SB13-252

Colorado Legislative Council Staff Fiscal Note

STATE and LOCAL FISCAL REVISED IMPACT

(replaces fiscal note dated April 12, 2013)

Drafting Number:	LLS 13-0962	**Date:**	April 24, 2013
Prime Sponsor(s):	Sen. Morse; Schwartz Rep. Ferrandino; Duran	**Bill Status:**	House Transportation & Energy
		Fiscal Analyst:	Marc Carey (303-866-4102)

TITLE: CONCERNING MEASURES TO INCREASE COLORADO'S RENEWABLE ENERGY STANDARD SO AS TO ENCOURAGE THE DEPLOYMENT OF METHANE CAPTURE TECHNOLOGIES.

Fiscal Impact Summary	FY 2013-2014	FY 2014-2015
State Revenue		
State Expenditures	See State Expenditure Section	
FTE Position Change		
Effective Date: July 1, 2013.		
Appropriation Summary for FY 2013-2014: None required.		
Local Government Impact: None.		

Summary of Legislation

This ***reengrossed*** bill makes several changes to Colorado's renewable electricity standard (RES).

Expansion of Eligible Energy Resources. Specifically, the bill expands the definition of eligible energy resources that may be used to comply with the standard to include coal mine methane and synthetic gas produced by pyrolysis of municipal solid waste. This expansion is subject to a determination by the Colorado Public Utilities Commission (PUC) that the production and use of these gases to generate electricity will not result in a net increase in greenhouse gas emissions.

Increasing the RES for Cooperative Electric Associations. The bill also increases from 10 to 25 percent the share of retail electricity sales that must be achieved from eligible energy resources by cooperative electric associations (CEAs) serving more than 100,000 meters, beginning in the year 2020. In addition, the allowable retail rate impact for CEAs is raised from 1 percent to a maximum of 2 percent.

Generation and transmission CEAs providing wholesale electricity to CEAs in Colorado are defined in the bill as wholesale CEA's and are also subject to this increased RES and retail rate impact rule, beginning in 2020. Wholesale CEAs may take credit for energy generated from eligible resources by its Colorado members. The bill specifies that if the purchase of energy generated from eligible resources by a Colorado member CEA would cause an increase in rates exceeding the

2 percent retail rate impact rule, the obligation of the wholesale CEA is reduced by the energy necessary to allow compliance by the member with the rule. Wholesale CEAs are required to use a system of renewable energy credits to comply with the new RES. In addition, wholesale CEAs must report annually to the PUC on standard compliance.

For CEAs serving fewer than 100,000 meters, the bill adds a distributed generation requirement of 1 percent of total electricity sales. For purposes of compliance with the 25 percent standard, the bill authorizes a 3 kilowatt-hour multiplier for solar generation. The bill eliminates:

- in-state preferences for wholesale distributed generation;
- the in-state requirement for the "community-based project" 1.5 kilowatt-hour multiplier; and
- the 1.25 kilowatt-hour multiplier for eligible energy resources beginning operation on or after January 1, 2015.

Background

Under current law, CEAs are required to meet an RES of 3 percent of retail electric sales for years 2011 through 2014, 6 percent in years 2014 through 2019, and 10 percent in years 2020 and thereafter. These standards are currently subject to a 1 percent retail rate impact rule.

According to the Energy Information Administration, the only Colorado CEA with over 100,000 customers in 2012 was the Intermountain Rural Electric Association (IREA), which serves about 140,800 customers. Tri-State Generation and Transmission Association supplies wholesale electricity to 18 member CEAs and would also be affected by the requirements of this bill. Table 1 presents information on the number of customers served, the 2012 sales measured in megawatt hours, the estimated incremental megawatt hours that would be required in 2020 to meet the higher standard specified in the bill, and the associated generation capacity requirements, assuming a 35 percent capacity factor for wind.

