

FOOTPRINT



EMPOWERING YOUR WORLD

Leading the Way...to a Carbon-Free Future



The first in an occasional newsletter to inform community stakeholders about HG&E's ongoing leadership in producing innovative energy solutions.



Our Commitment to You

Holyoke Gas & Electric's (HG&E) mission is to provide competitive rates, innovative and sustainable energy solutions, reliable service, and excellent customer care. HG&E has a long history of leadership in renewable energy and has taken significant steps to reduce Holyoke's carbon FOOTPRINT while maintaining some of the lowest energy rates in the region. As the Commonwealth works toward net-zero greenhouse gas emissions by 2050, HG&E is at the forefront in leveraging hydro, solar, wind, and renewable + battery storage, as well as emerging carbon-free opportunities. In this document we highlight some of the ways we are leading in the development of "innovative and sustainable energy solutions." Beginning with harnessing energy from the Connecticut River in the 1800s, Holyoke is poised to continue leading the way to a carbon-free future.

Recognizing Our Green Leadership; Poised for a Carbon-Free Future

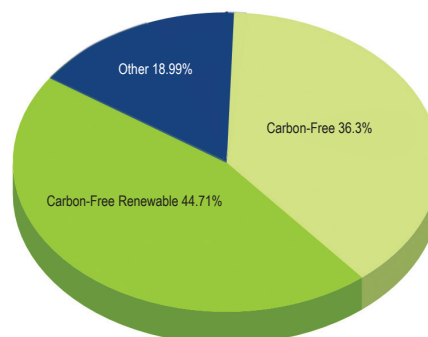
HG&E has remained committed to advancing clean and renewable energy growth, and in 2021 was named to the Utility Transformation Leaderboard by the Smart Electric Power Alliance (SEPA), recognized as one of a handful of utilities nationwide for its leadership in transforming to a carbon-free energy system. Only ten utilities, including Southern California Edison, Green Mountain Power and Consolidated Edison of New York, were cited for leadership in carbon reduction.

In 2021, HG&E also earned a Smart Energy Provider (SEP) designation from the American Public Power Association. This two-year designation was awarded to HG&E for demonstrating commitment to, and proficiency in, energy efficiency, distributed generation, and environmental initiatives that support a goal of providing low-cost, quality, safe, and reliable electric service. HG&E joins a pioneering group of 90 public power utilities nationwide that received the inaugural SEP designation.

The Commonwealth of Massachusetts designated Holyoke as a Green Community back in 2010. The future is bright for the development of more clean energy as Holyoke grows its green footprint.

HG&E has received several prestigious awards and designations, including:

- Smart Electric Power Alliance named HG&E to 2021 Utility Transformation Leaderboard
- Reliable Public Power Provider from the American Public Power Association
- Certificate of Excellence in Reliability from the American Public Power Association
- Smart Electric Power Alliance ranked HG&E third nationally in energy storage per capita
- The Ira W. Leighton, Jr. Outstanding Innovative Technology Award from Environmental Business Council of New England for Mount Tom Solar & Energy Storage System
- Energy Manager Today Project of the Year for Mount Tom Solar & Energy Storage System



