F I S C A L I M P A C T R E P O R T

SPONSOR Akhil/Sariñana/Small **ORIGINAL DATE** 2/25/19 **LAST UPDATED** 3/05/19 **HB** 593/aHENRC

SHORT TITLE Energy Storage System Tax Credit **SB**

ANALYST Graeser

REVENUE (dollars in thousands)

Estimated Revenue					Recurring or Nonrecurring	Fund Affected
FY19	FY20	FY21	FY22	FY23		
	($2,000.0)	($2,000.0)	($2,000.0)	($2,000.0)	Recurring	General Fund

Parenthesis ( ) indicate revenue decreases

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY19	FY20	FY21	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total	>0	55.5	55.5	$111.0	Recurring	EMNRD Operating
	0	TRD indicates no additional budget, but implementation will need additional time.			Recurring	TRD Operating

Parenthesis ( ) indicate expenditure decreases

SOURCES OF INFORMATION

LFC Files

Responses Received on Original Bill From
Taxation and Revenue Department (TRD)
Energy, Minerals and Natural Resources Department (EMNRD)

SUMMARY

Synopsis of HENRC Amendment

The House Energy, Environment and Natural Resources Committee Amendment to House Bill 593 removes the purpose language from both income tax and corporate income tax credits, conforms the corporate income tax credit limit for credit amounts to the $150,000 income tax limit for commercial installations. The bill removes the phrase, “on a first-come, first-served basis” from both credits.

Synopsis of Original Bill

House Bill 593 creates an energy storage system income tax credit and a companion energy storage system corporate income tax credit. The amount of credit would be 30 percent of the installed cost, with a limit of $5 thousand for a system installed on a residence and $150 thousand if the system is installed on commercial property. A new Section is also added to the Corporate Income Tax Act providing for a similar credit, but at an amount not exceeding the lesser of ~~$50,000~~ $150,000 [per HENRC amendment] for a system installed on the taxpayer's property, or 30 percent of the total cost of installation of the system. TRD will allow a maximum of $2 million in total energy storage system income tax and corporate income tax credits. ~~The credits will be honored on a first-come, first-served basis.~~ The credits are nonrefundable and cannot be rolled forward. The full amount of the claim must be applied in the tax year filing for the year of installation. If claims in a given tax year exceed the $2 million cap, further claims will not be honored and will not be rolled over to the following tax years. EMNRD is charged with developing a certification process and a process for notifying potential claimants if the $2 million cap has been exceeded. With the limit of $150 thousand, this is not a utility scale tax credit. See Technical Issues below for a discussion of whether the provisions of this bill can actually be administered by EMNRD and TRD.

TRD is required to prepare a report annually and present this report to an interim legislative committee.

There is no effective date of this bill. It is assumed that the effective date is 90 days after this session ends (June 14, 2019). The provisions are applicable to taxable years beginning January 1, 2019. That is, installations in course of calendar year 2019 will be approved (or rejected) by EMNRD and the claims will be made on personal income tax or corporate income tax returns filed as early in 2020 as possible. EMNRD will approve energy storage income tax and corporate income tax credits until total 2019 tax year applications exceed $2 million or some amount greater than $2 million based on an analysis of applications that would be paid by TRD. The cap amount is imposed on TRD, not EMNRD, so a complicated set of relationships would have to be implemented. There is no delayed repeal of the provisions of the act but systems installed after December 31, 2024 would not be eligible for credit.

TRD reports that it can implement this new credit within state development resources, but the effective date needs to allow sufficient time for EMNRD to establish technical criteria and for TRD to work with EMNRD on communications processes. TRD suggests an effective date of January 1, 2020.

FISCAL IMPLICATIONS

This bill may be counter to the LFC tax policy principle of adequacy, efficiency, and equity. Due to the increasing cost of tax expenditures, revenues may be insufficient to cover growing recurring appropriations.

TRD expects the credit to be maxed out each year and discusses this methodology as follows:

> General market system costs can range from $12,000 to $500,000, but this is without associated technical specifications. Tesla's Powerwall costs $6,700 per Powerwall, $1,100 for supporting hardware, and installation costs range from $1,000 to $3,000. This

is aimed for residential installations. The Taxation and Revenue Department (TRD) assumes that residential properties will therefore have credits amounts that fall under the 30 percent of total cost threshold. Based only on Tesla data, personal income credits would be around $3,250. For commercial properties, a $500,000 system with the 30 percent cost threshold would reach the $150,000 threshold for commercial properties listed in the bill under the personal income tax credit.

