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**RENEWABLE ENERGY MODIFICATIONS**

2010 GENERAL SESSION

STATE OF UTAH

**Chief Sponsor: Stephen H. Urquhart**

House Sponsor: Don L. Ipson

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**LONG TITLE**

**General Description:**

This bill includes certain compressed air energy storage technology as a renewable energy source under Title 10, Chapter 19, Municipal Electric Utility Carbon Emission Reduction Act, and Title 54, Chapter 17, Energy Resource Procurement Act.

**Highlighted Provisions:**

This bill:

- ▶ includes certain compressed air energy storage technology as a renewable energy source under Title 10, Chapter 19, Municipal Electric Utility Carbon Emission Reduction Act, and Title 54, Chapter 17, Energy Resource Procurement Act; and
- ▶ makes technical changes.

**Monies Appropriated in this Bill:**

None

**Other Special Clauses:**

None

**Utah Code Sections Affected:**

AMENDS:

**10-19-102**, as enacted by Laws of Utah 2008, Chapter 374

**54-17-601**, as enacted by Laws of Utah 2008, Chapter 374

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*Be it enacted by the Legislature of the state of Utah:*



28 Section 1. Section **10-19-102** is amended to read:

29 **10-19-102. Definitions.**

30 As used in this chapter:

31 (1) "Adjusted retail electric sales" means the total kilowatt-hours of retail electric sales  
32 of a municipal electric utility to customers in this state in a calendar year, reduced by:

33 (a) the amount of those kilowatt-hours attributable to electricity generated or purchased  
34 in that calendar year from qualifying zero carbon emissions generation and qualifying carbon  
35 sequestration generation;

36 (b) the amount of those kilowatt-hours attributable to electricity generated or purchased  
37 in that calendar year from generation located within the geographic boundary of the Western  
38 Electricity Coordinating Council that derives its energy from one or more of the following but  
39 that does not satisfy the definition of a renewable energy source or that otherwise has not been  
40 used to satisfy Subsection 10-19-201(1):

41 (i) wind energy;

42 (ii) solar photovoltaic and solar thermal energy;

43 (iii) wave, tidal, and ocean thermal energy;

44 (iv) except for combustion of wood that has been treated with chemical preservatives  
45 such as creosote, pentachlorophenol or chromated copper arsenate, biomass and biomass  
46 byproducts, including:

47 (A) organic waste;

48 (B) forest or rangeland woody debris from harvesting or thinning conducted to improve  
49 forest or rangeland ecological health and to reduce wildfire risk;

50 (C) agricultural residues;

51 (D) dedicated energy crops; and

52 (E) landfill gas or biogas produced from organic matter, wastewater, anaerobic  
53 digesters, or municipal solid waste;

54 (v) geothermal energy;

55 (vi) hydro-electric energy; or

56 (vii) waste gas and waste heat capture or recovery; and

57 (c) the number of kilowatt-hours attributable to reductions in retail sales in that  
58 calendar year from activities or programs promoting electric energy efficiency or conservation

59 or more efficient management of electric energy load.

60 (2) "Amount of kilowatt-hours attributable to electricity generated or purchased in that  
61 calendar year from qualifying carbon sequestration generation," for qualifying carbon  
62 sequestration generation, means the kilowatt-hours supplied by a facility during the calendar  
63 year multiplied by the ratio of the amount of carbon dioxide captured from the facility and  
64 sequestered to the sum of the amount of carbon dioxide captured from the facility and  
65 sequestered plus the amount of carbon dioxide emitted from the facility during the same  
66 calendar year.

67 (3) "Banked renewable energy certificate" means a bundled or unbundled renewable  
68 energy certificate that is:

69 (a) not used in a calendar year to comply with this part or with a renewable energy  
70 program in another state; and

71 (b) carried forward into a subsequent year.

