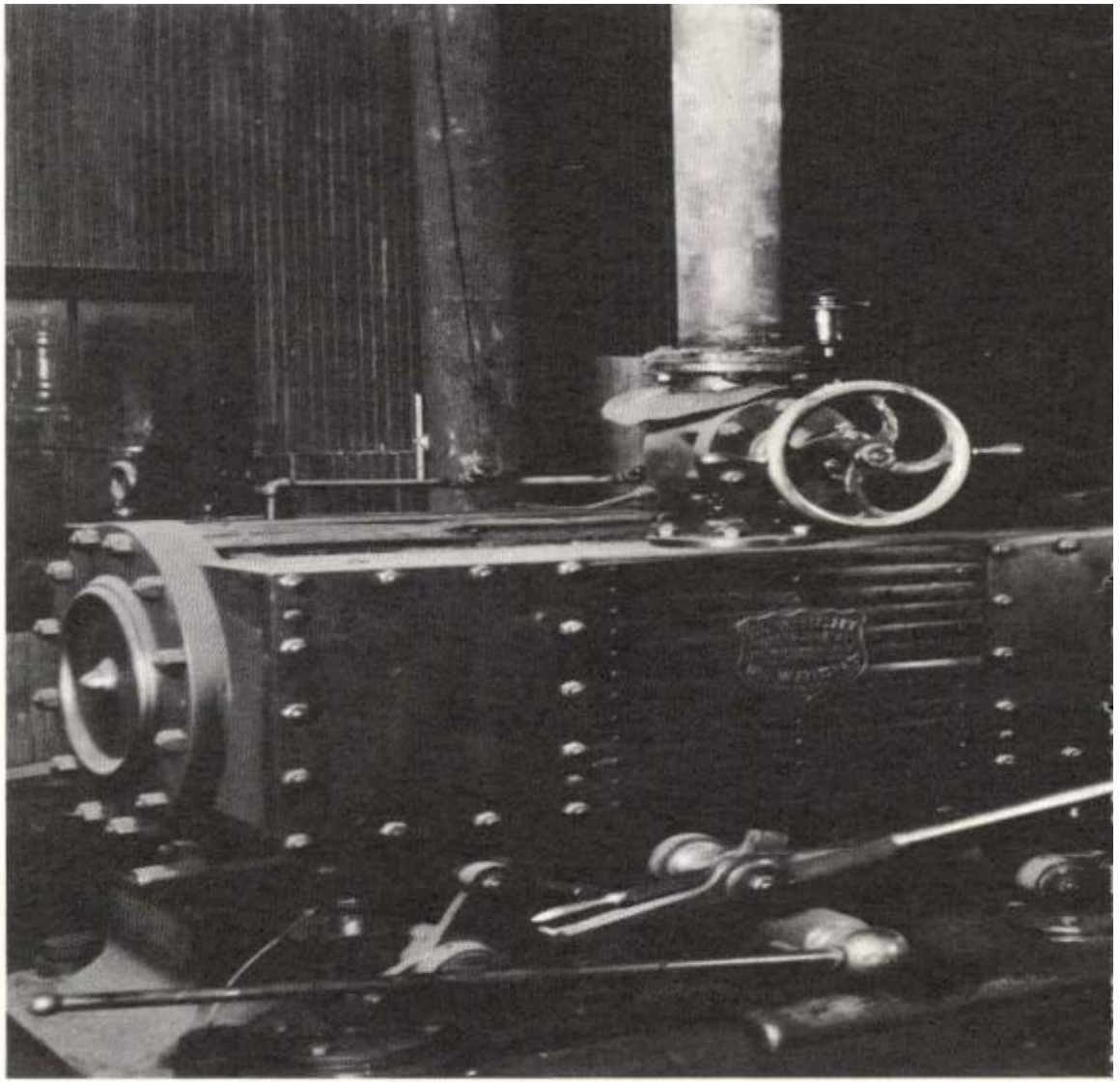
Boulder Valley Rotary Club
May 19, 2015

Bob Harberg, Principal Engineer – Project Manager for Electric Utility Development

History of Electricity in Colorado



“Old Sally” – First Generating Equipment west of the Missouri River - 1881

History of Electricity in Colorado

Boulder Electric Light Company

An Ordinance #266

Granting A Permit To The Boulder Electric Light Company And Their Assigns To Use The Public Streets And Alleys Of The City Of Boulder For Constructing, Maintaining And Operating Lines Of Electric Light Wire.

