

**First Regular Session
Seventy-first General Assembly
STATE OF COLORADO**

INTRODUCED

LLS NO. 17-0839.01 Duane Gall x4335

SENATE BILL 17-145

SENATE SPONSORSHIP

Fenberg,

HOUSE SPONSORSHIP

Foote,

Senate Committees

Agriculture, Natural Resources, & Energy

House Committees

A BILL FOR AN ACT

101 **CONCERNING MODIFICATIONS TO THE ELECTRIC UTILITY RESOURCE**
102 **ACQUISITION PROCESS, AND, IN CONNECTION THEREWITH,**
103 **PROMOTING A MORE RESILIENT, RELIABLE, AND**
104 **COST-EFFECTIVE ELECTRICAL GRID THROUGH ENHANCED**
105 **PLANNING AND DATA TRANSPARENCY.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov>.)

The bill directs specified electric utilities to prepare, and the Colorado public utilities commission to review, proposals to integrate

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.
Capital letters indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

distributed energy resources into their plans to acquire new infrastructure. "Distributed energy resources" is defined to include renewable distributed generation facilities, such as rooftop solar, energy storage facilities, electric vehicles, and other features of an improved and diversified electrical grid architecture. The commission may approve the plans as submitted or modify them in ways that improve system reliability, reduce costs, or increase the benefits to ratepayers.

1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1. Legislative declaration.** (1) The general assembly
3 finds and determines that:

4 (a) Colorado's economy, as well as the health and safety of its
5 residents, depends on the reliable and efficient supply of electricity;

6 (b) The threat of interruptions in electric supply due to weather,
7 malicious interference, or malfunctions in generation and transmission
8 facilities makes distributed energy resources an important part of a robust,
9 resilient electrical grid;

10 (c) A transparent distribution grid planning process, which
11 includes development of a map that publicly displays optimal locations
12 for the safe installation of additional distributed energy resources, will
13 lower costs for Colorado ratepayers;

14 (d) Electric utilities in many states, including California, Hawaii,
15 Minnesota, Maryland, Massachusetts, and New York, are proactively
16 planning their distribution grids for greater penetrations of distributed
17 energy resources; and

18 (e) In Minnesota, Xcel Energy has recognized that the capacity to
19 incorporate distributed energy resources is a key element in the future of
20 distribution system planning and has provided preliminary hosting
21 capacity results for more than one thousand sources of distributed energy.

22 (2) Therefore, the general assembly declares that it is in the public

1 interest to develop a cost-effective distribution grid planning process with
2 online hosting capacity maps that will aid in the siting and installation of
3 cost-effective distributed energy resources.

4 **SECTION 2.** In Colorado Revised Statutes, **add** 40-2-126.5 as
5 follows:

6 **40-2-126.5. Distribution facilities - improvements to**
7 **distribution grid - planning - approval - definitions.** (1) AS USED IN
8 THIS SECTION, UNLESS THE CONTEXT OTHERWISE REQUIRES:

9 (a) "DISTRIBUTED ENERGY RESOURCES" MEANS DISTRIBUTED
10 GENERATION, AS DEFINED IN SECTION 40-2-124 (1)(a)(III), ENERGY
11 STORAGE, ELECTRIC VEHICLES, AND ENERGY EFFICIENCY AND DEMAND
12 RESPONSE PROGRAMS THAT CAN BE LEVERAGED TO ESTABLISH A NEW,
13 DIVERSIFIED GRID ARCHITECTURE THAT MITIGATES VULNERABILITY TO
14 TERRORIST ATTACKS, HACKING, EXTREME WEATHER, INSUFFICIENT FUEL
15 SUPPLY, AND OTHER DISRUPTIONS.

16 (b) "DISTRIBUTION RESOURCES PLAN" MEANS A FIVE-YEAR PLAN
17 FOR:

18 (I) DISTRIBUTION GRID UPGRADES; AND

19 (II) PROCUREMENT OF DISTRIBUTED ENERGY RESOURCES.

20 (c) "DISTRIBUTION SUBSTATION GRID AREA" MEANS THE
21 GEOGRAPHIC AREA SERVED BY A DISTRIBUTION SUBSTATION.

22 (d) "QUALIFYING RETAIL UTILITY" HAS THE MEANING SET FORTH
23 IN SECTION 40-2-124 (1); EXCEPT THAT THE TERM DOES NOT INCLUDE A
24 MUNICIPALLY OWNED UTILITY.