Table 1. Customers, Generation and Capacity Requirements for IREA and Tri-State Under Senate Bill 13-252

Cooperative	Customers	2012 Sales (Mwh)	Required Increase in Mwh	Required Increase in MW
IREA	140,787	2,187,741	328,161	107
Tri-State	371,184	9,180,015	1,308,152	427
TOTAL	**511,971**	**11,367,756**	**1,636,313**	**534**

To comply with the increased RES contained in the bill, these entities have three options. First, they could build their own eligible generation facilities. Second, they could enter into power purchase agreements with the owner of a eligible energy generation facility. Finally, they could purchase existing renewable energy credits (RECs). Each of these options involves additional costs, the first two of which could be offset partially or wholly by restructuring existing power generation resources.

RECs are tradable certificates that represent proof that 1 megawatt-hour (MWh) of electricity was generated from an eligible renewable energy resource. These certificates can be bought and sold and the owner of the REC can claim to have purchased renewable energy. RECs represent the environmental attributes of the power produced from renewable energy projects. Currently, RECs are bought and sold through bi-lateral agreements. There is no national market clearinghouse.

The price of RECs varies substantially by geographic region. According to the United States Department of Energy, between January 2008 and May 2012, prices for RECs to comply with state RESs varied widely. For example, in New England, REC prices ranged from $5 to $50 per REC and have been increasing recently. In contrast, REC prices in Texas ranged from $2 to $5 per REC and have been declining. Similarly prices in Illinois fell from $15 to $1 from May 2009 through May 2012. In Colorado, and most other western states, the majority of RECs are registered and tracked by the Western Renewable Energy Generation Information System (WREGIS). RECs are retired once they are counted against RES requirements. According to the PUC, after compliance with the 2011 RES requirements, Xcel Energy owns 8.9 million RECs from its own generation and power purchase agreements.

State Expenditures

Department of Regulatory Agencies, Public Utilities Commission. The PUC will incur costs associated with rulemaking to conform PUC rules to the new requirements for both CEAs and G&T wholesale CEAs. As the rules generally reflect specific statutory language, the impact is expected to be minimal. The bill also requires the PUC to assess whether any coal mine methane or pyrolysis projects are greenhouse gas neutral. These will be handled on a case-by-case basis for projects proposed by utilities. As such, no additional appropriation is required.

State Agency Impact. Current law contains a 1 percent cap on the retail rate impact of the RES for CEAs. This bill increases that cap to 2 percent for both CEAs with over 100,000 customers (currently only IREA) and for wholesale CEAs (Tri-State).

The retail rate impact is required to be determined "net of alternative sources of electricity supply from noneligible energy resources that are reasonably available at the time of determination." Thus, the rate impact depends on the cost differential between renewable resource acquisition and "reasonably available" conventional resource acquisition, typically natural gas. The future differential will depend on the future price of renewable resources and the future price of natural gas, as well as anticipated technology changes for both resources.

Natural gas prices are highly volatile. Wellhead prices have been as high as $11 per thousand cubic feet (Mcf) in July 2008, as low as $1.80 per Mcf in April 2012, and are now around $4.20 per Mcf. According to the modeling assumptions from Xcel Energy's most recent electric resource plan, market prices for natural gas are anticipated to rise from $35.30 per Mwh in 2015 to $62.02 per Mwh in 2030. For the sake of comparison, according to a report from the Department of Energy, the average cost of wind energy in the "wind belt" (which includes eastern Colorado) for power purchase agreements signed in 2009, 2010 and 2011 was $53 per Mwh, $44 per Mwh, and $32 per Mwh, respectively.

Because this bill increases the cap for certain CEAs from 1 to 2 percent, the rate impact of the bill on retail electricity customers of IREA and affected Tri-State member cooperatives, including state agencies, could be an increase in energy costs of up to 1 percent. Because future rate impacts are difficult to predict and depend on assumptions regarding the factors identified above as well as an unknown resource acquisition schedule, the exact impact to state facilities is not possible to quantify.

Local Government Impact

Local governments and school districts that receive their electricity from IREA or affected Tri-State member CEAs could see their energy costs increase by up to 1 percent. Energy cost increases will depend on the cost differential between renewable resource acquisition and conventional resource acquisition as discussed above.

Departments Contacted

Regulatory Agencies