72 (4) "Bundled renewable energy certificate" means a renewable energy certificate for  
73 qualifying electricity that is acquired:

74 (a) by a municipal electric utility by a trade, purchase, or other transfer of electricity  
75 that includes the renewable energy attributes of, or certificate that is issued for, the electricity;  
76 or

77 (b) by a municipal electric utility by generating the electricity for which the renewable  
78 energy certificate is issued.

79 (5) "Commission" means the Public Service Commission.

80 (6) "Municipal electric utility" means any municipality that owns, operates, controls, or  
81 manages a facility that provides electric power for a retail customer, whether domestic,  
82 commercial, industrial, or otherwise.

83 (7) "Qualifying carbon sequestration generation" means a fossil-fueled generating  
84 facility located within the geographic boundary of the Western Electricity Coordinating  
85 Council that:

86 (a) becomes operational or is retrofitted on or after January 1, 2008; and

87 (b) reduces carbon dioxide emissions into the atmosphere through permanent  
88 geological sequestration or through other verifiably permanent reductions in carbon dioxide  
89 emissions through the use of technology.

90 (8) "Qualifying electricity" means electricity generated on or after January 1, 1995  
91 from a renewable energy source if:

92 (a) (i) the renewable energy source is located within the geographic boundary of the  
93 Western Electricity Coordinating Council; or

94 (ii) the qualifying electricity is delivered to the transmission system of a municipal  
95 electric utility or a delivery point designated by the municipal electric utility for the purpose of  
96 subsequent delivery to the municipal electric utility; and

97 (b) the renewable energy attributes of the electricity are not traded, sold, transferred, or  
98 otherwise used to satisfy another state's renewable energy program.

99 (9) "Qualifying zero carbon emissions generation":

100 (a) means a generation facility located within the geographic boundary of the Western  
101 Electricity Coordinating Council that:

102 (i) becomes operational on or after January 1, 2008; and

103 (ii) does not produce carbon as a byproduct of the generation process;

104 (b) includes generation powered by nuclear fuel; and

105 (c) does not include renewable energy sources used to satisfy a target established under  
106 Section 10-19-201.

107 (10) "Renewable energy certificate" means a certificate issued in accordance with the  
108 requirements of Sections 10-19-202 and 54-17-603.

109 (11) "Renewable energy source" means:

110 (a) an electric generation facility or generation capability or upgrade that becomes  
111 operational on or after January 1, 1995 that derives its energy from one or more of the  
112 following:

113 (i) wind energy;

114 (ii) solar photovoltaic and solar thermal energy;

115 (iii) wave, tidal, and ocean thermal energy;

116 (iv) except for combustion of wood that has been treated with chemical preservatives  
117 such as creosote, pentachlorophenol or chromated copper arsenate, biomass and biomass  
118 byproducts, including:

119 (A) organic waste;

120 (B) forest or rangeland woody debris from harvesting or thinning conducted to improve

121 forest or rangeland ecological health and to reduce wildfire risk;

122 (C) agricultural residues;

123 (D) dedicated energy crops; and

124 (E) landfill gas or biogas produced from organic matter, wastewater, anaerobic

125 digesters, or municipal solid waste;

126 (v) geothermal energy located outside the state;

127 (vi) waste gas and waste heat capture or recovery; ~~or~~

128 (vii) efficiency upgrades to a hydroelectric facility, without regard to the date upon

129 which the facility became operational, if the upgrades become operational on or after January

130 1, 1995; or

131 (viii) compressed air, if:

132 (A) the compressed air is taken from compressed air energy storage; and

133 (B) the energy used to compress the air is a renewable energy source;

134 (b) any of the following:

135 (i) up to 50 average megawatts of electricity per year per municipal electric utility from

136 a certified low-impact hydroelectric facility, without regard to the date upon which the facility

137 becomes operational, if the facility is certified as a low-impact hydroelectric facility on or after

138 January 1, 1995, by a national certification organization;

139 (ii) geothermal energy if located within the state, without regard to the date upon which