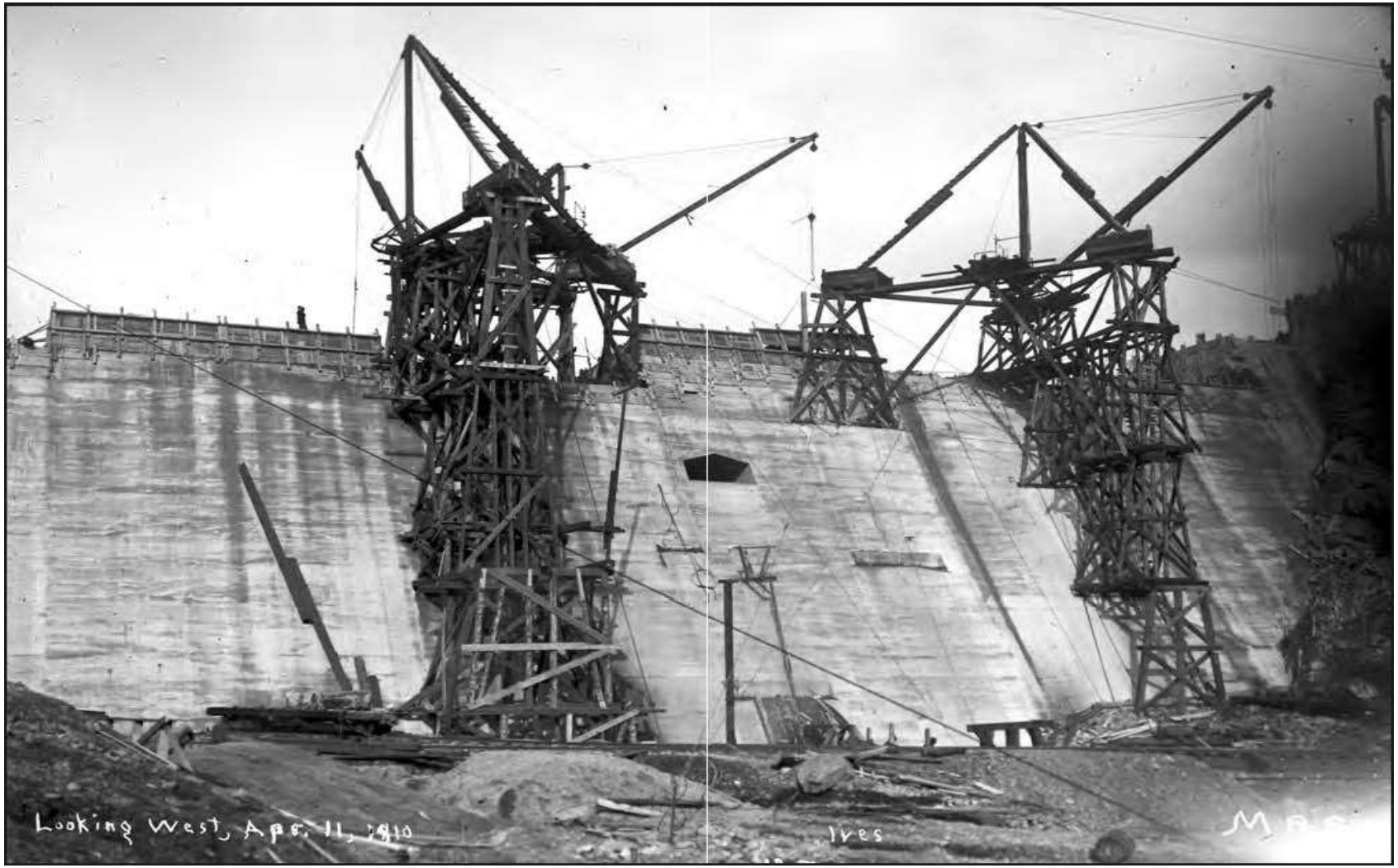
Be it ordained by the City Council of the City of Boulder:

Section 1. There is hereby granted to The Boulder Electric Light Company and its assigns a permit, for a period of twenty years unless sooner ended by the election of the City Council, for the use of the public streets and alleys of the City of Boulder, for constructing, maintaining and operating lines of electric light wire (including the right to set poles therefor), along such streets and alleys; but such lines shall be constructed and maintained so as not to obstruct or hinder the usual travel and other legitimate uses of such streets and alleys, and so as not to interfere with any rights of private parties owning or using property contiguous to any portion of such streets and alleys along which such lines may extend. The use of said streets and alleys in the construction, maintenance, continuance and operation of said lines shall at all times be subject to the regulations of the City of Boulder in the premises which may exist at any time or be made in the future, whether by ordinance, resolution or other order. Before this permit to take effect, (Parties to whom permit is granted) in the sum of ~~$5000~~ $10000. satisfactory to and approved by the City Council to hold the City harmless for any liability incurred ~~by said party~~ by such use of streets and alleys.

Passed March 6, A.D. 1895

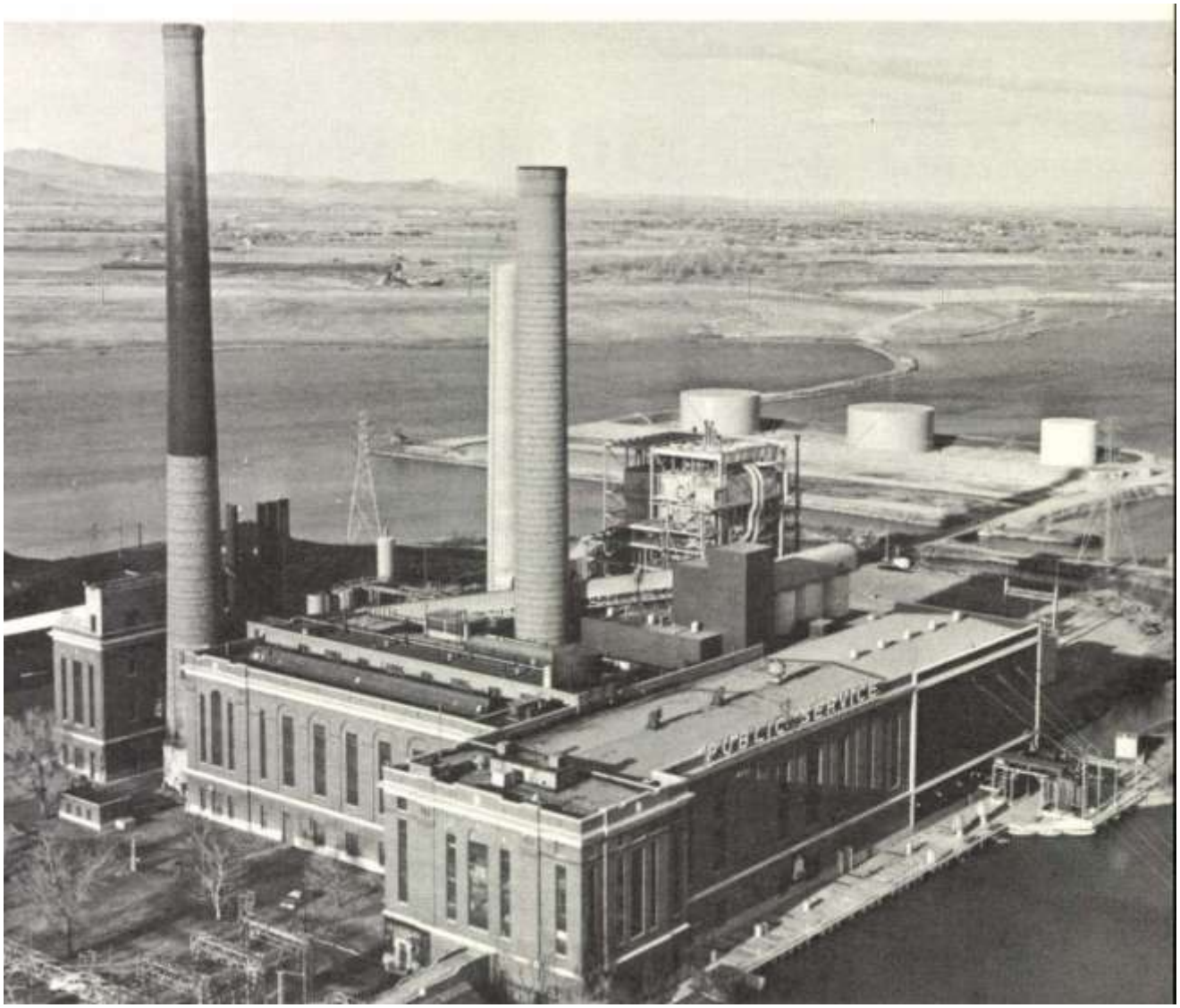
March 6, A.D. 1895.