25 (2) ON OR BEFORE JUNE 1, 2018, EACH QUALIFYING RETAIL UTILITY
26 IN COLORADO SHALL SUBMIT TO THE COMMISSION A PROPOSAL FOR A
27 DISTRIBUTION RESOURCES PLAN.

1 (3) ON OR BEFORE DECEMBER 1, 2018, THE COMMISSION SHALL
2 REVIEW EACH QUALIFYING RETAIL UTILITY'S PROPOSAL FOR A
3 DISTRIBUTION RESOURCES PLAN AND APPROVE, OR MODIFY AND APPROVE,
4 A DISTRIBUTION RESOURCES PLAN FOR THE QUALIFYING RETAIL UTILITY.
5 THE COMMISSION MAY MODIFY ANY PLAN AS APPROPRIATE TO MINIMIZE
6 OVERALL SYSTEM COSTS AND MAXIMIZE RATEPAYER BENEFITS FROM
7 INVESTMENTS IN DISTRIBUTED ENERGY RESOURCES.

8 (4) AFTER APPROVAL OF A QUALIFYING RETAIL UTILITY'S
9 DISTRIBUTION RESOURCES PLAN, THE QUALIFYING RETAIL UTILITY'S
10 EXPENDITURES FOR DISTRIBUTION INFRASTRUCTURE NECESSARY TO
11 EFFECTUATE THE PLAN SHALL BE PROPOSED AND CONSIDERED AS PART OF
12 THE NEXT GENERAL RATE CASE FOR THE QUALIFYING RETAIL UTILITY. THE
13 COMMISSION MAY APPROVE THESE EXPENDITURES IF IT CONCLUDES THAT
14 RATEPAYERS WOULD REALIZE NET BENEFITS AND THE ASSOCIATED COSTS
15 ARE JUST AND REASONABLE. THE COMMISSION SHALL ALSO ADOPT
16 CRITERIA, BENCHMARKS, AND ACCOUNTABILITY MECHANISMS TO
17 EVALUATE THE SUCCESS OF ANY INVESTMENT AUTHORIZED PURSUANT TO
18 A DISTRIBUTION RESOURCES PLAN.

19 (5) EACH DISTRIBUTION RESOURCES PLAN PROPOSAL MUST, AT A
20 MINIMUM:

21 (a) SUPPORT MARKET INNOVATION THROUGH DATA
22 TRANSPARENCY;

23 (b) IMPROVE INTERCONNECTION PROCEDURES FOR DISTRIBUTED
24 ENERGY RESOURCES, TO WHICH END THE QUALIFYING RETAIL UTILITY
25 SHALL:

26 (I) PUBLISH INTERCONNECTION QUEUE AND COST DATA;

27 (II) DETERMINE THE ABILITY OF THE EXISTING DISTRIBUTION

1 SYSTEM TO ACCOMMODATE ADDITIONAL DISTRIBUTED ENERGY
2 RESOURCES; AND

3 (III) PUBLISH ON THE QUALIFYING RETAIL UTILITY'S WEBSITE, AND
4 REGULARLY UPDATE, PUBLICLY ACCESSIBLE DISTRIBUTION GRID MAPS
5 SHOWING AVAILABLE HOSTING CAPACITY TO AT LEAST THE DISTRIBUTION
6 GRID LINE-SEGMENT LEVEL OF DETAIL;

7 (c) PROPOSE, FOR APPROVAL BY THE COMMISSION, A
8 METHODOLOGY TO VALUE THE COSTS AND BENEFITS OF DISTRIBUTED
9 ENERGY RESOURCES. THE METHODOLOGY MUST RECOGNIZE
10 LOCATION-SPECIFIC FACTORS AND MUST IDENTIFY AND QUANTIFY:

11 (I) REDUCTIONS OR INCREASES IN LOCAL GENERATION CAPACITY
12 NEEDS, AVOIDED OR INCREASED INVESTMENTS IN TRANSMISSION AND
13 DISTRIBUTION INFRASTRUCTURE, SAFETY BENEFITS, RELIABILITY AND
14 RESILIENCE BENEFITS, AND ANY OTHER SAVINGS THE DISTRIBUTED ENERGY
15 RESOURCES PROVIDE TO THE ELECTRIC GRID OR COSTS THAT THE
16 DISTRIBUTED ENERGY RESOURCES IMPOSE UPON THE RATEPAYERS OF THE
17 QUALIFYING RETAIL UTILITY;

18 (II) THE AGGREGATE VALUE ACHIEVED THROUGH PLANNED OR
19 COORDINATED OPERATION OF PORTFOLIOS OF DISTRIBUTED ENERGY
20 RESOURCES; AND

21 (III) SOCIETAL VALUES FOR ECONOMICALLY QUANTIFIABLE
22 IMPACTS, INCLUDING STATE AND LOCAL REVENUES, EMPLOYMENT,
23 EMISSIONS, HEALTH, AND ENVIRONMENTAL IMPACTS.

