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FISCAL IMPACT REPORT

SPONSOR Louis ORIGINAL DATE 02/08/21
LAST UPDATED _____ HB 245/ec
SHORT TITLE Utility Distribution System Hardening SB _____
ANALYST Martinez

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY21	FY22	FY23	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total	NFI	NFI	NFI			

(Parenthesis () Indicate Expenditure Decreases)

SOURCES OF INFORMATION

LFC Files

Responses Received From

Public Regulation Commission (PRC)

Energy Minerals and Natural Resources Department (EMNRD)

SUMMARY

Synopsis of Bill

House Bill 245 (HB245) clarifies that grid modernization projects may include distribution system hardening projects for circuits and substations designed to reduce service outages or service restoration times, but does not include the conversion of overhead tap lines to underground service.

This bill contains an emergency clause and would become effective immediately upon signature by the governor.

FISCAL IMPLICATIONS

HB245 does not contain an appropriation and will not have a fiscal impact on the PRC's or EMNRD's operating budget.

SIGNIFICANT ISSUES

The United States Department of Energy’s (DOE) publication, “*Climate Change and the Electricity Sector, a Guide for Climate Change Resilience Planning, 2016*” states that hardening measures include initiatives to make physical and structural improvements to lines, poles, towers, substations, generation and supporting facilities, including elevating existing equipment or building and reinforcing floodwalls. There are a number of examples of hardening involving the application of design standards, construction guidelines, maintenance routines, inspection procedures, and adoption of innovative technologies. These initiatives can include:

- **Targeted undergrounding:** Utilities may select underground lines to reduce exposure to lightning, tree and storm damage, and doing so by evaluating targeted undergrounding opportunities to maximize the benefit, given the added costs of undergrounding.
- **Strengthening transmission and distribution lines:** As an alternative to undergrounding, overhead lines can be strengthened by adding structural reinforcement (e.g., steel poles, guy wires, pole treatment) to existing lines. In addition, breakaway cables can be installed to avoid cascading pole system failures and minimize the restoration effort.
- **Hydrophobic coatings:** Special hydrophobic coatings help reduce damage to transmission and distribution system components by shedding water and facilitating ice removal. These coatings are already being used in some applications.
- **Floodwalls and elevating key assets:** Utilities can reduce vulnerabilities to sea level rise, storm surge and floods by elevating existing and new equipment, building floodwalls to prevent exposure, and increasing the use of submersible equipment (e.g., substations, transformers, switches, pumps, etc.). Hardening against flooding and inundation can also include sealing conduits and cable penetrations, and shrink-wrapping cabinets and weatherproofing enclosures.
- **Advanced water cooling technologies for thermoelectric generation:** Power plants require significant volumes of water for thermoelectric cooling. Utilities can employ alternative approaches to once-through cooling technologies to reduce their water use, including recirculating cooling, dry cooling, and wet-dry hybrid cooling technologies.

According to DOE, measures that limit the number of customers affected by outages can also “harden” the grid. Examples include installing additional substations, as well as expanded use of distributed generation, microgrids capable of islanding, and load management programs. Examples include:

- **Distributed generation:** Increased use of distributed generation (e.g., PV solar, wind, fuel cells, plug-in electric vehicles, etc.) can provide additional capacity to enhance resilience particular during periods of major outages. In some cases, these systems can disconnect from the bulk power system and serve as an independent backup power system.
- **Microgrids:** Microgrids consisting of distributed generation, storage and energy management and control systems can be configured to operate in unison with the bulk power grid during most times, but operate independently as a complete, “islanded” electricity grid during outages.
- **Remote monitoring and control:** Utilities can combine advances in automated monitoring and information technology to limit the number of customers affected by outages. Technologies such as reclosers, switches, and sectionalizers, limit the spread of outages and allow faster restoration of service to the unaffected sections of the lines.

