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Carbon Pricing in the Private Sector: How Science, Politics, and Climate Change Influence Business Strategy

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Introduction

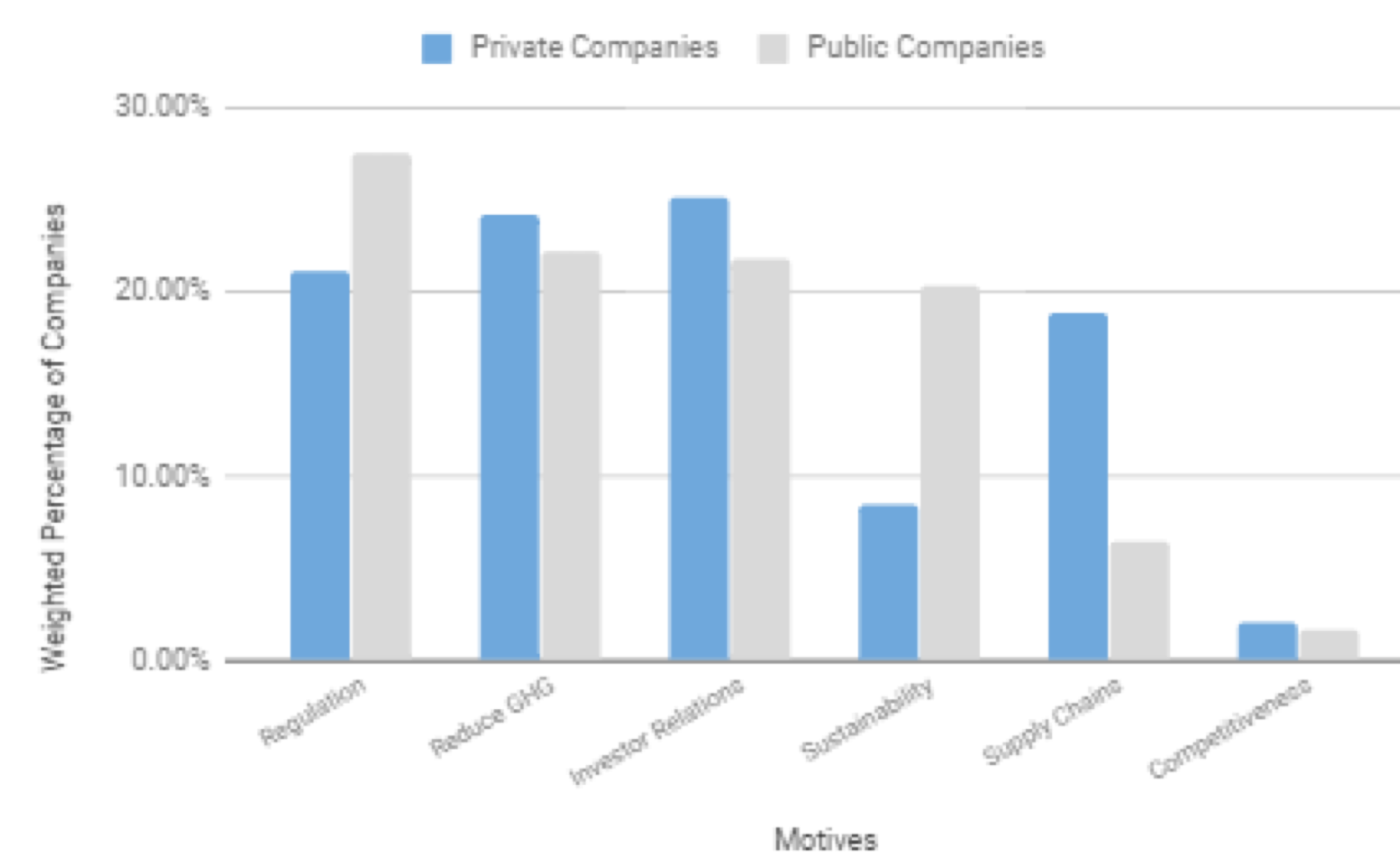
The social cost of carbon (SCC) is defined as the monetized social (externality) cost of a metric ton of CO2 emitted into the atmosphere in a given year. Economist Michael Greenstone called it **“The most important figure you’ve never heard of.”**

Since 2009, the SCC has been a major factor in \$1.2 trillion of legislation. No carbon tax exists in the U.S., but many private and public companies have started using internal carbon pricing in decision making.

The Carbon Disclosure Project (CDP) has capitalized on this trend by creating a central depository for emissions reporting and sustainability. This was the resource for our data analysis.

Our research primarily uses the CDP and company sustainability reports to analyze the motives for carbon pricing in companies, the types of pricing used and the accuracy of carbon pricing evaluations.