History of Electricity in Colorado



Construction of Barker Dam - 1910

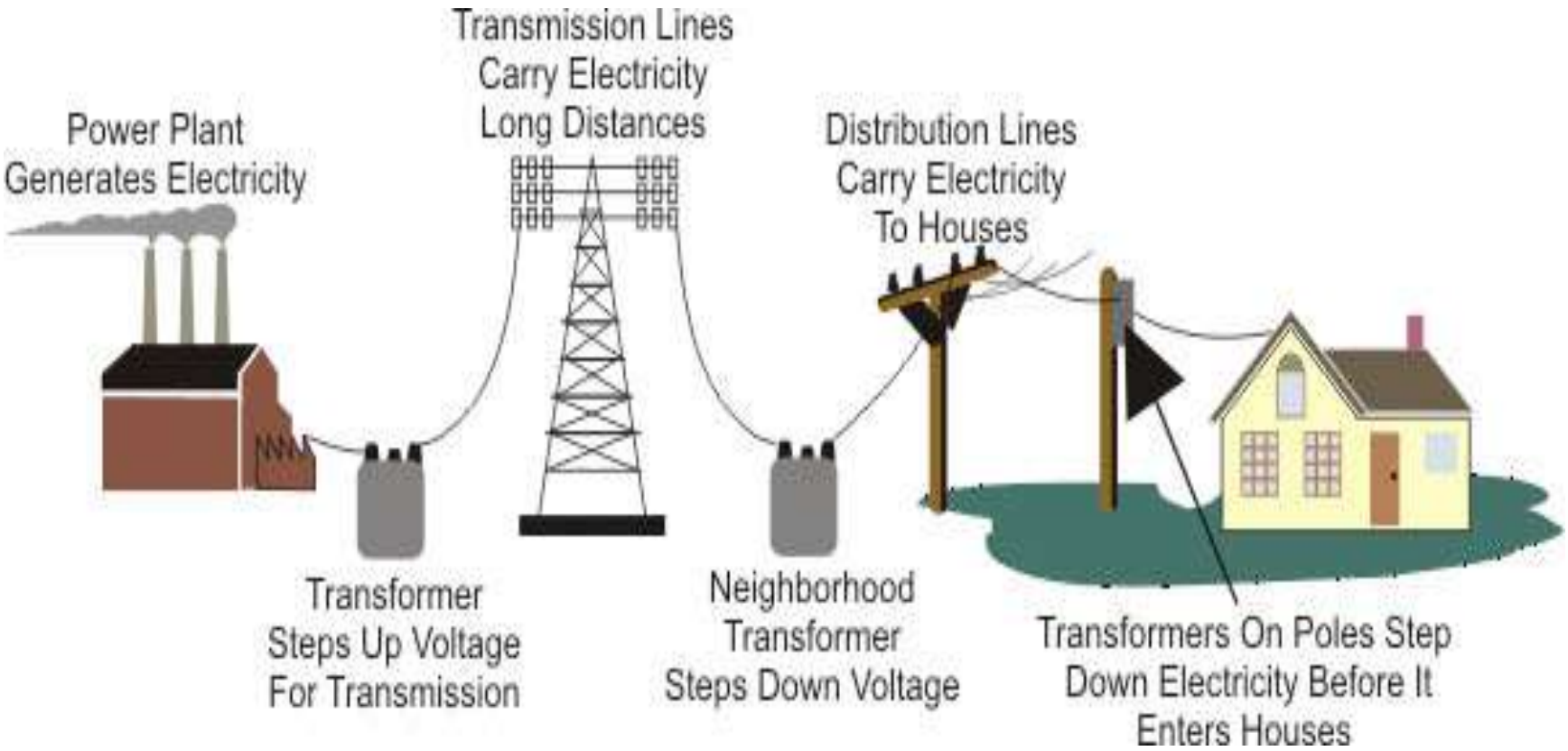
History of Electricity in Colorado



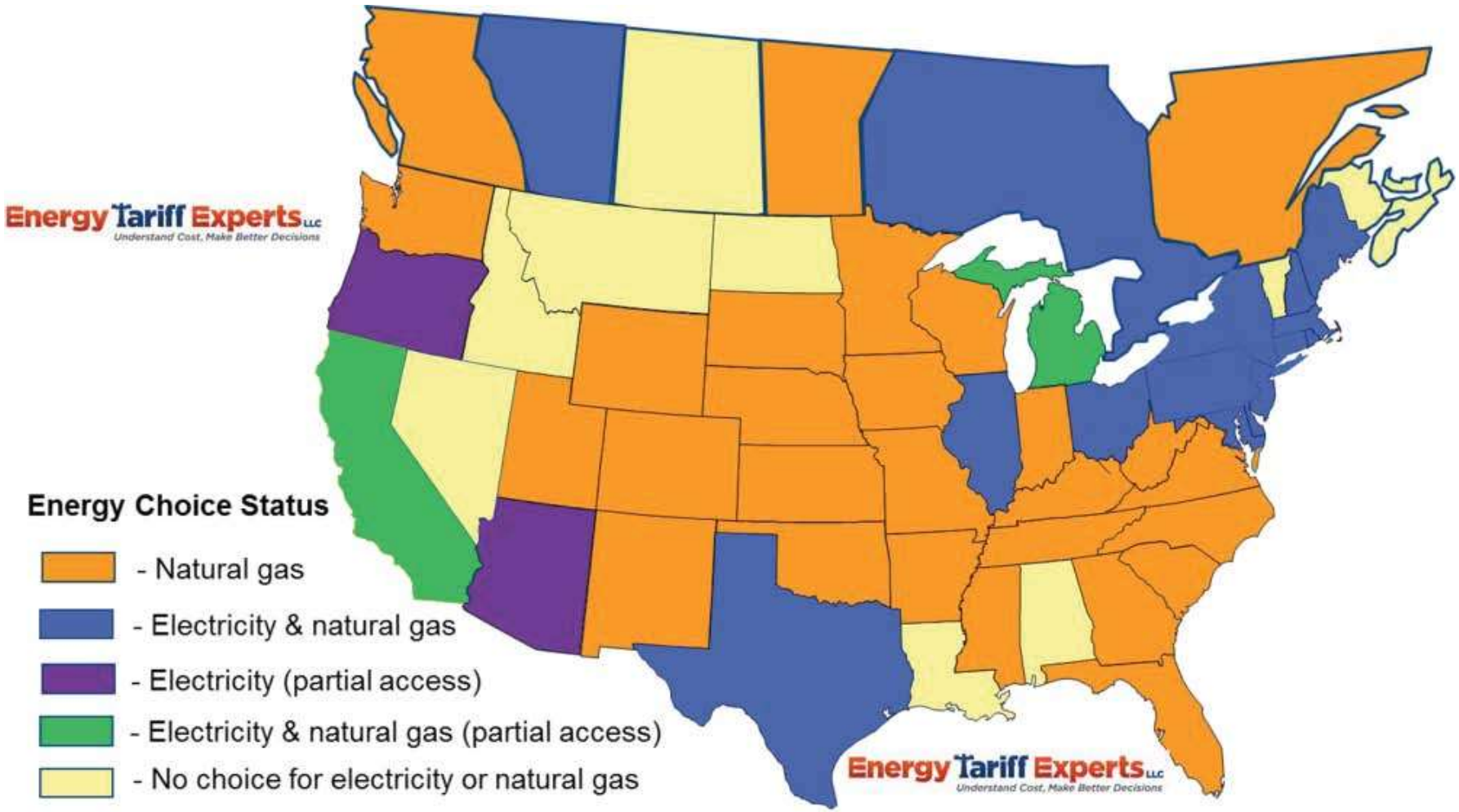