140 the facility becomes operational; and

141 (iii) hydroelectric energy if located within the state, without regard to the date upon

142 which the facility becomes operational;

143 (c) hydrogen gas derived from any source of energy described in Subsection (11)(a) or

144 (b);

145 (d) if an electric generation facility employs multiple energy sources, that portion of the

146 electricity generated that is attributable to energy sources described in Subsections (11)(a)

147 through (c); and

148 (e) any of the following located in the state and owned by a user of energy:

149 (i) a demand side management measure, as defined by Subsection 54-7-12.8(1) with

150 the quantity of renewable energy certificates to which the user is entitled determined by the

151 equivalent energy saved by the measure;

152 (ii) a solar thermal system that reduces the consumption of fossil fuels, with the  
153 quantity of renewable energy certificates to which the user is entitled determined by the  
154 equivalent kilowatt-hours saved, except to the extent the commission determines otherwise  
155 with respect to net-metered energy;

156 (iii) a solar photovoltaic system that reduces the consumption of fossil fuels with the  
157 quantity of renewable energy certificates to which the user is entitled determined by the total  
158 production of the system, except to the extent the commission determines otherwise with  
159 respect to net-metered energy;

160 (iv) a hydroelectric or geothermal facility, with the quantity of renewable energy  
161 certificates to which the user is entitled determined by the total production of the facility,  
162 except to the extent the commission determines otherwise with respect to net-metered energy;

163 (v) a waste gas or waste heat capture or recovery system other than from a combined  
164 cycle combustion turbine that does not use waste gas or waste heat, with the quantity of  
165 renewable energy certificates to which the user is entitled determined by the total production of  
166 the system, except to the extent the commission determines otherwise with respect to  
167 net-metered energy; and

168 (vi) the station use of solar thermal energy, solar photovoltaic energy, hydroelectric  
169 energy, geothermal energy, waste gas, or waste heat capture and recovery.

170 (12) "Unbundled renewable energy certificate" means a renewable energy certificate  
171 associated with:

172 (a) qualifying electricity that is acquired by a municipal electric utility or other person  
173 by trade, purchase, or other transfer without acquiring the electricity for which the certificate  
174 was issued; or

175 (b) activities listed in Subsection (11)(e).

176 Section 2. Section **54-17-601** is amended to read:

177 **54-17-601. Definitions.**

178 As used in this part:

179 (1) "Adjusted retail electric sales" means the total kilowatt-hours of retail electric sales  
180 of an electrical corporation to customers in this state in a calendar year, reduced by:

181 (a) the amount of those kilowatt-hours attributable to electricity generated or purchased  
182 in that calendar year from qualifying zero carbon emissions generation and qualifying carbon

183 sequestration generation;

184 (b) the amount of those kilowatt-hours attributable to electricity generated or purchased  
185 in that calendar year from generation located within the geographic boundary of the Western  
186 Electricity Coordinating Council that derives its energy from one or more of the following but  
187 that does not satisfy the definition of a renewable energy source or that otherwise has not been  
188 used to satisfy Subsection 54-17-602(1):

189 (i) wind energy;

190 (ii) solar photovoltaic and solar thermal energy;

191 (iii) wave, tidal, and ocean thermal energy;

192 (iv) except for combustion of wood that has been treated with chemical preservatives  
193 such as creosote, pentachlorophenol or chromated copper arsenate, biomass and biomass  
194 byproducts, including:

195 (A) organic waste;

196 (B) forest or rangeland woody debris from harvesting or thinning conducted to improve  
197 forest or rangeland ecological health and to reduce wildfire risk;

198 (C) agricultural residues;

199 (D) dedicated energy crops; and

200 (E) landfill gas or biogas produced from organic matter, wastewater, anaerobic  
201 digesters, or municipal solid waste;

202 (v) geothermal energy;

203 (vi) hydroelectric energy; or

204 (vii) waste gas and waste heat capture or recovery; and

205 (c) the number of kilowatt-hours attributable to reductions in retail sales in that  
206 calendar year from demand side management as defined in Section 54-7-12.8, with the  
207 kilowatt-hours for an electrical corporation whose rates are regulated by the commission and  
208 adjusted by the commission to exclude kilowatt-hours for which a renewable energy certificate  
209 is issued under Subsection 54-17-603(4)(b).

