

# Constellation Carbon Offsets for Lake County



**Constellation®**

An Exelon Company

# Carbon Offsets

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A **Carbon Offset** is a reduction in 1 metric ton of emissions of carbon dioxide or other greenhouse gases made in order to offset 1 metric ton of emissions made elsewhere such as for business operations or heating a building

**Sources:** Forestry, energy efficiency, industrial process improvements, carbon capture & sequestration projects

## Customer Benefits:

- Claim offset of emissions made from onsite operations and elsewhere like travel & supply chains
- No facility / equipment modifications required
- Help fund projects that generate carbon reductions
- Lower cost vs RNG (but not a direct scope 1 reduction)

# Carbon-free Gas with Carbon Offsets

## Lower-cost sustainable gas option utilizing carbon offsets:

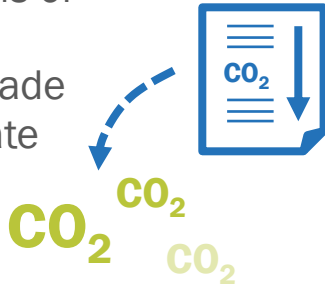
- **Carbon Offsets** purchased by customer to claim, for every ton of CO<sub>2</sub> emitted from their natural gas consumption, they supported an equal amount of reductions in CO<sub>2</sub> emissions



- **1 MMBtu of natural gas consumption** = ~0.053 metric tons of scope 1 CO<sub>2</sub> emissions depending on specific combustion end-use and customer-chosen GHG accounting standard
- **Price:** The cost for this option is a function of volume to cover certification costs as well as the type of carbon offset selected
- **Sample Sources of Carbon Offset Types:** Forestry projects, renewable energy/energy efficiency projects, industrial manufacturing carbon reduction and sequestration projects

# Carbon Offsets: How it Works

A **carbon offset** is a reduction in emissions of **carbon** dioxide or greenhouse gases made in order to compensate for or to **offset** an emission made elsewhere.



Offsets are sold by the tonne.



The offsets **should be third party verified by specific protocols** and are typically catalogued for sale in specific registries (Climate Action Reserve, for example).



There is a **specific measure of a baseline** (CO2 emissions prior to any action being taken) **and then very specific measures of emissions reductions that occur from that specific action.** These may be at an industrial facility (e.g., *capture and destruction of methane emissions from a landfill that previously was simply venting the methane to the atmosphere*)



Typically offsets are purchased **for Scope 1 emissions** (*emissions businesses make directly from their actions, operations, fleet vehicles*) that they cannot otherwise reduce. Offsets can also be utilized for Scope 2 and 3.

## 2 Product Options

Type	Generic “Pool”	Location Sourcing (Illinois)
Sourcing	Always available, a pool of offsets is an aggregated purchase of many different types of offsets across the U.S. Projects are disclosed upon purchase.	Available as of 9.28.2021 but could change whenever a company chooses to purchase this particular project.
Brief Description	Transportation, Manufacturing and municipality efficiency projects	U of Illinois Energy Efficiency (see next slides)
Pricing	\$0.42 / Dth	\$0.56 / Dth
Volume	Unlimited	120,000 credits

### Cost Illustration for Generic Pool

Annual Dth usage for example: 100,000 dth/year

To offset 10% of your annual NG consumption:  $10,000 \text{ dth} \times \$0.42 = \$4,200$

To offset 50% of your annual NG consumption:  $50,000 \text{ dth} \times \$0.42 = \$21,000$

To offset 100% (or be “net zero” or “Carbon Neutral”):  $100,000 \times \$0.42 = \$42,000$

# U of Illinois Energy Efficiency



**Project Type:** Clean Energy and Energy Efficiency

**Standard:** [Verified Carbon Standard](#)

The University of Illinois Urbana-Champaign (UIUC) increased building energy efficiency across campus through a program of aggressive retro-commissioning and upgrades, reducing energy use by 27% across 40 buildings. UIUC also implemented renewable energy and LEED-certified buildings on campus. Students, faculty, and staff across campuses helped UIUC achieve its sustainability goals, from pledging to take action to reduce energy use to working on teams that identify energy efficiency projects. Additionally, the University is the winner of Second Nature's Climate Leadership Award.



## Sustainable Development Impacts



As part of its Climate Commitment, UIUC has committed to achieving carbon neutrality and incorporating sustainability and climate action into its curriculum. At UIUC, students drive climate action through initiatives such as the SWATeam, where students, faculty, and staff assess the university's progress towards its Climate Action Plan. They also formed the Revolving Loan Fund Committee, where students help determine funding for energy conservation projects on campus.



UIUC has a 5.87 MW solar PV system and has promoted the adoption of renewable energy in the community. Additionally, solar thermal panels provide hot water for the Activities and Recreation Center. The school also secured money for a biomass boiler that provides heat to greenhouses by burning the farm's energy crop harvest to heat water.



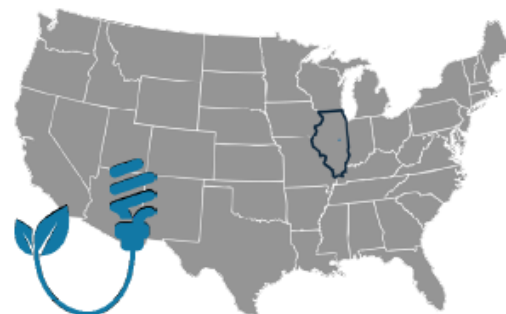
The campus has utilized creative innovations such as the Illini Energy Dashboard, which shows users how to make educated choices about their energy habits. Other installments include retrofitting 118,567 inefficient light fixtures, an on-campus energy conservation incentive program, and the creation of 12 LEED buildings.



Improvements in weatherization, boiler retrofits, cooling upgrades, energy control, HVAC, and temperature control systems have led to a 27% reduction in energy consumption. By reducing UIUC's dependence on nonrenewable energy sources, the school is taking major steps toward resource efficiency and mitigating the negative environmental impact of its growing student population.



Reducing and replacing nonrenewable energy sources decreases UIUC's negative environmental impact. The estimated total emission reductions over the life of the project are 338,112 metric tons of CO<sub>2</sub>e.



# FAQs

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How is this billed?	Our standard option is a separate line item on your Natural Gas bill (if using Constellation).
Does this need to line up with my natural gas commodity purchase?	No. We can bill separately if you're not using Constellation for NG
Where's my proof of purchase?	Upon purchase, offsets will be retired in the name of your business and found on the national carbon registry website. Additionally, you'll receive a certificate from Constellation.
I'm not ready to buy – how long is this price good for?	The carbon market is extremely volatile, and prices can change daily. We can only confirm pricing the week you're ready to purchase.