BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Pursuant to Assembly Bill 2514 to Consider the Adoption of Procurement Targets for Viable and Cost-Effective Energy Storage Systems.	Rulemaking 10-12-007 (AYK) (Filed December 16, 2010)

OPENING COMMENTS OF SIERRA CLUB CALIFORNIA ON ADMINISTRATIVE LAW JUDGE'S DECEMBER 14, 2011 RULING ENTERING INITIAL STAFF PROPOSAL INTO RECORD AND SEEKING COMMENTS

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Sierra Club California ("Sierra Club") respectfully submits the following comments on the Administrative Law Judge"s Ruling Entering Initial Staff Proposal into Record and Seeking Comments, dated December 14, 2011.

INTRODUCTION

Assembly Member Skinner"s bill AB 2514 created great momentum for developing electric energy storage ("EES") policies that would reduce the State"s greenhouse gas emissions and peak power requirements as well as better integrate into the electrical system the generation built pursuant to the 33% renewables mandate. This proceeding is the direct result of that bill. The proceeding started earlier than prescribed by statute and with great promise. Yet, Staff"s new proposal on which the Commission seeks comment does little more than kick the can down the road for future decisions. [1] The Framework Proposal states that "[t]he purpose of the CPUC Staff proposal is not to resolve any of the barriers at this point in time, but rather outline a

[1] Energy Storage Framework Staff Proposal, December 12, 2011, Attachment A to the Administrative Law Judge"s Ruling Entering Initial Staff Proposal into Record and Seeking Comments, dated December 14, 2011 ("Framework Proposal").

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roadmap for how they can be addressed. Additionally, the CPUC Staff proposal defines the steps to be taken in the next phase of the proceeding."[2]

In contrast, PUC Staff recommended in a 2010 White Paper that "if policymakers want to increase the amount of EES in operation throughout California's electricity system they must take action."[3] Sierra Club agrees. Staff's White Paper concluded that "[t]he major barrier for deployment of new storage facilities is not necessarily the technology, but the absence of appropriate regulations and market mechanisms that properly recognize the value of the storage resource and financially compensate the owners/operators for the services and benefits they provide."[4] This will continue to be the case until the Commission squarely deals with this issue in Phase 2 of this proceeding. According to the new schedule, it appears that after a decision is reached on the Framework Proposal, the second phase of this proceeding will address the important issues of cost-effectiveness and procurement targets, among others.[5]

The Framework Proposal diminishes this proceeding. "Staff believes that the creation of a Resource Adequacy value and development of other rules allowing storage providers to participate more effectively in the utilities' procurement programs will mitigate many of the identified barriers. This effort will need to be coordinated with the California Independent System Operator (CAISO) to encourage polices and define products to enable electric energy storage systems to participate in its markets similar to other generation facilities."[6] More than coordination with ISO is needed. The Commission is well aware of the regulatory decisions necessary to successfully incorporate EES into the electric system.

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[2] Framework Proposal, p. 1.
[3] "Electric Energy Storage: An Assessment of Potential Barriers and Opportunities" CPUC Policy and Planning Division White Paper, July 9, 2010 ("White Paper"), p. 8, attachment A to the Order Instituting Rulemaking.
[4] White Paper, p. 14.
[5] Framework Proposal, p. 17.
[6] *Id.*, p. 3.

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The recommendations made by staff in 2010 are still applicable in 2012. Staff's White Paper recommended:

> [a] centralized, coordinated rulemaking addressing storage [which] will avoid unnecessary duplication and potentially conflicting policy development. Top priorities in the rulemaking should be:
> 1. Define the goals of increased deployment of EES within California's electrical energy system.
> 2. Determine what the potential operational uses are for EES.
> 3. Develop a cost-benefit methodology for EES and use it to define, quantify and monetize the full range of EES costs and benefits.
> 4. Compare the costs and benefits of various types of EES with those of other load-shifting and emissions reduction strategies (including energy efficiency, demand response, and renewable energy procurement), in order to determine how ratepayer funds can be optimally committed.
> 5. Determine the mechanism(s) by which an EES facility can recover its costs, including when the facility is being used for multiple purposes.
> 6. Develop a methodology to determine a Resource Adequacy ("RA") value for EES, thus enabling load serving entities to meet part of the requirements under the RA program with storage resources.
> 7. Streamline the siting and interconnection rules for both distributed and utility scale EES projects.
> 8. Explore whether the natural gas industry, which has relied upon storage products and services for decades, could provide some insight as to how best to incorporate EES into the electric system.
> 9. Consider developing incentives for EES, which could include:
> a. An EES procurement standard and/or feed-in tariff(s).
> b. Increased utility rates of return for EES investment (i.e., utility ownership).
> c. Develop a methodology to allow utilities to earn an incentive rate of return on power purchase agreements signed with EES developers.
> d. Increased and coordinated research, development and deployment programs with appropriate levels of funding for EES technologies.[7]