210 (2) "Amount of kilowatt-hours attributable to electricity generated or purchased in that  
211 calendar year from qualifying carbon sequestration generation," for qualifying carbon  
212 sequestration generation, means the kilowatt-hours supplied by a facility during the calendar  
213 year multiplied by the ratio of the amount of carbon dioxide captured from the facility and

214 sequestered to the sum of the amount of carbon dioxide captured from the facility and  
215 sequestered plus the amount of carbon dioxide emitted from the facility during the same  
216 calendar year.

217 (3) "Banked renewable energy certificate" means a bundled or unbundled renewable  
218 energy certificate that is:

219 (a) not used in a calendar year to comply with this part or with a renewable energy  
220 program in another state; and

221 (b) carried forward into a subsequent year.

222 (4) "Bundled renewable energy certificate" means a renewable energy certificate for  
223 qualifying electricity that is acquired:

224 (a) by an electrical corporation by a trade, purchase, or other transfer of electricity that  
225 includes the renewable energy attributes of, or certificate that is issued for, the electricity; or

226 (b) by an electrical corporation by generating the electricity for which the renewable  
227 energy certificate is issued.

228 (5) "Electrical corporation":

229 (a) is as defined in Section 54-2-1; and

230 (b) does not include a person generating electricity that is not for sale to the public.

231 (6) "Qualifying carbon sequestration generation" means a fossil-fueled generating  
232 facility located within the geographic boundary of the Western Electricity Coordinating  
233 Council that:

234 (a) becomes operational or is retrofitted on or after January 1, 2008; and

235 (b) reduces carbon dioxide emissions into the atmosphere through permanent  
236 geological sequestration or through another verifiably permanent reduction in carbon dioxide  
237 emissions through the use of technology.

238 (7) "Qualifying electricity" means electricity generated on or after January 1, 1995  
239 from a renewable energy source if:

240 (a) (i) the renewable energy source is located within the geographic boundary of the  
241 Western Electricity Coordinating Council; or

242 (ii) the qualifying electricity is delivered to the transmission system of an electrical  
243 corporation or a delivery point designated by the electrical corporation for the purpose of  
244 subsequent delivery to the electrical corporation; and



245 (b) the renewable energy attributes of the electricity are not traded, sold, transferred, or  
246 otherwise used to satisfy another state's renewable energy program.

247 (8) "Qualifying zero carbon emissions generation":

248 (a) means a generation facility located within the geographic boundary of the Western  
249 Electricity Coordinating Council that:

250 (i) becomes operational on or after January 1, 2008; and

251 (ii) does not produce carbon as a byproduct of the generation process;

252 (b) includes generation powered by nuclear fuel; and

253 (c) does not include renewable energy sources used to satisfy the requirement  
254 established under Subsection 54-17-602(1).

255 (9) "Renewable energy certificate" means a certificate issued under Section 54-17-603.

