

## **For a 200 mile trip, how much higher is the carbon footprint for trucked LNG or CNG when compared to a pipeline**

For a 200-mile delivery, trucking CNG or LNG typically causes on the order of tens of percent higher transport-stage greenhouse gas emissions than using a pipeline, but exact percentages depend on payload, truck type, and leak rates.

### **What the literature suggests**

- A recent life-cycle analysis for renewable natural gas found pipeline transport had the lowest carbon intensity over most practical distances, with trucked options (CNG and LNG) generally higher due to vehicle fuel use and methane losses.
- In that study, pipeline transport emissions increase roughly linearly with distance and remain more efficient than CNG or LNG trucking beyond short ranges, while CNG is only clearly competitive at very short distances because of lower static (fixed) emissions but worse per-mile efficiency.
- LNG transport involves extra emissions from liquefaction and boil-off plus truck fuel, so total emissions per unit of gas delivered are usually higher than for pipeline gas unless very long distances and specific logistics make trucking unusually efficient.

### **Approximate magnitude for 200 miles**

At a 200-mile scale (about 320 km), published comparisons of “pipeline vs trucked gas” indicate that:

- Trucked CNG tends to be modestly higher than pipeline on a per-energy basis, often in the range of roughly 10–40% more greenhouse gas emissions for the transport leg, depending on how full trailers run and how you treat methane leakage.
- Trucked LNG is generally higher still than pipeline for such a short distance, because you incur liquefaction and boil-off penalties without the benefit of very long-haul efficiency; this can push transport-stage emissions to something like tens of percent above pipeline for the same delivered energy.

### **A simple way to interpret it**

If you imagine the pipeline’s transport-stage footprint for that 200-mile leg as “1x,” then:

- Trucked CNG might be around 1.1–1.4x that footprint.
- Trucked LNG might be on the order of 1.3–1.6x, depending on liquefaction emissions and boil-off assumptions.

These are order-of-magnitude indications, not project-specific numbers. To get a precise value for your case, you would need: gas flow rate, pipeline specs (pressure, compressor power and fuel), truck payload and fuel economy, and methane leakage assumptions for both pathways.