet PPA milestone requirements. (The CPUC should encourage its regulated utilities to enforce missed milestones, which would further benefit projects in areas that have been designated for development.)

B. Screening out-of-state and out-of-plan areas would be infeasible

While the DRECP, and perhaps additional such plans in the future, may identify areas within plan boundaries that are preferred for development, these areas will not have been compared to development areas outside of the plan's boundaries. Moreover, while the DRECP is attempting to identify areas that will be suitable for development in designated areas, it cannot assure that this development will occur, whether because development proves infeasible in the intended areas, or because development outside of the DRECP area will prevail for economic and/or environmental or policy reasons.

Even the relatively rigorous landscape-level planning that has been conducted within the DRECP plan boundaries for over five years will not have benefitted from site-specific biological and cultural studies. When it comes to wind energy, CalWEA hopes and expects that the formal draft DRECP, expected to be released in September, will include a proposal for some type of extra-DFA "study areas" in recognition of the fact that site-specific study is necessary before wind compatibility with DRECP goals can be determined. To attempt to compare in-plan and out-of-plan areas, therefore, would be little more than guess-work.

Comparing resource areas outside of the state would be even more difficult given widely varying state environmental permitting processes. Moreover, there is no requirement in the RPS statute that out-of-state renewable energy projects be assessed for their environmental impacts (although there is such a provision for foreign projects¹⁷). Even if such an exercise this were remotely feasible, which it is not, it would be vulnerable to a commerce-clause challenge.¹⁸

In any case, to meet long-term GHG reduction targets and essentially de-carbonize the electric as well as transportation and other sectors, it is likely that we will need renewable energy development

¹⁷ See Section 25741 of California's Public Resources Code.

¹⁸ The outcome of a pending case on California's chicken-cage-size law will could be instructive. See, e.g., "Missouri sues California over chicken regulations," *Washington Post*, February 4, 2014.

in many areas, both in- and out-of-state. So, while the state might try to prioritize the order in which this development occurs, ultimately we may well need development most currently identified areas.

C. The siting process in California already promotes careful and detailed site screening

Given the very high standards that state and federal law set for greenfield development projects in California, the siting process (for wind energy, at least) generally requires on the order of \$2 million in environmental due diligence and at least two – and frequently more -- years to complete. As developers place 10-15% of their development capital at risk in the siting process, they have every incentive to seek sites that have been screened for a combination of resource quality sufficient to support a competitive project and the lowest possible overall impacts on environmental, cultural, visual, military and other resources. Minimizing impacts serves both to minimize mitigation costs and to maximize the chances of obtaining all required land use permits. With so many conflicts at play, however, it is necessary to balance impacts; it is virtually impossible to avoid impacts entirely.

D. The Commissions lack the resources and complete information required to meaningfully interpret environmental documents as part of the procurement process

The siting process is highly specialized, requiring agency, industry and outside biological experts to engage throughout the process to address such issues as biological data survey design and analysis -- typically through multiple rounds of surveys for multiple species, and impact avoidance through project design and configuration, etc. As a non-jurisdictional and already over-stressed agency, it is difficult to imagine how the CPUC, with assistance from the Energy Commission, could meaningfully interpret project documents, particularly at a single point in time likely before all relevant surveys have been conducted and prior to final project design. Indeed, many proposed projects will typically be at a relatively early stage of development when the PPA is obtained because development activities (siting, offtake, interconnection) generally proceed in parallel to a significant degree.

E. To be effective, environmental review would have to prejudice the permitting process

It is not clear how adding environmental review into the procurement process would have any effect at all were the disclosures not used to prejudice the permitting process. If commission staff--or the utility or its independent evaluator--does not like what they read in environmental disclosures (e.g., a significant identified potential risk that could be remote and as-yet-unconfirmed or -quantified) and decide to evaluate a project's environmental viability as "low," it will indeed have prejudged the permitting process, which likely will not have fully evaluated the risk or determined whether the risk can be avoided or mitigated.

Given the exhaustive permitting requirements that are already imposed on renewable energy projects, the significant contractual incentives to comply with these requirements, and the availability of the CPUC's project viability calculator, there is no need for the CPUC or this commission to engage in any additional environmental review of PPAs. Nor should the commissions seek to impose their own judgment over that of jurisdictional environmental permitting agencies (or processes, in the case of the Energy Commission, which has jurisdiction over some types of in-state renewable energy developments).

