



January 14, 2022

Jim Zolnierek  
Torsten Clausen  
Illinois Commerce Commission  
Leland Building  
527 East Capitol Avenue  
Springfield, IL 62701

Dear Mr. Zolnierek and Mr. Clausen:

I would like to submit this letter with attachments to the Illinois Commerce Commission for consideration in relation to the ICC's current energy storage work. This is relevant to the ICC's discussions on a framework to identify and measure the potential costs and benefits that deployment of energy storage could produce. I would also like to speak on this topic in the upcoming January 20 meeting on energy storage cost and benefits.

Clean Energy Group (CEG) conducts quite a lot of energy storage work with state energy agencies and regulators, and the question of the cost effectiveness of energy storage arises very frequently. There are some important recommendations I would like to make to the ICC, based on experience in this area.

One thing that is important to understand is that different states use different cost-benefit tests when evaluating proposed new technologies or measures for inclusion in incentive programs. These various tests (the UCT, SCT, TRC, RIM etc) all consider a different set of benefits. Needless to say, the outcome of a cost-benefit analysis will vary greatly depending on which set of benefits is considered.

The historic problem for energy storage is that it is a multi-use technology, meaning there are many different benefits that could be included in a cost-benefit test. Some of these benefits are easy to price, while others are more difficult. For example, while it is well understood that resilience (back-up power during grid outages) is a valuable benefit, it is also difficult to assign a dollar value to this benefit. Energy storage also offers many non-energy benefits – such as emissions reductions and reduced land use – that can be difficult to price.

Cost-benefit analyses that consider only a few of the benefits of storage will have a more difficult time showing that storage is cost-effective, because the test is weighing all the costs of storage against a small subset of the benefits.

For these reasons, it is important to understand which test is being applied, and which set of benefits is being considered in the test.

It is also important to consider who is conducting the cost-benefit test, as this can play a large role in determining the outcome. For example, in some states, utilities have conducted cost-benefit tests using the assumption that storage will be large, utility-owned, centrally located resources (for example, megawatt-scale batteries installed at substations). In such a case, the cost of the storage would include capital costs. But this is not the only form energy storage procurement can take. Utilities can purchase storage services from third parties, including aggregations of small, distributed batteries owned by customers and third parties; in this case, a utility cost-benefit test would not include capital costs, since the utility would not own the storage, but only purchase storage services. Storage as a service will therefore have a very different cost-benefit profile, from the utility's perspective, than utility-owned storage, and both ownership models should be considered.

Here are some best-practice recommendations to consider regarding energy storage cost-benefit testing:

- Get third parties/stakeholders involved. This ensures that a variety of perspectives are brought to bear.
- Consider as wide a range of benefits as possible, including non-energy benefits (NEBs). When necessary, assign a value to benefits not already valued in the market. A low value is better than no value at all.
- Don't do cost-benefit testing as part of an IRP process, because IRPs are typically very limited in the number and types of benefits they consider.
- Consider the advantages of energy storage services procurement versus utility ownership/rate basing. Services procurement does not include capital costs, and there are typically other resources providing similar services that can provide a basis for pricing.
- Look at what other states have done. While every state is different, there is no need to reinvent the wheel. Many states have developed energy storage regulations, policy and programs; it is prudent to learn from their experience.

More details and examples of these and other best practices may be found in the attached documents, along with results of energy storage cost-benefit tests conducted in other states. I will be happy to speak to Commission members to answer any questions on these topics.

Thank you,



Todd Olinsky-Paul  
Senior Project Director  
Clean Energy Group and Clean Energy States Alliance

#### About CEG:

Clean Energy Group (CEG), a national nonprofit organization, works to accelerate an equitable and inclusive transition to a resilient, sustainable, clean energy future at the forefront of clean energy innovation to address the urgency of the climate crisis. Founded in 1998, CEG has been a thought leader on effective climate and clean energy strategies for more than two decades. Its staff specializes in providing resources and assistance related to emerging technology trends and transformative policy, regulatory, and market approaches. See [www.cleanegroup.org](http://www.cleanegroup.org) for more information about CEG's work.