The other assumption of how many taxpayers would apply for the credit has very little market data to establish an estimate. The U.S. Energy Information Administration points out that data collection on small-applications depends on interactions with distribution networks where utility companies may collect the information. The data is also not consistently collected across states. In megawatt capacity, the majority of current small-scale energy storage capacity nationwide is occurring in the commercial sector. Assuming the commercial sector is where the development would occur in New Mexico, only 13 systems would need to be installed at the $150,000 maximum per system to reach the cap. Coupled with some residential installations that generate a much smaller credit, TRD assumes the cap limit could be reached. Unverified market activity relayed to EMNRD indicates 3 energy storage systems currently installed per month. This would support reaching the cap if the installations are in the commercial sector.

From a commercial perspective, the bill is written so that an industrial sized uninterruptible power supply (UPS) would qualify. Such items are a common element in most data centers, bridging the need for a rapid source of electricity after a power failure, but before a fuel powered generator can start. With a large data center under construction in the state on land owned by a local government, it appears their UPS would qualify for the 30 percent deduction. Rough sizing estimates show this facility alone could swamp the credit.

LFC staff notes that there are currently a number of technologies available for residential, commercial and utility scale storage systems. It is expected that at most 100 residential systems per year would be installed, since most residential solar photovoltaic systems are installed as grid-tied systems. Only remote, "off-the-grid" residential installations would be plausible candidates for these credits. And in many cases, the personal income tax liability of the taxpayers would not be sufficient to allow total use of the approved credit amounts. Commercial installations could include agricultural uses. The higher credit amount of $150 thousand based on $450 thousand installed cost would be attractive for high energy-consuming industries such as dairies or machine shops. If 10 such systems (plus an assumed 100 residential energy storage systems) were installed each year, with maximum credit amounts, then the full amount of the $2 million cap would be utilized. Again, this would be a balancing act between credits earned and that year's tax liability. TRD notes that commercial scale non-interruptible power supplies would be eligible for the credit.

EMNRD reports a fiscal impact as follows:

The fiscal impact for EMNRD includes staff resources to create rules and to develop an electronic submission process for applications. There would be an estimated cost for initiation of the program of $55,500, for program, legal and information technology staff. The estimate is based on staff time of 1,500 hours, at a $37 average hourly rate with fringe benefits, to create new rules and establish an electronic submission system.

Ongoing staff resources are required to effectively manage, provide system reviews, certify systems for tax credit eligibility, collect data, and maintain a database.

SIGNIFICANT ISSUES

TRD has a number of comments on the tax policy aspects of the provisions of this bill:

The bill defines the purpose of the tax credit, which TRD recommends for new credits to facilitate evaluation. The credit also has a defined end date of prior to January 1, 2025. TRD supports sunset dates for legislators to review the impact of a credit before extension. For credits associated with rapidly changing technology, a sunset date allows for efficiently updating criteria and dollar thresholds as technology changes. Due to the broad definition of an energy storage system, an even earlier sunset date may be beneficial to see what storage technologies are being claimed through the credit.

The broader question of subsidizing the research, development and installation of energy storage systems has many economic factors to consider including incentives already impacting established markets. New Mexico is currently one of 16 states requiring utilities to include storage in their state energy plans.[1] Market factors are occurring for public utilities and this credit may incentivize more action in residential and commercial sectors. A credit is a tax expenditure giving preferential tax treatment to certain taxpayers. There is a question whether the state needs to incentive these investments to continue the market development of energy storage systems or whether current market factors support them naturally. Other states have provided incentive to this market through rebates, grants and loans. Maryland became the first state to issue an energy storage income tax credit for tax year 2018. There, credits are capped at $750,000 per year with sub caps for residential and commercial projects, and the credit program extends through 2022. Maryland has yet to issue an assessment of the first year impact of the credit. New Mexico would join Maryland as one of the first states to collect data on the impact and effectiveness of these credits.