All but two of these recommendations could be accomplished in Phase 2 of this proceeding; the most urgent being setting goals (#1) and proving for funding and cost recovery (#5 and #9). Sierra Club agrees with Staff that providing a Resource Adequacy value for EES will be an important method for valuing EES. Recommendation #6 may be addressed in the parallel Resource Adequacy proceeding. However, the Commission ruled in the Resource Adequacy proceeding that issues related to energy storage issue

[7] White Paper, p. 8-9.

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will not be addressed until Phase 2 of that proceeding.[8] Consequently, the work of the Resource Adequacy proceeding should not be seen as a reason to delay addressing storage procurement in this proceeding.

I. The Commission Should Incorporate Work of the State's Energy Agencies on EES into this Proceeding.

Staff"s framework proposal asks more questions than it answers, and it does not appear to incorporate the latest thinking of the California energy agencies including the PUC. Last year the California energy agencies released a report entitled "California Clean Energy Future: An Overview on Meeting California"s Energy and Environmental Goals in the Electric Power Sector in 2020 and Beyond."[9] This report explains the important role energy storage will play in California"s clean energy future. It states:

> Energy storage will be a significant feature of the cleaner power system. As a result of agency support for storage technology pilot studies, increased utility-scale and aggregated smaller scale storage technologies (such as batteries, flywheels, compressed air energy storage, pumped, hydroelectric storage, and capacitors) will be available to help facilitate integration of intermittent wind and solar renewable resources; shift renewable production to times of higher value and demand; and provide grid operators with ancillary services such as regulation and spinning reserve.[10]

This report states that the energy agencies "are targeting 1,000 megawatts of additional storage capacity to be brought onto the system by 2020."[11] The Energy Commission"s Integrated Energy Policy Report reiterates this goal of 1,000 MW of new storage and states that it could be met if 20% of FERC licensed capacity for pumped storage capacity "completes environmental

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[8] Phase 1 Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge, Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations, Rulemaking 11-10-023, p. 7. Additionally, Sierra Club also believes Recommendation #8 is a low priority compared to the other recommendations.
[9] California Clean Energy Future, CEC-100-2010-002.
[10] *Id.*, p. 7.
[11] *Id.*

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permitting and comes on line by 2020."[12] The report projects that "[s]everal hundred megawatts of distributed electricity storage facilities may come on-line by 2020 as well, depending on various factors. For example, one factor is the outcome of [this] proceeding (OIR R.10-12-007), which will determine whether and how the CPUC should further encourage storage"[13] Similarly, the Governor's Clean Energy Jobs Plan "envisions[, among other things,] accelerated development of energy storage capacity to support integration of renewable resources into the California grid."[14]

The California Energy Commission's Public Interest Energy Research (PIER) Program released its Final Energy Storage report before the release of the Staff's Framework.[15] "This report, a project of the California Energy Commission, presents a strategic analysis of energy storage technology for California by 2020, in part to inform [this] process."[16] "It also provides a framework for the Energy Commission, CPUC, and other regulatory agencies, as they create a roadmap for how commercially ready energy storage technologies can be cost-effectively applied in California to reduce costs to ratepayers, reduce emissions from fossil fuel generation, and enable and accelerate the implementation of more renewable generation and its integration in California's electricity system."[17] Yet, Staff's Framework Proposal apparently does not consider the analysis developed in the report. For example, according to that report, "[s]tudies indicate that California may require between 3,000 to 4,000 megawatts of fast-acting energy storage by