Valmont Station – Boulder, Colorado

History of Electricity in Colorado

The Electric System

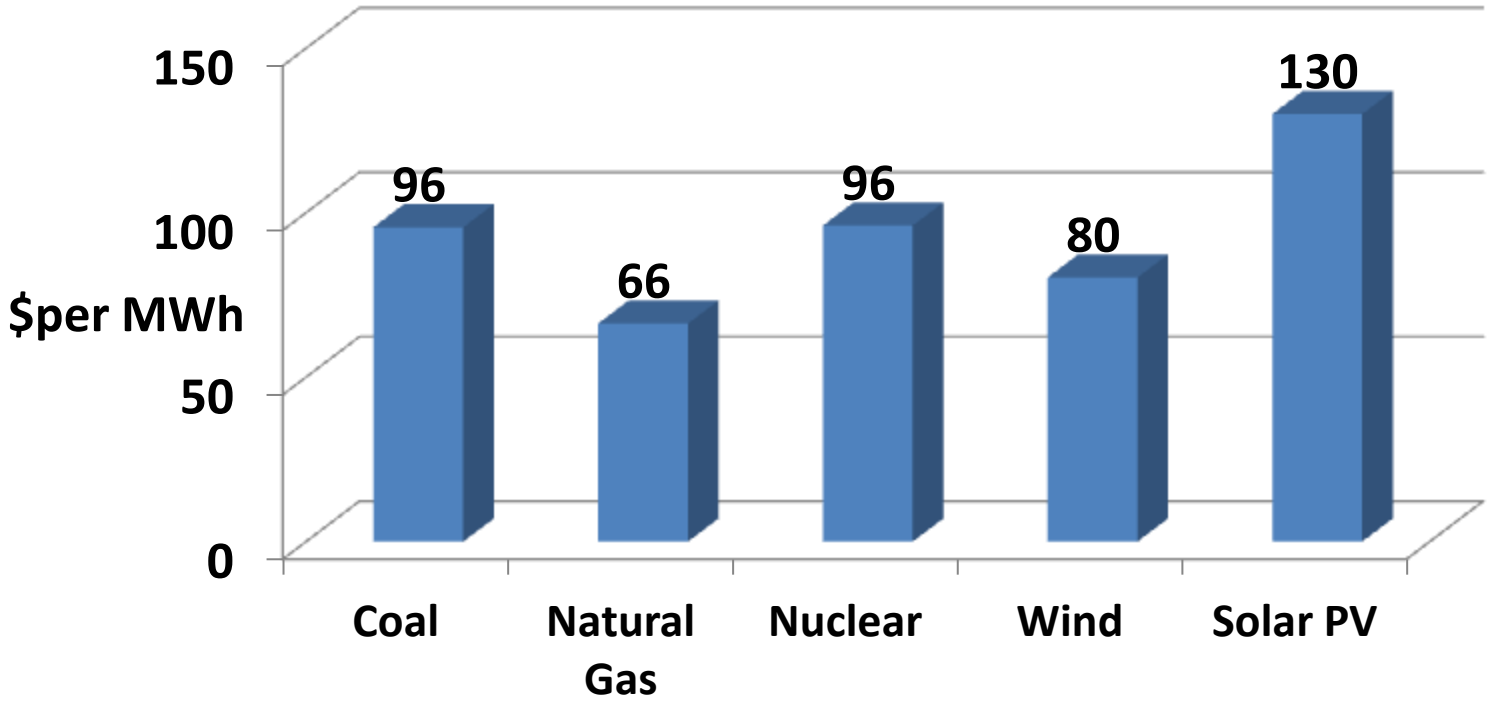


Why Municipalize?



