

# Utility Profit

## Utility Provider Lookup

### Provider Verification Process

## Overview

The lookup system identifies and verifies utility providers for any US address across four categories: Electric, Gas, Water, and Internet.

Each lookup uses a multi-step verification process combining government databases, state-specific authoritative data, and Google Search verification via AI.

## Cost Per Lookup

Each lookup costs approximately \$0.02, broken down as follows:

Component	Cost	Source
Address Geocoding	\$0	US Census (free)
Electric/Gas Lookup	\$0	Government APIs (free)
Internet Providers	~\$0.01	FCC Broadband Map
Google Verification	~\$0.01	Search + AI Analysis
Total	~\$0.02	

## Verification Process

### Step 1: Address Geocoding

The street address is converted to GPS coordinates using the US Census Geocoder. This also returns city, county, state, and ZIP code.

### Step 2: Electric Utility (Nationwide)

Three methods are used to identify the electric provider:

1. **Federal Database (HIFLD):** Query the government database of electric utility territories to find utilities serving the location.

2. **EIA Form 861 Data:** Federal data mapping 31,633 ZIP codes to 143 investor-owned utilities across all 50 states (Duke Energy, Con Edison, PG&E, etc.).
3. **Google Verification:** A Google search for the address + "electric utility" is analyzed by AI to confirm the match.

### Step 3: Gas Utility (Nationwide)

Similar process to electric:

4. Query the federal database of natural gas territories
5. Verify against a database of ~150 major gas utilities covering all 50 states + DC
6. Confirm with Google search

*Note: Some areas lack natural gas service. In those cases, the system indicates the area likely uses propane.*

### Step 4: Water Utility

7. Query the EPA database of all public water systems in the US
8. Filter by city and county, prioritizing larger systems
9. Verify with Google search

### Step 5: Internet Providers

The official FCC Broadband Map is scraped to retrieve:

- All internet service providers at the address
- Fiber and cable availability
- Download and upload speeds for each provider
- Best wired and wireless options

## Confidence Levels

Each result includes a confidence level indicating reliability:

Level	Meaning
Verified	Matched government data AND confirmed by Google search
High	Strong database match, Google confirms
Medium	Database match, Google inconclusive
Low	Uncertain, manual verification recommended

## Coverage by State

### Electric Utilities - Nationwide

Electric utility data covers all 50 states through multiple data sources:

Data Source	Coverage	Details
EIA Form 861	All 50 states	143 utilities, 31,633 ZIP codes
HIFLD Territories	All 50 states	~3,000 utilities (polygon data)
Texas TDU Mapping	Texas only	5 TDUs + municipal utilities

### Example Electric Utilities by State

- **California:** Pacific Gas & Electric, Southern California Edison, San Diego Gas & Electric
- **New York:** Con Edison, National Grid, NYSEG, RG&E
- **Florida:** Florida Power & Light, Duke Energy Florida, Tampa Electric
- **Pennsylvania:** PECO, PPL, Duquesne Light, West Penn Power
- **Illinois:** ComEd (Commonwealth Edison), Ameren Illinois
- **Ohio:** AEP Ohio, Duke Energy Ohio, FirstEnergy
- **North Carolina:** Duke Energy Carolinas, Duke Energy Progress

### Gas Utilities - Nationwide

The gas utility database covers all 50 states plus DC with approximately 150 major local distribution companies (LDCs).

### Example Gas Utilities by State

- **California:** SoCalGas, PG&E, San Diego Gas & Electric
- **New York:** Con Edison, National Grid, National Fuel Gas
- **Pennsylvania:** PECO, Columbia Gas, UGI, Peoples Gas
- **Illinois:** Nicor Gas, Peoples Gas, Ameren Illinois
- **Ohio:** Columbia Gas, Dominion Energy, Duke Energy Ohio
- **Carolinas:** Piedmont Natural Gas, Dominion Energy

## Texas-Specific Data (Enhanced)

Texas has additional ZIP-level mapping because it is a deregulated market. Customers can choose their Retail Electric Provider (REP), but the Transmission & Distribution Utility (TDU) is fixed by location.

## Electric TDUs

TDU	Service Area
Oncor	Dallas/Fort Worth, North Texas
CenterPoint	Houston metro area
AEP Texas North	Lubbock, Abilene area
AEP Texas Central	Corpus Christi, South Texas
TNMP	Scattered areas

*Municipal utilities (Austin Energy, CPS Energy in San Antonio, etc.) are not part of the deregulated market.*

## Texas Gas Utilities

Gas Utility	Service Area
Atmos Energy	DFW, West Texas, Panhandle
CenterPoint Energy	Houston metro area
Texas Gas Service	Austin, El Paso, other areas

## Data Sources Summary

Utility Type	Primary Data Source	Verification
Electric	HIFLD + EIA Form 861 + State data	Google Search + AI
Gas	HIFLD + State LDC database	Google Search + AI
Water	EPA SDWIS database	Google Search + AI
Internet	FCC Broadband Map	Direct from FCC (authoritative)