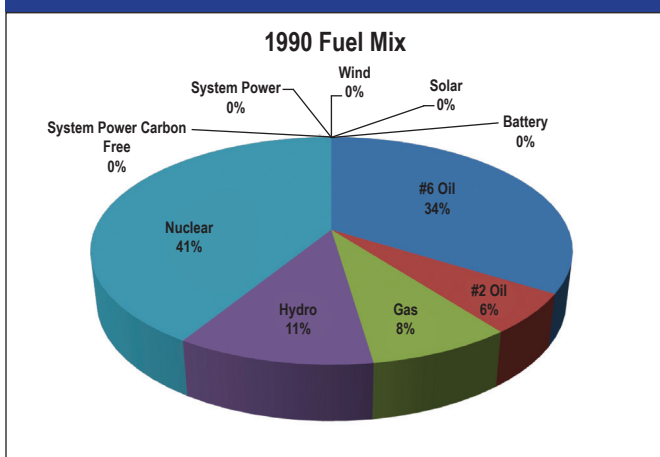
2020 Energy Emissions

Your Renewable Energy Future

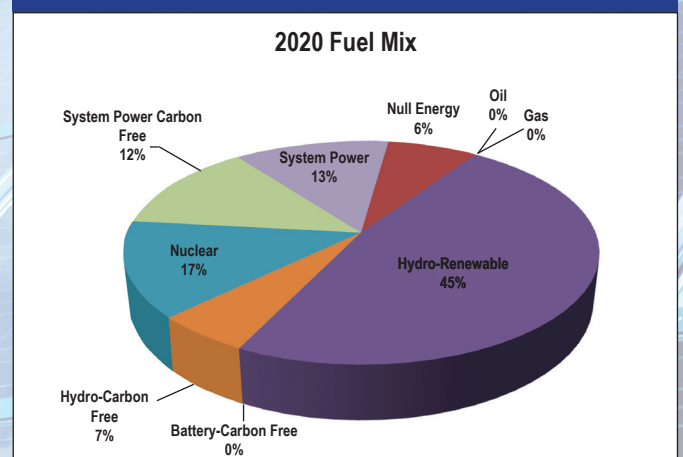
Holyoke's movement toward a carbon-free energy mix has been steady and forward looking



Where We Have Been...



Where We Are...



Where We Are Going...

Realizing the goal of a carbon-free energy system will not be an easy task, but HG&E is well positioned to meet the incremental targets set by the State. There is a long way to go in moving households and businesses away from propane and oil, the dirtiest fossil fuels, and some significant work will need to be done in order to modify the regional electric energy mix. The development of carbon-free resources, adoption of energy efficiency and ongoing discovery will help us succeed.



Martin J. Dunn Energy Center Launches in Holyoke

Friends and family of Marty Dunn, including his wife Kathy Dunn, joined HG&E's Jim Lavelle and Citizens Energy's Michael Kennedy to dedicate the Martin J. Dunn Energy Center, a groundbreaking battery storage project in Holyoke.

In partnership with Holyoke Gas & Electric (HG&E), Citizens Energy Corporation flipped the switch on The Martin J. Dunn Energy Center on July 29, 2021. Located on Water Street across from HG&E's North Canal Substation, the Energy Center consists of a 4.9 megawatt (10 megawatt-hour) Battery Energy Storage System (BESS). The BESS will be directly interconnected to HG&E's grid and will be charged during low demand periods, when energy costs are low. This stored power will be called upon during local and regional peak load periods to cost-effectively lower demand, while reducing utility costs and demand charges for customers.

The Energy Center is named after Holyoke's late Mayor and State Senator, Martin "Marty" J. Dunn. In 2018, Dunn connected leadership from Citizens Energy Corporation and HG&E to discuss innovative energy opportunities for the City of Holyoke.

The system is the most recent addition to HG&E's strategic peak shaving program and will help keep utility rates stable, protecting customers from the potential volatility of energy markets. The Martin J. Dunn Energy Center is HG&E's second BESS collaboration. Mt. Tom Energy Storage System was HG&E's first BESS partnership, and it was the largest utility-scale battery in the state of Massachusetts when it was commissioned in 2018 by ENGIE North America. Today, HG&E has a total battery storage capacity of approximately 8 MW/16 MWh.

HG&E's peak shaving plan and other cost saving activities include the following:

Demand Management – HG&E has invested in a variety of load reduction programs, including initiation of local generation, forecasting peak periods, and investment in state-of-the-art technologies like battery storage. All load reduction programs have been developed to ensure that these assets are optimized during peak periods to effectively reduce peak load and associated costs.

Hedging – HG&E forecasts energy usage and market pricing in an effort to lock in lower costs for peak periods. This is a careful balance, by which HG&E's market analysis team aligns market conditions and load shaving activities to protect customers from sharp rate increases. Currently, power has been hedged through 2026.