Energy Cost Comparisons

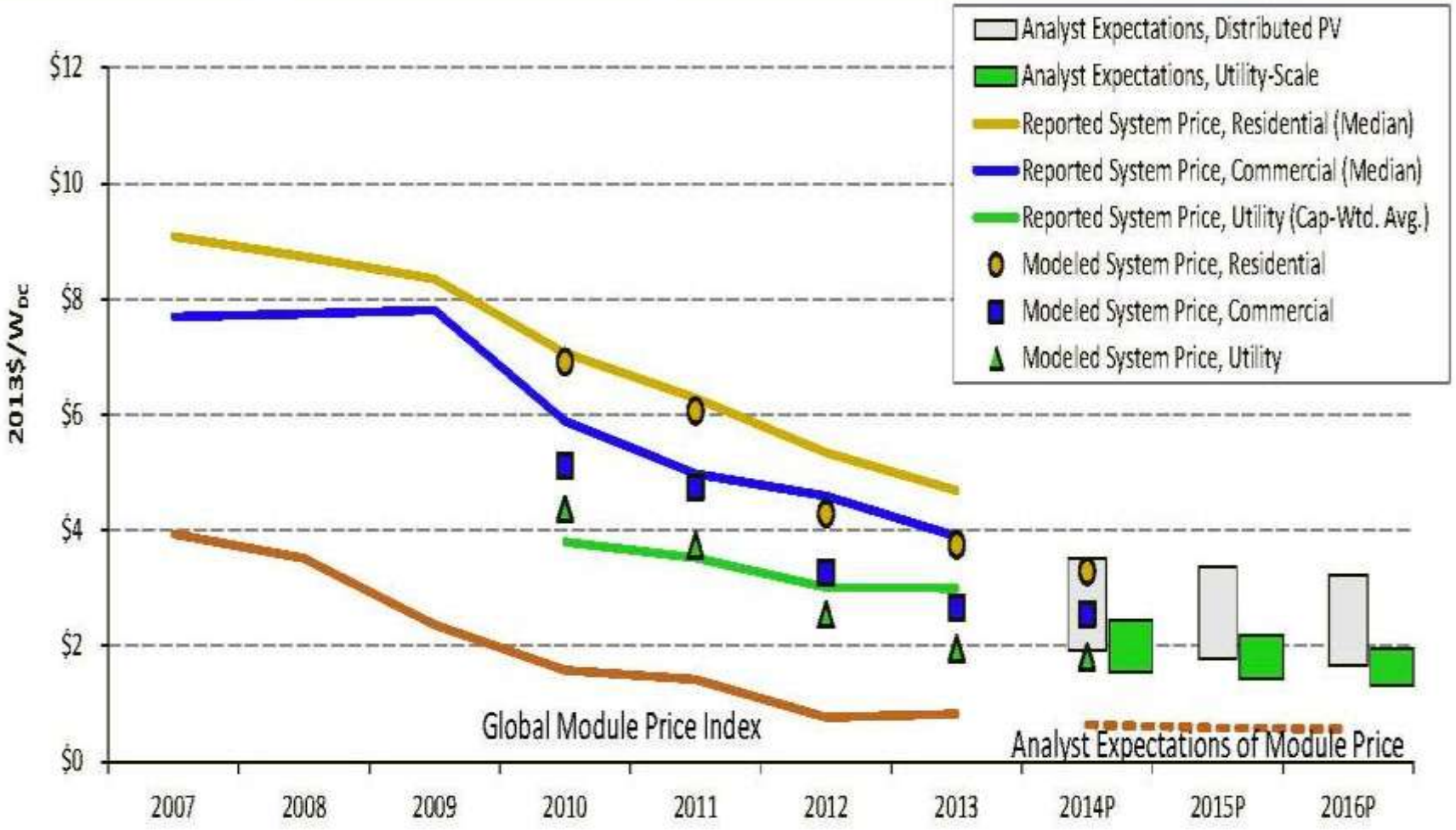
Comparison of Energy Cost by Source



Non-subsidized Total System Levelized Cost of Energy (LCOE)