The credit aligns with New Mexico's Executive Order 2019-003, which aims to address climate change and energy waste prevention. Storage energy systems can allow for the efficient use of energy to transfer solar energy gathered during the peak solar hours to peak energy demand and consumption during evening hours. This is an example of "peak shaving" at an individual basis. Storage energy systems can thus address issues of energy management.

EMNRD has a number of concerns with the underlying premise and some of the provisions of the bill. [LFC note: HENRC amendment deleted the reference to encouraging research, development and installation of electricity storage facilities. Most of EMNRD's comments are still valid despite this HENRC amendment and have been retained below.]

HB 593 would create a new tax credit program to specifically encourage research, development and installation of energy storage systems. Since the program is meant to encourage R & D, allowing for the inspection of, evaluation, and collection of data on

[1] U.S. Energy Information Administration (EIA), "U.S. Battery Storage Market Trends", May 2018, EIA report cites the following source: PV Magazine, "Utilities are increasingly planning for energy storage," December 7, 2017, https://pv-magazine-usa.com/2017/12/07/utilities-are-increasingly-planning-for-energy-storage-w-charts/

system performance would provide information on the effectiveness of systems installed. SB 593 does not provide for this process. EMNRD recommends adding language to HB 593 that for purposes of inspecting the energy storage system's installation, EMNRD or its authorized representative shall have the right to inspect an energy storage system an applicant owns and that EMNRD has certified, after EMNRD's certification, upon providing a minimum of five days' notice to the taxpayer.

The definition of energy storage system is not well defined. HB 593 limits the tax credit to retail electricity customers only and the focus is on electricity. Therefore, if electricity is the focus of the bill, the definition should focus on only "electric energy storage" and should be simplified to: "Electric Energy Storage System – a system used to capture electric energy produced at one time for use at a later time."

If HB 593 intends to allow for mechanical, chemical and thermal systems, then separate definitions of those energy storage devices should be included those and not limit those systems to strictly electricity in and out storage. For example, it would exclude devices with only one-way electric function (e.g. solar thermal storage devices (heat in, electricity out), and ice storage devices (electricity in, cooling out). Deleting the following language from the definition would eliminate this issue: "that was once electrical energy, for use as electrical energy at a later time."

HB 593 does not require inspections of regulatory authorities or, if applicable, compliance with electric utility requirements for energy storage systems that interconnect to the distribution system grid of the electric utility company. To ensure quality and safety standards are met, consideration of an inspection process should be part of the certification.

HB 593 does not limit a taxpayer from claiming other tax credits that may become available for energy storage systems.

A quick Google search indicates a number of vendors of residential, commercial and industrial/utility-scale energy storage systems are currently in the market. Most energy storage systems currently utilized lithium-ion batteries, but other technologies are available.

Two such vendors are listed below:

https://www.dynapower.com/products/energy-storage-inverter-solutions/?creative=311432091559&keyword=%2Benergy%20%2Bstorage%20systems&matchtype=b&network=g&device=c&gclid=EAIaIQobChMIyv7Yl7jX4AIVFB-tBh1v4AMAEAAYAiAAEgIemPD_BwE

https://www.essinc.com/cost-calculator/

This second reference has a calculator that includes capital costs, operating and maintenance and fuel cost savings and focuses on levelized cost of service for an iron flow battery system.

PERFORMANCE IMPLICATIONS

The LFC tax policy of accountability is nominally met since TRD is required in the bill to report annually to an interim legislative committee regarding the data compiled from the reports from taxpayers taking the credit and other information to determine whether the deduction is meeting its purpose. The bill does not establish goals or milestones, so TRD could only report on the amount of claims actually paid for a fiscal year. With the cooperation of EMNRD, the report could include the kilowatt-hour or megawatt-hours of storage approved.

HB 593 allows the use of renewable energy through energy storage at night and other times when renewable energy is intermittent. This supports the Governor's Executive Order (2019-003) on addressing Climate Change and Energy Waste Prevention.

ADMINISTRATIVE IMPLICATIONS

HB 593 requires EMNRD staff lead the rulemaking process to create procedures to certify systems for tax credit eligibility of each tax credit applicant. In addition, to accommodate the application review process the use of electronic form submission and IT technical support is required for this effort.