24 (d) (I) PROPOSE AT LEAST THREE DISTRIBUTION SUBSTATION GRID
25 AREA PILOT PROJECTS, WHICH THE QUALIFYING RETAIL UTILITY SHALL
26 DEPLOY BY JUNE 1, 2020, THAT:

27 (A) SUPPORT A MORE DIVERSIFIED GRID ARCHITECTURE THROUGH

1 THE DEPLOYMENT OF DISTRIBUTED ENERGY RESOURCES; AND

2 (B) ACHIEVE RATEPAYER SAVINGS WHEN COMPARED WITH OTHER
3 APPROACHES TO MEETING THE INFRASTRUCTURE REQUIREMENTS OF THE
4 ELECTRICAL GRID.

5 (e) INCLUDE A DISTRIBUTED ENERGY RESOURCES PROCUREMENT
6 PLAN THAT PROPOSES OR IDENTIFIES STANDARD TARIFFS, CONTRACTS, OR
7 OTHER SOURCING MECHANISMS. THE DISTRIBUTED ENERGY RESOURCES
8 PROCUREMENT PLAN MUST SUPPORT A MARKET FOR DISTRIBUTED ENERGY
9 RESOURCES BY MONETIZING THE BENEFITS OF DISTRIBUTED ENERGY
10 RESOURCES IDENTIFIED UNDER SUBSECTION (5)(c) OF THIS SECTION.

11 (f) PROPOSE COST-EFFECTIVE METHODS OF EFFECTIVELY
12 COORDINATING EXISTING COMMISSION-APPROVED PROGRAMS, INCENTIVES,
13 AND TARIFFS TO MAXIMIZE THE LOCATIONAL BENEFITS AND MINIMIZE THE
14 INCREMENTAL COSTS OF DISTRIBUTED ENERGY RESOURCES. NOTHING IN
15 THIS SECTION AFFECTS EXISTING OBLIGATIONS UNDER A NET ENERGY
16 METERING PROGRAM.

17 (g) IDENTIFY ANY ADDITIONAL QUALIFYING RETAIL UTILITY
18 SPENDING, INCLUDING FOR SMART METERING, NECESSARY TO INTEGRATE
19 COST-EFFECTIVE DISTRIBUTED ENERGY RESOURCES INTO DISTRIBUTION
20 PLANNING CONSISTENT WITH THE GOAL OF YIELDING NET BENEFITS TO
21 RATEPAYERS;

22 (h) IDENTIFY AND REMOVE BARRIERS TO THE DEPLOYMENT OF
23 DISTRIBUTED ENERGY RESOURCES THROUGH MEANS THAT INCLUDE THE
24 ADOPTION OF REVISED SAFETY STANDARDS RELATED TO TECHNOLOGY OR
25 OPERATION OF THE DISTRIBUTION SYSTEM IN A MANNER THAT ENSURES
26 RELIABLE SERVICE; AND

27 (i) FORECAST THE GROWTH OF DISTRIBUTED ENERGY RESOURCES

1 THROUGH 2025, INCLUDING REASONABLY DETAILED PREDICTIONS OF THE
2 EXPECTED SITING LOCATIONS WITHIN THE DISTRIBUTION SUBSTATION GRID
3 AREA AND IMPACTS ON TRANSMISSION AND DISTRIBUTION SYSTEM
4 PLANNING.

5 **SECTION 3. Act subject to petition - effective date.** This act
6 takes effect at 12:01 a.m. on the day following the expiration of the
7 ninety-day period after final adjournment of the general assembly (August
8 9, 2017, if adjournment sine die is on May 10, 2017); except that, if a
9 referendum petition is filed pursuant to section 1 (3) of article V of the
10 state constitution against this act or an item, section, or part of this act
11 within such period, then the act, item, section, or part will not take effect
12 unless approved by the people at the general election to be held in
13 November 2018 and, in such case, will take effect on the date of the
14 official declaration of the vote thereon by the governor.