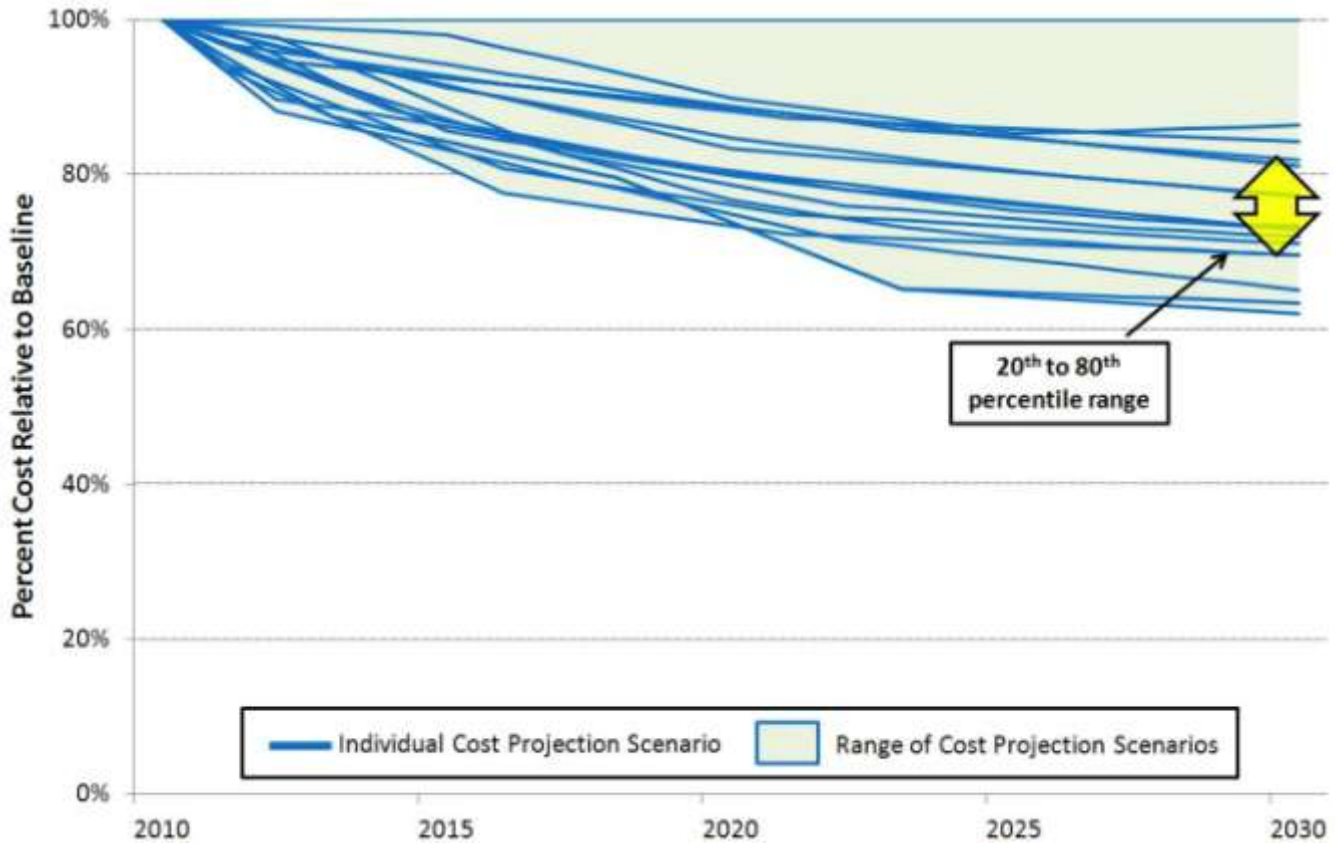
Annual Energy Outlook, U.S. Energy Information Administration, 2015

Photovoltaic (PV) Panel Cost Trends



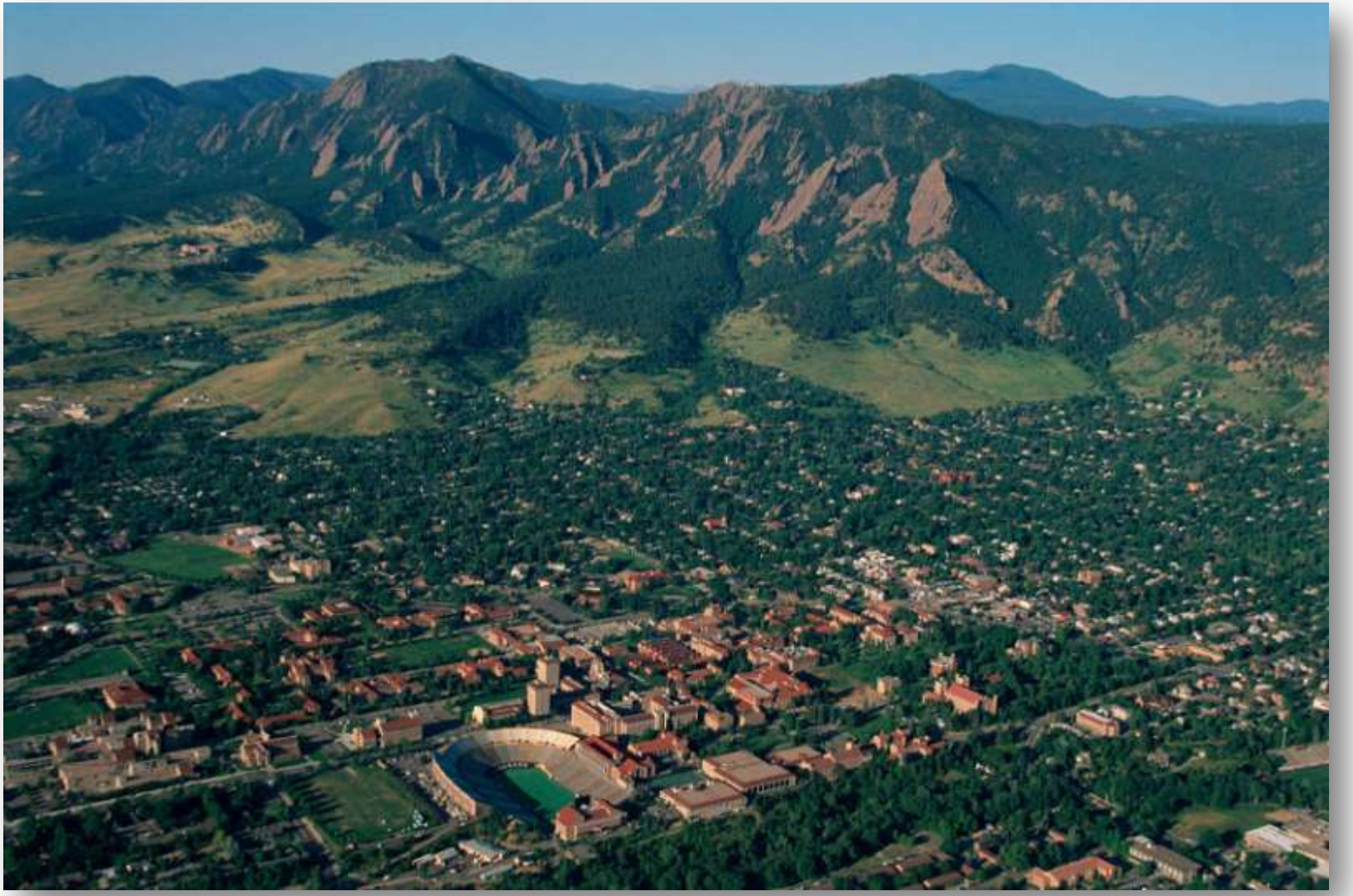
Photovoltaic System Pricing Trends, U.S. Department of Energy, 2014