256 (10) "Renewable energy source" means:

257 (a) an electric generation facility or generation capability or upgrade that becomes  
258 operational on or after January 1, 1995 that derives its energy from one or more of the  
259 following:

260 (i) wind energy;

261 (ii) solar photovoltaic and solar thermal energy;

262 (iii) wave, tidal, and ocean thermal energy;

263 (iv) except for combustion of wood that has been treated with chemical preservatives  
264 such as creosote, pentachlorophenol or chromated copper arsenate, biomass and biomass  
265 byproducts, including:

266 (A) organic waste;

267 (B) forest or rangeland woody debris from harvesting or thinning conducted to improve  
268 forest or rangeland ecological health and to reduce wildfire risk;

269 (C) agricultural residues;

270 (D) dedicated energy crops; and

271 (E) landfill gas or biogas produced from organic matter, wastewater, anaerobic  
272 digesters, or municipal solid waste;

273 (v) geothermal energy located outside the state;

274 (vi) waste gas and waste heat capture or recovery; [~~or~~]

275 (vii) efficiency upgrades to a hydroelectric facility, without regard to the date upon

276 which the facility became operational, if the upgrades become operational on or after January  
277 1, 1995; or

278 (viii) compressed air, if:

279 (A) the compressed air is taken from compressed air energy storage; and

280 (B) the energy used to compress the air is a renewable energy source;

281 (b) any of the following:

282 (i) up to 50 average megawatts of electricity per year per electrical corporation from a  
283 certified low-impact hydroelectric facility, without regard to the date upon which the facility  
284 becomes operational, if the facility is certified as a low-impact hydroelectric facility on or after  
285 January 1, 1995, by a national certification organization;

286 (ii) geothermal energy if located within the state, without regard to the date upon which  
287 the facility becomes operational; or

288 (iii) hydroelectric energy if located within the state, without regard to the date upon  
289 which the facility becomes operational;

290 (c) hydrogen gas derived from any source of energy described in Subsection (10)(a) or  
291 (b);

292 (d) if an electric generation facility employs multiple energy sources, that portion of the  
293 electricity generated that is attributable to energy sources described in Subsections (10)(a)  
294 through (c); and

295 (e) any of the following located in the state and owned by a user of energy:

296 (i) a demand side management measure, as defined by Subsection 54-7-12.8(1), with  
297 the quantity of renewable energy certificates to which the user is entitled determined by the  
298 equivalent energy saved by the measure;

299 (ii) a solar thermal system that reduces the consumption of fossil fuels, with the  
300 quantity of renewable energy certificates to which the user is entitled determined by the  
301 equivalent kilowatt-hours saved, except to the extent the commission determines otherwise  
302 with respect to net-metered energy;

303 (iii) a solar photovoltaic system that reduces the consumption of fossil fuels with the  
304 quantity of renewable energy certificates to which the user is entitled determined by the total  
305 production of the system, except to the extent the commission determines otherwise with  
306 respect to net-metered energy;

307 (iv) a hydroelectric or geothermal facility with the quantity of renewable energy  
308 certificates to which the user is entitled determined by the total production of the facility,  
309 except to the extent the commission determines otherwise with respect to net-metered energy;

310 (v) a waste gas or waste heat capture or recovery system, other than from a combined  
311 cycle combustion turbine that does not use waste gas or waste heat, with the quantity of  
312 renewable energy certificates to which the user is entitled determined by the total production of  
313 the system, except to the extent the commission determines otherwise with respect to  
314 net-metered energy; and

315 (vi) the station use of solar thermal energy, solar photovoltaic energy, hydroelectric  
316 energy, geothermal energy, waste gas, or waste heat capture and recovery.

317 (11) "Unbundled renewable energy certificate" means a renewable energy certificate  
318 associated with:

319 (a) qualifying electricity that is acquired by an electrical corporation or other person by  
320 trade, purchase, or other transfer without acquiring the electricity for which the certificate was  
321 issued; or

322 (b) activities listed in Subsection (10)(e).

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**Legislative Review Note**  
as of 1-25-10 11:50 AM

**Office of Legislative Research and General Counsel**

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**S.B. 104 - Renewable Energy Modifications**

**Fiscal Note**

2010 General Session

State of Utah

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**State Impact**

Enactment of this bill will not require additional appropriations.

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**Individual, Business and/or Local Impact**

Enactment of this bill likely will not result in direct, measurable costs and/or benefits for individuals, businesses, or local governments.

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