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[12] "2011 Integrated Energy Policy Report," Lead Commissioner Final Report ("IEPR") California Energy Commission, January 2012, CEC-100-2011-001-LCF, p. 75. The Energy Commission is scheduled to vote on adoption of this report at its February 8, 2012 business meeting.
[13] *Id.*
[14] "Renewable Power in California: Status and Issues," Lead Commissioner Report, California Energy Commission, December 2011, CEC-150-2011-LCF-Rev1 ("Renewable Power in CA") p. 27; see also IEPR p. 76 n. 92.
[15] 2020 Strategic Analysis of Energy Storage in California, Public Interest Energy Research (PIER) Program Final Project Report, November 2011, CEC-5000-2011-047 ("PEIR Report"), located at http://www.energy.ca.gov/2011publications/CEC-500-2011-047/CEC-500-2011-047.pdf , last viewed January 30, 2012.
[16] *Id.*, p. 13.
[17] *Id.*

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2020 to integrate the projected increase in renewable energy."[18] This is not mentioned in the Framework Proposal. The PIER report should be made part of the record and analyzed in conjunction with Framework Proposal in Phase 1.

One common theme in these reports is that this proceeding will play an important role in developing and furthering energy storage policy.[19] Yet, the Framework Proposal appears to be inconsistent with the aggressive calls for the development of EES. Staff explains that "[s]ince energy storage is a very large and complex subject, the preferred approach for achieving progress is incrementally manage the policy analysis. Therefore, it is proposed that the analysis approach going forward focuses on incremental steps and that the approach and framework be revised as issues become more precise."[20] Sierra Club urges the staff and Commission to build on the work that has already been done by other State agencies. The issues and priorities related to EES have already been identified. The key is to have a proceeding that digs in to the details and provide decisions that will support California"s Clean Energy Future.

II. The Barriers Identified By Staff Should Not Delay Decisions by the Commission.

A. "Lack of Definitive Operational Needs" Is Not a Reason to Delay Deployment of EES.

To argue there are no "definitive operational needs" for energy storage does a great disservice to what is already known. As discussed above, the State energy agencies foresee EES playing an important role in the State"s clean energy future. The enabling legislation for this proceeding identifies similar operational roles. The legislature found that the expansion of energy storage systems could assist load-serving entities in "integrating increased amounts of renewable energy resources into the electrical transmission and distribution grid in a manner that

[18] PIER Report, p. 6.
[19] See, e.g., IEPR, p. 75; PIER, pp. 8, 109; Renewable Power in CA, pp. 113-15.
[20] Framework Proposal, p. 14.

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minimizes emissions of greenhouse gases," "optimize the use of the significant additional amounts of variable, intermittent, and off peak electrical generation from wind and solar energy," reduce "the need for new fossil fuel-powered peaking power plants," avoid or reduce peak load "from high carbon-emitting electrical generating facilities," and provide "ancillary services otherwise provided by fossil-fueled generating facilities" reducing emissions of carbon dioxide and criteria pollutants.[21]

The energy storage program does not need to serve all of these functions immediately in order to provide significant benefits. It can begin simply providing dispatchable load for balancing intermittent renewables and energy transfer to peak hours as needed to compensate for variable output from solar and wind. Delay risks losing more value than would be gained by further analysis. Other services can be added later. By prioritizing this, ESS could play an important role as a new source of needed flexibility and thereby, move California away from reliance on thermal generation in the integration of renewable resources.[22] Moreover, implementing storage in the near term will actually help the CPUC and IOUs gain experience and expertise through real world in-State applications.

In discussing ISO"s renewable integration modeling, the Framework Proposal disregards the obvious implications of the modeling"s results. The Framework Proposal states that "[t]he lack of definitive conclusion to the study presents a challenge to determining to what extent energy storage technologies ***can indeed play a part in addressing grid system needs***, including integration."[23] In contrast, the Energy Commission explains that CAISO"s 33% RPS renewable modeling presented in the long-term procurement proceeding indicates that EES can play a role in addressing an over generation issue that may arise from implementing the 33% mandated; the

[21] AB 2514, Stats. 2010, ch 469 Section 1(a-e).
[22] *See, e.g.*, Renewable Power in CA, pp. 119-120.
[23] Framework Proposal, p. 4 (citation omitted, emphasis added).