Wind Energy Cost Trends



Wind Energy Cost, Performance and Pricing Trends: Past and Future, U.S. Department of Energy, 2013

History of Municipalization



History of Municipalization

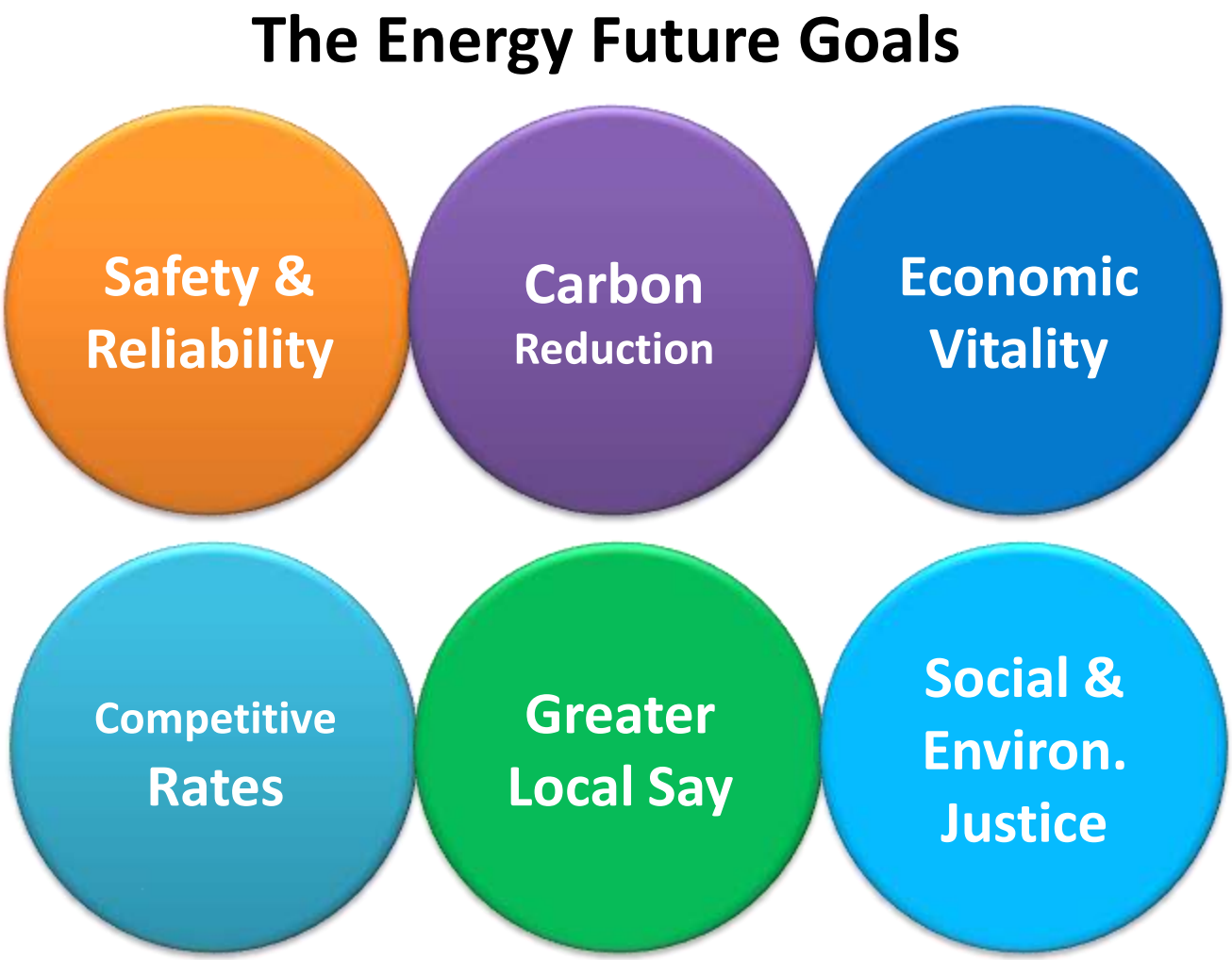
- **2005** – City started researching power supply options
- **2006** – Boulder voters pass nation's first carbon tax
- **2010** – Franchise with Xcel expires, city decides not to renew after extensive negotiations; Boulder voters approve utility occupation tax to replace franchise fee
- **2011** – Continued negotiations with Xcel, which included potential "wind agreement;" wind deal did not meet community goals

City Charter Requirements

- Rates equal to or less than Xcel's at time of acquisition
- Sufficient revenue to cover operating costs plus earn a debt service coverage margin of 25%
- Reliability comparable to that offered by Xcel
- Increase renewable energy and decrease carbon emissions
- Independent 3rd party review
- $214 million cap on debt for acquisition

Feasibility Analysis

Feasibility Analysis



What Can Public Power Do?