TRD notes that it can implement this new credit within state development resources, the effective date needs to allow sufficient time for EMNRD to establish technical criteria and for TRD to work with EMNRD on communications processes. TRD suggests an effective date of January 1, 2020.

See "Technical Issues" below. Both TRD and EMNRD would have significant difficulty implementing the somewhat complicated interaction between agencies to avoid having EMNRD approve too few or too many applications. The goal would be for TRD to pay out $2 million in combined credit claims in any fiscal year, keeping in mind that many approved claims could not be honored in any fiscal year if the taxpayers with those approved claims did not have sufficient tax liability to fully utilize the credit.

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

Relates to HB-520, SB 518 and SB 39 as energy storage can be connected to the solar systems.

TECHNICAL ISSUES

In addition to the suggestions in "Significant Issues" above, EMNRD notes another technical issue:

> In section 1, the income tax credit is for the cost of purchasing and installing a system (1.C(3)). In section 2, the corporate income tax credit is for the cost of installing the system (2.C(2)).

TRD also addresses some technical concerns:

> In Section 1(A), the bill does not specify that the property is owned by the taxpayer in New Mexico nor that the taxpayer is purchasing electricity at retail. For Section 2(A),

under the corporate income tax credit, the language is clear the taxpayer owns the property. TRD suggests adding the following language for the personal income tax credit, "in New Mexico owned by that taxpayer". Section 1(A), page 1, lines 20 and 21 now may read "individual and who installs an energy storage system on property in New Mexico owned by that taxpayer and the taxpayer purchases electricity at retail . . ." "Purchases electricity at retail" should be defined in statute.

From a corporate perspective, it is common for businesses to exist in rented commercial property. Treating rented versus owned commercial property differently does not adhere to the tax principal of equity. TRD recommends C (1) be eliminated and a consistent standard of 30 percent be applied, possibly with a maximum dollar amount, regardless of property type.

The corporate credit is limited to one credit per taxpayer per tax year (Section 2 (E)). TRD suggests similar language should be added for the personal income tax credit. While the bill language limits by one system per property per year, it does not limit the number of credits a taxpayer may apply for. (Section 1 (A)).

Both the income tax credit for an energy storage system in Section 1 (D) and the corporate income tax credit in Section 2 (D) describe a maximum annual aggregate of $2 million where both descriptions include the personal income tax credit and the corporate income tax credit. The bill may need clarity to establish that it is the combined total of the two credits that cannot exceed $2 million. TRD suggests language similar to the Agricultural biomass income tax credit, Section 7-2-18.26 (H) NMSA 1978, which describes a combined total of income tax credits and corporate income tax credits. In addition, TRD suggests changing the maximum annual amount from per "fiscal year" to per "calendar year," which is more consistent with current credits and aligns with the taxable year used in the bill language for taxpayers.

~~TRD notes that under the personal income tax credit, if the property is a commercial property, then the credit amount is the lesser of $150,000 or 30% of the total cost. On the corporate income tax credit, it is the lesser of $50,000 on the taxpayer's property or 30% of the total cost. An individual qualifies for more personal income tax credit on a commercial property over a business entity credit. It is unclear the reasoning of having differing amounts. Alternatively, it could be more sensible to limit the PIT credit to a combination of 1-C (1) and 1-C (3), for residential properties only. This is similar to the recommendation for the corporate credit above.~~

Sections 1(E) and 2(E) state that the taxpayer may claim a credit for the taxable year in which the taxpayer installs an energy storage system. TRD would suggest added language to require taxpayers to claim a credit within 12 months of the calendar year the filer qualifies for the credit. This aids in the administration of the credit by TRD.

Sections 1(F) and 2(F) only allows the credit to be taken against a tax liability for the taxable year that the energy storage system was purchased and shall not be carried forward. The policy to apply a one-year limitation may effectively eliminate many taxpayers with no or small tax liability thereby negating the intent of the bill.

In Section 1(H), page 4, lines 2 and 3, the bill language states "…taxed for federal income tax purpose as a partnership or limited liability company…" Limited liability companies are not taxed as such federally. Instead, federally they default to be taxed as a partnership if two or more owners or may elect to be taxed as either a disregarded entity or corporation. TRD recommends replacing the above-mentioned text with "…taxed for federal income tax purpose as a partnership or an S corporation as defined in Section 1361 of the Internal Revenue Code…".