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CAISO modeling shows that energy storage products may be able to substitute for the procurement of new fossil fuel generation.[24] Furthermore, Staff"s previous White Paper concludes that "EES has the potential to enhance California"s ability to effectively meet its many energy and environmental goals. EES can provide a number of benefits to the grid: it can provide emergency backup, reduce the need for peak generation capacity, provide ancillary services, facilitate demand response, reduce GHG emissions and help to integrate intermittent renewables."[25]

Staff also misconstrues Sierra Club"s comments regarding operational needs, by citing to Sierra Club"s Comments to support the Framework Proposal"s statement questioning the role EES can play on the grid.[26] Sierra Club"s point is that there should be more transparency related to the grid and that this additional information would promote better analysis of the locational value of EES. Sierra Club"s previous comments state:

> One barrier to the successful deployment of energy storage not identified at the workshop is the lack of information regarding the specific locational and operational needs of the electricity grid. The California Energy Commission has identified initial regional targets for the implementation of the Governor"s 12,000 MW goal. However, locational information regarding when and where storage capacity is needed for operational efficiency, displacement of peak fossil fuel generation, and regulatory compliance would maximize the benefits of energy storage in renewable integration and procurement planning. Greater transparency provided by CAISO and the utilities will allow the Commission to inform an analysis of energy storage"s value. This type of locational and operational information should be compiled and considered in this proceeding in order to develop a map of the transmission and distribution system that examines the potential locational benefits of certain energy storage placement. This would enable the Commission to consider whether the placement of energy storage in certain locations provides greater services to the grid and, if so, to value that storage appropriately. For example, strategically located energy storage can allow for cost effective deferment or replace the need for transmission and distribution

[24] Renewable Power in CA, pp. 119-120 and n. 244.
[25] White Paper, p. 10
[26] Framework Proposal, p. 4 n. 3.

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> infrastructure upgrades, providing greater local reliability and capturing significant benefits for ratepayers, end users, and the environment.[27]

The PIER report makes a similar point:

> At present, the most important characteristic affecting baseline deployment of energy storage technologies for renewables grid integration is the lack of information available regarding the amount, locations, and types of energy storage systems that electric power companies need for system-level renewables integration. Every major study reviewed for this report noted that industry experts generally believe that energy storage will be a key asset in integrating grid-scale renewable generation and providing additional regulation, ancillary services, and T and D congestion relief and upgrade deferral. However, not many studies analyze how much energy storage will be needed and whether energy storage is a cost-effective solution.[28]

Sierra Club reiterates its call for more transparency, and requiring CAISO and the IOUs to produce this type of information in this proceeding does not in any way diminish Sierra Club"s view that EES will play an important role in addressing grid needs and the energy and environmental policies of the State. Staff"s proposal that it continue "to collaborate with other entities, including CAISO" will not in of itself provide the necessary information to the participants in this proceeding.

B. Other Barriers Identified by Staff Can Be Addressed in This Proceeding.

Addressing "lack of cost-effectiveness evaluation methods," "lack of cost recovery policy," and "lack of cost transparency and price signals (wholesale and retail)" in this proceeding would facilitate the deployment of EES.[29] This is consistent with Staff"s Recommendation"s in its 2010 White Paper.[30] In addition, coordination with the Resource Adequacy proceeding should be clearly delineated.

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[27] Comments of Sierra Club California on Administrative Law Judge's July 21, 2011 Ruling Entering Documents Into Record And Seeking Comments, August 29, 2011, pp. 7-8.
[28] PIER Report, p. 156.
[29] *See* Framework Proposal, pp. 7-8.
[30] White Paper, p. 8-9.

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III. The Roadmap and Procurement Objectives Should Recognize that Energy Storage Will Play an Important Role in California's Clean Energy Future

When analyzing the use and deployment of the EES, the Commission should consider both the role storage can play now and will play in the future. This temporal framework for addressing EES should inform both the roadmap and procurement objectives. EES technology will improve over the next few years and the costs will likely go down as EES is scaled up for the market and as more policies address EES"s place in the energy system. [31] The PIER Report suggests that "[t]he result of the potential increase in investment and deployment of energy storage technologies, driven by the aforementioned policy changes and technological advances that may occur over the next decade, is that California and the nation will likely experience significant price drops in the cost of various energy storage technologies by 2020."[32] In addition, the need for energy storage will be greater by 2020, because it will play a role in the clean energy future which necessitates a move away from fossil fuels and towards more renewable power. To achieve California"s goal of an 80% reduction in the carbon emissions by 2050, the amount of storage on the grid will have to increase dramatically.[33]

A. Procurement Targets for EES Will Contribute to California's Clean Energy Future.

The Framework Proposal correctly points out that "[t]he end goal of this proceeding is to determine what procurement targets, if any, should be established for energy storage."[34] The proposal requests that the parties propose criteria for procurement objectives. Sierra Club submits that the Commission has already identified the relevant criteria in other contexts. For example, the scoping memo poses the question "What policies are needed to encourage effective

[31] PIER Report, p. 8.
[32] *Id.*
[33] Renewable Power in CA, p. 52.
[34] Framework Proposal, p. 14.