DOE also states that not all assets will be hardened or upgraded in the same way, as some resilience measures will be more cost-effective than others. For example, design and construction standards for upgrading or retrofitting existing assets are based on the local conditions of the facilities, so costs may vary regionally. Building protective features or relocating exposed assets to locations that reduce exposure to climate hazards can improve resilience. For a preliminary investigation of risks, a screening analysis of vulnerable sites or a record of repeated past impacts at a site may provide sufficient justification to consider hardening. Robust investigations would involve a detailed analysis of projected impacts for the location.

The Public Regulation Commission provided the following:

While HB245 amends the definition of distribution system hardening projects in Section 62-8-13 (F)(5) NMSA 1978, but does not amend its definition in NMSA 1978 Section 71-11-1(G)(2) (e) which may create an inconsistency in the definitions of distribution system hardening projects in their respective Sections in Chapters 62 and 71, and may cause confusion when an application for a distribution system hardening project is submitted to the Energy Minerals and Natural Resources (“EMNRD”) Department for approval. Specifically, the definition in EMNRD’s statute does not exclude conversion of overhead tap lines to underground service, whereas the definition in Chapter 62 does. Pursuant to the definition in Chapter 62, conversion of overhead tap lines to underground service will not qualify for approval in an application submitted to the Public Regulation Commission (“PRC” or “Commission”) for distribution system hardening; however, pursuant to the definition in Chapter 71, the same project could qualify for an EMNRD grant as a “Grid Modernizing Project”.

This FIR reflects PRC’s technical staff’s analysis consistent with Commission policy, rules, and precedent, but does not reflect a position ratified by a vote of the full Commission.

Energy Minerals and Natural Resources Department provided the following:

The amendments to the Public Utility Act made via 2020 HB 233 (being Laws 2020 Chapter 15 Section 3) allow for investor-owned electric utilities (IOUs) to submit to the PRC applications for recovery of costs incurred due to investments in grid modernization projects. Qualifying grid modernization projects are defined in the Act.

HB245 adjusts one of these qualifying definitions by moving a clause.

In its non-amended version, the Public Utility Act at this section (62-8-13 NMSA 1978, paragraph F (5)) reads:

“(5) distribution system hardening projects for circuits not including the conversion of overhead tap lines to underground service and substations designed to reduce service outages or service restoration times;”

It is possible to read the original text to mean that both (a) conversion of overhead tap lines to underground service; and (b) substations designed to reduce service outages or service restoration times are not included in the qualifying category “distribution system hardening projects for circuits”. This was an unintentional drafting error in HB 233. While “conversion of overhead tap lines to underground service” was meant to be disqualified,

“substations designed to reduce service outages or service restoration times” are in fact vital to distribution system hardening and an important aspect of grid modernization for which an IOU might legitimately seek cost recovery from the PRC.

(Converting overhead tap lines to underground service could be considered an element of grid modernization and does produce distribution system hardening. However, such conversions are expensive and often have associated land use and right-of-way permitting issues which might make them inappropriate for utility cost recovery at the PRC, whose mission is to protect ratepayers and shareholders alike.)

The amended text reads:

“(5) distribution system hardening projects for circuits [~~not including the conversion of overhead tap lines to underground service~~] and substations designed to reduce service outages or service restoration times, but does not include the conversion of overhead tap lines to underground service;”

This clarifies the qualification.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

The Public Regulation Commission provided the following:

The definition of a distribution system hardening project in Section 62-8-13 (F) (5) NMSA 1978 would remain and continue to cause confusion as to its intent.

Energy Minerals and Natural Resources Department provided the following:

IOUs may face legal issues in seeking cost recovery from the PRC for grid modernization investments in substations that are designed to reduce outages and distribution system disruption, due to the confusing syntax in current law.

AMENDMENTS

The Public Regulation Commission provided the following:

It is recommended that HB 245 include language to amend the definition of distribution system hardening projects in NMSA 1978 Section 71-11-1(G)(2)(e) and make it identical to the proposed, amended definition for Section 62-8-13 (F)(5) NMSA 1978. Having identical definitions helps ensure consistency in the approval of projects by both EMNRD and PRC.