What we learned from other Publicly Operated Utilities (POUs):

- *88 new public power utilities have formed in United States in the last 40 years:*
  - The largest serves over a million customers - the smallest just a few
  - In the last 10 years 17 new POUs have formed
- *Colorado has 29 public power utilities including Longmont, Loveland, Fort Collins and Colorado Springs*
- *Nationally, there are over 2,000 POUs and over 900 rural electric cooperatives*

Where We Are Today

August 2013 – Council authorized filing of condemnation to acquire Xcel assets

November 2013 – Boulder voters reaffirmed desire to continue exploring municipalization

May 2014 – City Council forms electric utility per charter

August 2014 – Transition Work Plan completed

December 2014 – The Federal Energy Regulatory Commission (FERC) defines their approval role in the transfer of any transmission (>115kV) assets

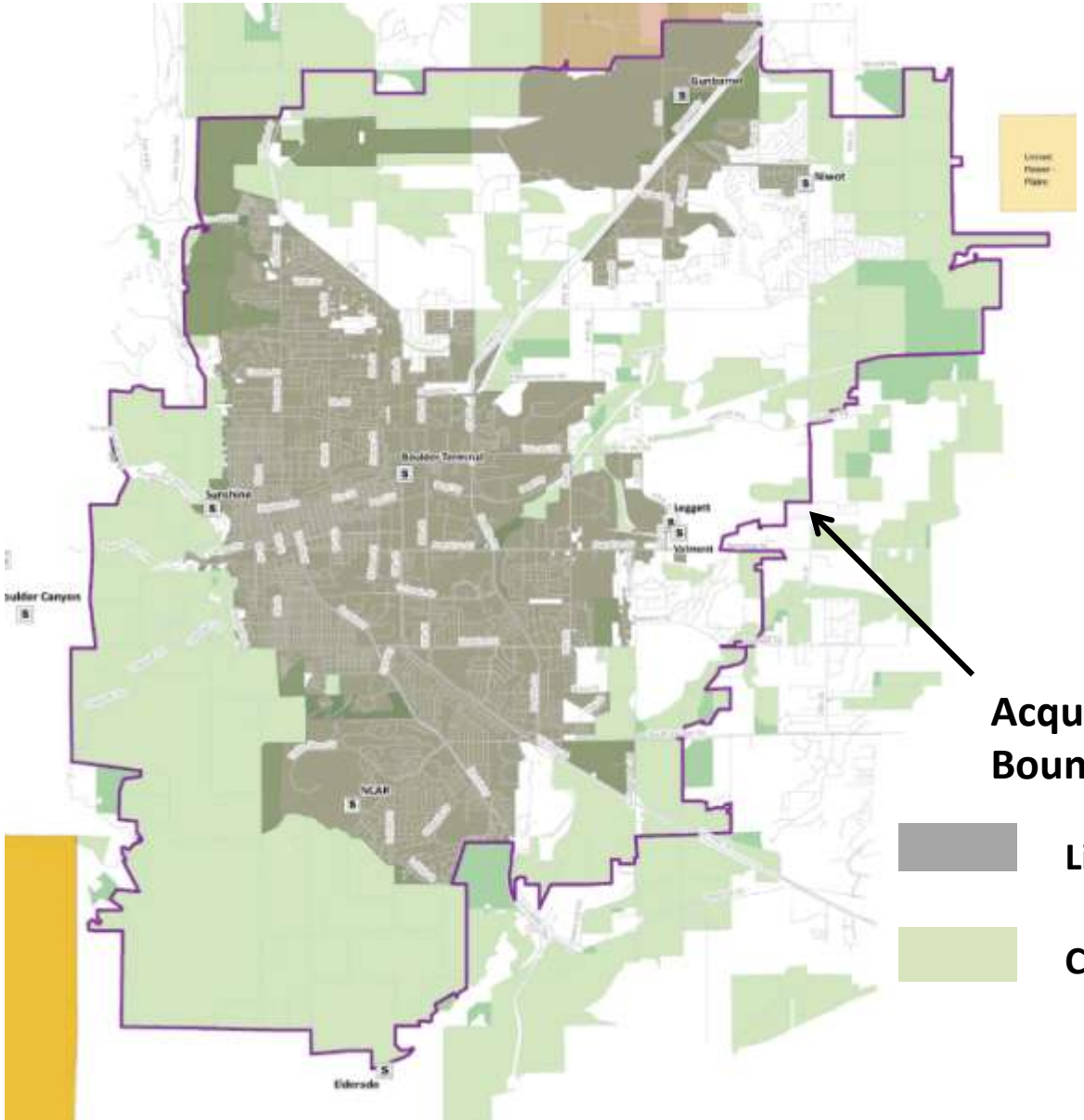
February 2015 – Boulder District Court dismisses condemnation petition until Colorado PUC determines how the separation will occur

Future Plans and Timelines

Colorado Public Utilities Commission

- Colorado Public Utilities Commission (CPUC) has authority to determine how Boulder separates from Xcel
- City Council authorized staff to submit an application to the CPUC for the transfer of assets from Xcel to the City
- Biggest issue is likely to be how electric customers outside of the City limits will be impacted
- Boulder will serve only those customers currently annexed to the city and Xcel Energy will continue to serve customers outside of City

Proposed Acquisition Area



Acquisition Area Boundary

Limits of City of Boulder

City Owned Property

Future Plans and Timeline

June 2015 – Colorado PUC – Transfer of Assets Petition

January 2016 – Colorado PUC Settlement Hearing

2016-2017 – Boulder District Court – Condemnation

2016-2017 – Colorado PUC – Transition Plan

Fourth Quarter 2017 - Day 1 – the date on which the city takes ownership of the electric system and begins customer billing

Fourth Quarter 2019 - Day 2 – completion of interconnection construction

For More Information

Follow along at www.BoulderEnergyFuture.com

- Sign up for E-News updates and newsletter
- Use online comment form for questions, feedback or suggestions

Send an email to the staff team at

EnergyFuture@BoulderColorado.gov

Contact Bob Harberg with questions/comments

harbergb@bouldercolordo.gov or **303-441-3124**

Questions


CLEAN
LOCAL
ENERGY
reliable
low-cost
possible
BoulderEnergyFuture.com

Regulation vs. Deregulation

Colorado Utility Regulation	Deregulated States
Supports vertically integrated utility structure and incentivizes investments in generation and infrastructure by allowing a nominal 10% rate of return	Unbundled generation and transmission to avoid preferential treatment of generators
Prices set by the regulator based on historical cost model (little incentive to manage cost and efficiency)	Cost of power established by market forces/ transmission continues to be regulated as a monopoly
Services must be approved by PUC and offered to all customers in the State of Colorado	Services and pricing packages can be created to meet unique customer needs and desires