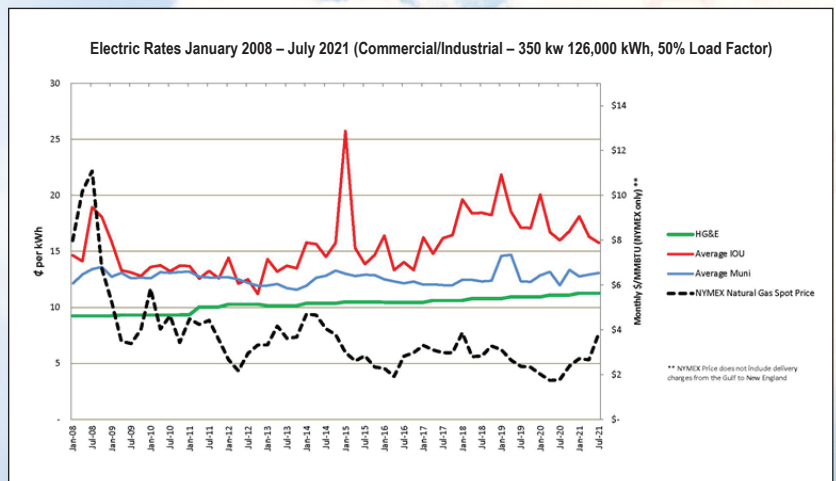
Generation Ownership & Entitlements – HG&E owns a significant amount of hydro generation and also has entitlements to other power plants throughout New England, which help offset capacity costs.

Transmission Ownership – HG&E owns and maintains 9.25 miles of transmission lines which are part of the regional transmission system and provide revenue to offset rising transmission costs.

Advanced Meters – HG&E has implemented Advanced Meters which allow for more efficient management of usage and peak data.

Energy Efficiency (EE) – HG&E has developed innovative energy and cost saving programs that allow residential and commercial customers to cut costs while assisting in overall load reduction. Some of HG&E's EE initiatives include energy conservation programs, energy audits, rebates, and incentives.

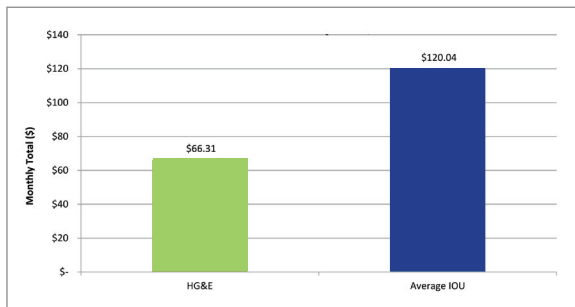
Through these benefits of owning local assets and equipment as well as load reducing activities, HG&E is able to manage rates and keep them stable. HG&E will continue to do our part to insulate customers from the volatile energy markets and provide you with competitive rates, reliable service, innovative and sustainable energy solutions, and excellent customer service.



Our Rates vs Investor-Owned Utilities

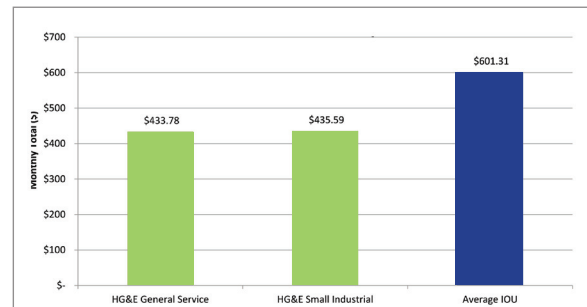
As a municipally-owned utility company, HG&E is responsible to its customers in Holyoke, not to investors without a local stake. Investor-Owned Utilities (IOUs) answer to shareholders and incur more obligations that are passed on to consumers. The result is that energy rates for residents and businesses in Holyoke are historically lower than those in communities where IOUs provide the energy. Here are a couple of graphs that show the savings for residents and small businesses in Holyoke.