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energy storage that will: reduce greenhouse gas emissions; reduce peak demand; defer and/or substitute for an investment in generation, transmission or distributions; and improve reliable grid operations?"[35] Similarly, the White Paper states that "[b]y utilizing EES technologies to store intermittent renewable power, the State may reduce greenhouse gas emissions from carbon-based electricity production, avoid the need to build expensive new transmission lines and power plants to meet peak energy demand, increase system reliability and generate economic activity through the manufacturing and operation of these EES technologies."[36] Evaluating procurement targets should be based on the above criteria and should address the question of whether targets will promote the State"s energy and environmental goals. According to the Energy Commission, "[e]nergy storage, demand response, and other options like improved forecasting must also be considered to potentially displace the need to use fossil fuel-fired generation technologies to back up intermittent renewable generation."[37]

Setting initial, minimal procurement objectives, for example, goals of 500 megawatts each for PG&E and SCE and 100 megawatts for SDG&E by December 31, 2015, would at least get the program moving with low risk to billpayers. More complex questions about market systems can be postponed by simply allowing IOUs to obtain cost recovery for a modest amount of early storage facilities built in the first year. The initial targets would represent about 20% storage capacity relative to the approximately 5,000 megawatts of renewable distributed generation that is currently planned by 2016 in the IOU territories programs such as the RAM, IOU Solar program, GoSolar, SB 32 FiT, and legacy programs.[38] These storage goals could then be increased as needed in future phases for years beyond 2016. Furthermore, at the very

[35] *See* Scoping Memo, p 4, Question No. 2.
[36] White Paper, p. 2.
[37] Renewable Power in CA, p. 52.
[38] *See, e.g.*, Renewable Power in CA, pp. 48-49.

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minimum this proceeding should evaluate the 1,000 MW of storage proposed by the California Energy Agencies[39] and the amount of storage necessary for renewable integration.[40] The proceeding should also consider a target for distributed electricity storage facilities[41] including an analysis of EES targets that would meet the needs of the Governor's Clean Energy Jobs Plan.

Sierra Club agrees with the PIER report that "targets under AB 2514 are a likely driver for energy storage technologies."[42] The PIER report explains that "[t]he state can boost appropriate deployment of energy storage by setting targets for procurement under AB 2514, ideally in a two-phase process with short-term and long-term targets. Setting procurement targets would ensure that conventional energy storage technologies do not have an unfair advantage over newer or less proven options that may nonetheless become more cost effective over time."[43] The long-term targets should promote the development of EES as emerging technologies. As more technologies are developed and integrated into the grid, the costs will go down.[44]

B. Methods of Assessing Cost-Effectiveness Will Need to Be Uniquely Tailored for EES.

Sierra Club agrees with the PIER report that a critical challenge of this proceeding "is how to allocate the costs and benefits of storage across the range of services that are affected, including generation, transmission, distribution, and regulation."[45] The PIER report makes recommendations for the considerations necessary in a cost-effectiveness analysis. It states:

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[39] CEC-100-2010-002, p. 7.
[40] *See, e.g.*, PIER Report, p. 6
[41] *See Id.*, p. 75.
[42] *Id.*, p. 114.
[43] *Id.*, p. 10.
[44] *Id.*, p. 183.
[45] *Id.*, p. 9.