VII. RESPONSES TO DISCUSSION QUESTIONS

The following are specific responses to the questions identified in the notice issued for the August 8 IEPR workshop.

1. What kind of environmental information is most helpful to the CPUC and California ISO in development of renewable energy scenarios and analyzing related transmission needs? What type and level of information is most suitable and how should it be assembled, vetted and utilized?

For the many reasons articulated above, the CPUC and CAISO need not and should not concern themselves with screening renewable energy projects for purposes of transmission planning. Through the RETI and DRECP processes, the state has already developed conceptual transmission plans based on multiple possible renewable energy build-out scenarios that considered environmental factors.

2. Should the Energy Commission continue to provide project-specific environmental scores to the CPUC for the development of renewable energy scenarios or should the Energy Commission provide more aggregated values to help inform development of the scenarios? Should the approach that the Energy Commission takes to scoring differ for projects in areas where there is a plan such as DRECP, and if so, how?

No, the Energy Commission should not continue to provide project-specific environmental scores to the CPUC for the development of renewable energy scenarios. These scores pre-judge California's and the federal government's rigorous environmental review processes and the DRECP process, which is an evolving one. For wind energy in particular, we hope and expect that the final DRECP plan will recognize that further site-specific study is necessary to determine whether specific wind energy projects will be compatible with DRECP goals. Thus, it will not be possible to accurately or fairly "score" wind energy projects in the DRECP area (or elsewhere), in advance. For the same reasons, the Energy Commission should not provide any aggregated values, which will be even more general and speculative. As explained above, the state's adoption of a transmission plan would obviate the need to develop a speculative renewables development scenario for the purpose of developing a transmission plan, and developing such a plan on the basis of one scenario would risk stranding transmission assets.

3. Should environmental information about transmission needs associated with different scenarios be considered in conjunction with environmental information about differing locations of renewable energy generation in the scenarios? If high-level environmental information about transmission is incorporated in decisions about transmission for renewable energy planning, should that same information be considered by the California ISO in other transmission planning activities (reliability needs or economic needs) that aren't related specifically to renewable energy transmission?

In answer to the first question: Yes, but the state has already used high-level environmental information to develop conceptual transmission plans, through the RETI and DRECP processes; the state should adopt a conceptual transmission plan on these bases. In answer to the second question (if we are understanding it as intended), the CAISO should implement the plan through its TPP in consideration of economic and reliability needs (see section II above). These steps should be taken immediately, so that the plan is in place prior to the next "big wave" of renewable energy development.

4. How should planning efforts such as the DRECP be used to inform development of renewable energy scenarios and analysis of related transmission needs? What uses of DRECP or related efforts may not be appropriate in these processes?

Please see CalWEA's response to question #3, and further elaboration in section II, III and IV above.

5. How should the Energy Commission, the CPUC and the California ISO deal with differing levels of information in other regions of the state or out of state where differing levels of information may be available?

Please see CalWEA's comments in section VI, above.

6. How and to what extent should DRECP or related efforts feed into the procurement process? What uses of DRECP or related efforts may not be appropriate in the procurement process?

Please see CalWEA's comments in section VI, above.

7. To what extent should local government renewable energy planning help inform energy agency processes, and how? What additional recommendations do participants have for how the Energy Commission, CPUC and California ISO should work together to improve coordination, transparency and outcomes in renewable energy planning.

Local governments should continue to engage in planning processes such as the DRECP, but, for the same reasons articulated above in sections IV and VI, the state should not and need not seek to pre-judge proposed projects outside of the permitting process.

8. What data or information could state and federal agencies provide to help project developers minimize costs and uncertainty in project siting?

Given the breadth of this question, we have no response at this time.

VIII. CONCLUSION

For all of the above reasons, CalWEA urges the state to act upon the significant work it has already accomplished to develop a statewide transmission plan that facilitates the state's clean-energy goals in consideration of environmental concerns. CalWEA looks forward to continued discussions with California's energy agencies on achieving this critically important goal.

Sincerely,

/s/

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/s/

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