**2020 Residential Electric Rate Comparison
500 kWh Consumption/Month**



HG&E Electric Residential Annual Savings - \$644.76

**2020 Commercial & Industrial Electric Rate Comparison
13 kW - 3,000 kWh Consumption**



HG&E Electric General Service Annual Savings - \$2,010.36,
HG&E Electric Small Industrial Annual Savings - \$1,988.64

The Advantages of Public Power

- We operate in the public interest - to improve the quality of life for our customers and the community.
- Local ownership means that a good portion of our customers' energy dollars stay in the community - creating jobs and supporting the local economy.
- Our rates and services are controlled locally. This enables us to carefully make decisions and provide services that specifically benefit the community.
- We are leaders in energy efficiency, renewable energy, sustainability and environmental stewardship, with a focus on the future success of the community. With that in mind, in 2020 HG&E provided 81% carbon-free electricity, far exceeding the Commonwealth's renewable portfolio standard for utilities.
- We provide our customers with energy at some of the lowest rates in Massachusetts. Our low energy rates and innovative energy conservation incentives serve to assist the City's Economic Development efforts.



Clean Energy Partnerships...

HG&E has been recognized as a leader in clean energy and is constantly looking for innovative, cost-effective ways to expand and diversify the portfolio of renewable and carbon-free energy. Partnering with national and regional energy leaders, HG&E has received over \$5 million in grant funding to support local, clean energy goals. In addition, HG&E has invested approximately \$20 million in collaborative clean energy projects that provide renewable energy to the community and enable future clean energy development.



- Rocky Mountain Institute (RMI) ■ Fraunhofer Center for Sustainable Energy Studies
- Pacific Northwest National Laboratory ■ Nature & People First ■ Massachusetts Clean Energy Center (MassCEC)
- National Science Foundation ■ Massachusetts Department of Energy Resources (DOER) ■ ITM Power
- University of Massachusetts, Amherst ■ Massachusetts Institute of Technology (MIT) ■ Boston University (BU)
- ENGIE North America ■ Alden Labs

...And Leadership in Innovation

- The availability of green, low cost and plentiful power generated by HG&E has attracted high-end technology to the city.
- Massachusetts Green High Performance Computing Center (MGHPCC): 90,300-square-foot, \$168 million facility with partners including MIT, Harvard University, UMass, Boston University, Northeastern University, EMC and Cisco Systems.
- MIT's Lincoln Laboratory Green AI (artificial intelligence) Accelerator computing system, and located at the MGHPCC that has been ranked as the most powerful AI supercomputer at any university in the world.
- Smart Electric Power Alliance named HG&E to 2021 Utility Transformation Leaderboard.

Savings for Commercial & Industrial Customers

Many commercial and industrial customers require a lot of power at an affordable cost. These organizations are vitally important to a healthy economy in the City. In 2020, Michael Curtin joined HG&E as the Technical Support Engineer for Commercial and Industrial Customers. Michael's background is in mechanical engineering and business administration, and he brings vast customer service experience in manufacturing and industrial distribution. As a Holyoke native and lifelong resident, he is highly familiar with HG&E's customer base, as well as the opportunities and challenges facing the greater Holyoke community.



Every day, Michael is helping our local businesses save money and energy, while working to retain existing commerce and attracting new industries to Holyoke. As a municipal utility, HG&E has the ability to work one-on-one with customers in order to target their specific needs related to energy. Some of the commercial opportunities include:

COMMERCIAL ENERGY CONSERVATION PROGRAM: Financial assistance at 0% interest for qualifying energy efficiency projects.

ECONOMIC DEVELOPMENT DISCOUNTS: New commercial and industrial customers in Holyoke can receive a 10% discount on electric and natural gas bills for three years.

HG&EV - ELECTRIC VEHICLE EDUCATION & INCENTIVES: Learn about electric vehicles (EVs), charging equipment and infrastructure, and currently available incentives for commercial properties on our new HG&EV website.

PROMPT PAYMENT DISCOUNT: A 10% reduction for customers who pay their bill within 15 days of receipt.

COMMERCIAL ENERGY AUDITS: Gain insight into ways to reduce your building's energy use by receiving an energy audit for your commercial property.

CULTIVATION DISCOUNT: A 10% discount for cultivation customers with a power factor of 85% or greater.

For more information, contact Michael by phone (413) 536-9319 or email mcurtin@hged.com.

We hope you enjoyed the information in FOOTPRINT about HG&E's success in green energy and moving the city toward the State's Net Zero Carbon energy goals.