The January 1, 2019 effective date does not facilitate sufficient time for EMNRD and TRD to implement this credit for the current tax year. Per communication with EMNRD staff, EMNRD does not currently have regulations regarding energy storage systems.

TRD recommends adding language that requires electronic information sharing for certificates awarded by the EMNRD. Receiving electronic files of awarded certificates data improves return processing efficiency and accuracy and supports annual reporting.

In addition, the communication process between EMNRD and TRD relating to reaching the cap limit should perhaps be reversed. On page 3, Section 1(D) the TRD is charged with letting the EMNRD know when claims for a year have exceeded the cap for the year; however, EMNRD should perhaps be keeping tabs on the cap and be in communication with TRD. Without knowing the tax liability, TRD cannot determine the "cap" until the credits have been applied against income tax returns. If the taxpayer has no liability, they do not receive the credit. EMNRD has the added responsibility of notifying taxpayers when the cap has been met (Section 1(I)) so they would be in a better position of keeping track of the amount they are certifying.

LFC staff have some concerns that parallel some of TRD's comments:

In section D, TRD is charged with notifying EMNRD when paid claims for the fiscal year exceed the $2 million cap. The timing of this requirement does not match the claim process. The application for claim is presented to EMNRD, presumably within a month or two of installation. EMNRD is able to track approvals and would be in a good position to determine if the $2 million cap were in danger of being exceeded. The approved claims would be filed for the taxable year in which the system was installed. Even if those claims were filed on returns filed by April 15 of the year following the year of installation, there could be a year (or more) delay between EMNRD approval and the filing of the claim on a tax return with TRD. If EMNRD is charged with determining when to shut down honoring claims, there is good likelihood that the claims paid by TRD would not honor the full $2 million in approved claims because only 20 percent of all taxpayers would have sufficient tax liability to honor the full amount of the approved claim in one year. The bill provides that the credit is not refundable and cannot be carried forward. So notification to EMNRD by TRD that the cap had been exceeded for the fiscal year would be far too late to allow EMNRD to administer the provision to stop processing claims. EMNRD could attempt to anticipate this shrinkage by requesting information on the amount of income tax or corporate income tax liability for the previous tax year and over-approve applications in an attempt to come as close to the $2 million cap as possible. However, any approvals over the first $2 million would have to be issued with a note that the claims might not be honored by TRD if the total claims actually paid for the fiscal year exceeded the cap amount.

EMNRD reinforces this discussion as follows:

> HB 593 refers to the tax credit cap availability on a fiscal year basis and not on a calendar or tax year basis. This issue needs to be addressed in the personal and corporate income tax credits. It further states that the credits are not to be carried forward and may only be claimed in the tax year the system is installed. The installation and certification process may cause a time delay with certification and tax filing.

OTHER SUBSTANTIVE ISSUES

In May 2018, the federal Department of Energy/Energy Information Agency (DOE/EIA) published a white paper discussing various aspects of the current state of energy storage.

https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery_storage.pdf

This report indicates only two significant energy storage installations in New Mexico and that most of the small-scale installations are in California:

> California's large share of small-scale energy storage power capacity can be attributed to the state's Self-Generation Incentive Program (SGIP), which provides financial incentives for installing customer sited distributed generation. SGIP provided rebates to 49 MW of storage through the end of 2016, which is 83 percent of all reported small-scale storage power capacity in California. Installations receiving rebates through SGIP contribute to California's energy storage mandate (Assembly Bill 2514), which requires 200 MW of customer-sited energy storage to be installed by 2024. In May 2017, the California Public Utilities Commission implemented Assembly Bill 2868 by ordering SCE, PGE, and SDGE to procure up to an additional 500 MW of distributed energy storage, including no more than 125 MW of customer sited energy storage.

Does the bill meet the Legislative Finance Committee tax policy principles?

1. **Adequacy**: Revenue should be adequate to fund needed government services.
2. **Efficiency**: Tax base should be as broad as possible and avoid excess reliance on one tax.
3. **Equity**: Different taxpayers should be treated fairly.
4. **Simplicity**: Collection should be simple and easily understood.
5. **Accountability**: Preferences should be easy to monitor and evaluate

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