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> Policy makers will need to devise a framework that addresses the multiple values and potential overlapping nature of energy storage"s benefits. Considerations that the CPUC will need to address include:
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> - Grouping operational uses and associated benefits, such as by application(s) and location. This method should use the most promising applications . . . frequency regulation, integrating variable renewable energy, and developing community or distributed energy storage systems.
> - Prioritizing certain applications to meet the objectives set forth by AB 2514.
> - Compensating energy storage owners/ operators for services not covered by California ISO markets.
> - Determining which services/applications and related value streams may be aggregated to maximize financial return to a storage system without double-counting benefits or committing the same resource to incompatible uses at one time.
>
> Policy makers should consider broad categories of benefits that could be monetized in the valuation method. For example, societal benefits include reduced reliance on fossil fuel and increased energy security, reduced criteria air pollutant and greenhouse gas emissions, and achieving superior operation of the existing generation fleet. In addition, energy storage can provide transmission and distribution deferral and other avoided costs, such as for variable distributed generation integration. Additional value for customers could come from avoided transmission and distribution fees, such as when large distributed energy storage modules provide on-peak energy closer to load, relieving some of the on-peak energy flow in congested transmission lines.[46]

"Another significant benefit for renewables integration may be the potential for energy storage to reduce the need for or amount of curtailment. Wind integration studies have shown that without some type of „outlet" for „excess generation" during periods of high production and low demand, conventional generators must reduce output or wind energy must be curtailed."[47]

The assessment of cost-effectiveness should also compare the costs of other technologies that would be used instead of energy storage. For example:

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[46] PIER Report, p. 9 (this summarizes the proposal that is explained in the PIER Report.)
[47] *Id*, p. 161 (citation omitted).

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> While conventional resources could possibly meet most of California"s regulation needs, the demonstrated capability of energy storage to outperform conventional resources in this application merits consideration of the benefits and costs of both scenarios. In addition, the results of the KEMA study suggest that meeting high-renewables penetration with conventional generation may be problematic, considering that renewable generation will displace a portion of conventional generation best suited to address ramping rates."[48]

Adoption of an energy storage "end use" framework could be a useful tool for assessing cost-effectiveness. Staff proposes that this framework be used in "cost-effectiveness evaluations and defining Resource Adequacy value."[49] Sierra Club cautions that this "end-use" framework should not be used as a method to limit an assessment of the broad categories of benefits that specific energy storage devices would provide. Sierra Club agrees with the PIER Report recommendation that the Commission "should consider a determination of cost effectiveness under the statute as including the value of various societal and environmental benefits."[50] This is especially important in that none of the studies to date regarding EES has considered these benefits.[51]

None of the four primary Standard Practice Manual alternatives used by the Commission to assess cost-effectiveness in the Standard Practice Manual tests appear to be a good basis for determining cost-effectiveness of EES.[52] Each of the four tests addresses demand side management and by definition none of these tests fully capture the unique characteristic of energy storage, *i.e.*, the cost effectiveness of its non-demand side management aspects. The Societal Cost test variation of the Total Resource test may have some applicable attributes because it addresses societal benefits as well as costs.

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[48] PIER Report, pp. 140-41 (citation omitted).
[49] Framework Proposal, p. 3.
[50] PIER Report, p. 186.
[51] *Id.*
[52] *See* Framework Proposal, p. 16.

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However, whatever cost-effectiveness test is developed, it must address the unique characteristics of EES and account for its stacked benefits.

C. The Proposed Roadmap Should Be Developed after this Proceeding Addresses Cost-Effectiveness and Procurement Targets.

Creating a roadmap at this time puts the cart before the horse, because there is no method to value cost-effectiveness. The greatest impediment to the deployment of EES that the Commission can address is the creation of a valuation methodology for the costs and benefits of storage, which is the very purpose of this proceeding. The PIER Report explains that "[t]o determine the appropriate amount and role of energy storage by 2020, California should first determine a method to valuate or monetize the benefits provided by energy storage technologies . . . . The high costs of current energy storage technologies and investment risk will persist without adoption of a valuation framework that monetizes the independent benefits and creates opportunities for cost recovery."[53] Once a valuation framework is created, procurement targets can be set and a roadmap developed. The priorities for these targets should be maximizing the cost-effective use of EES to meet the State energy and environmental policy goals including compliance with AB 32.[54]

CONCLUSION

By addressing cost-effectiveness and procurement targets in Phase 2 of the proceeding the Commission will be able to reduce the regulatory barriers to EES, take a leadership position on the development of energy storage policy and contribute to creating California's clean energy future.

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[53] PIER Report, p. 7-8.
[54] *See* Section III.A for a further discussion of priorities.

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