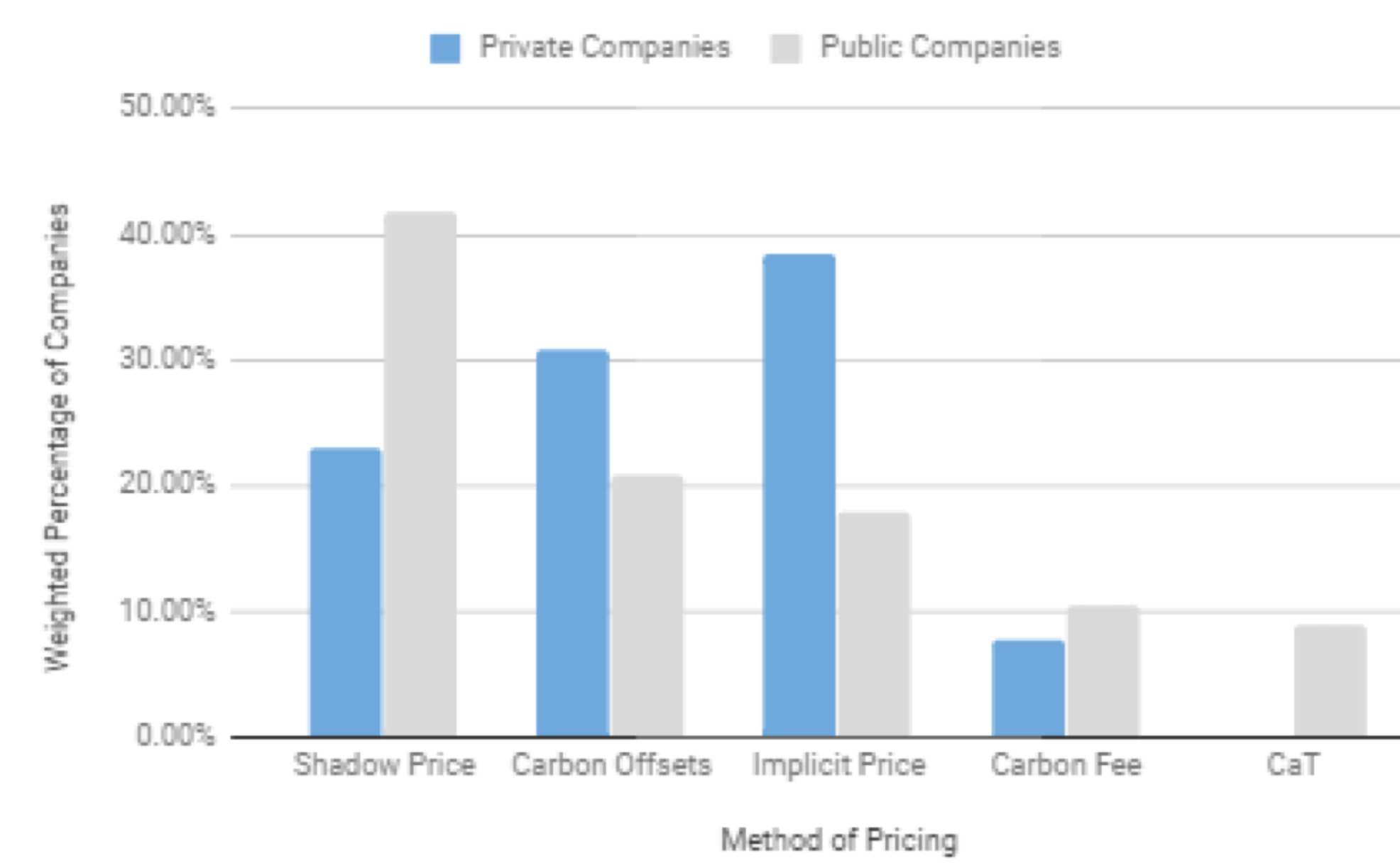
Figure 1 – Motives for Pricing Carbon



Methods

1. In depth study on the political uses and effects of carbon pricing.
2. Comprehensive analysis of social cost of carbon modeling methods and reliability.
3. Examination of external and internal motives for companies to use carbon pricing through sustainability reports and the CDP.
4. Indexing of CDP reports to find types of carbon pricing and average carbon price values within companies.

Figure 2 – Method for Pricing Carbon



Results

1. Sectors: utility (26.8%), wholesale (14.6%), manufacturing (7.3%), construction (6%), retail (6%), other (39%).
2. Carbon pricing motives: regulations (24.35%), GHG reduction (23.2%), investor relations (23.55%), corporate sustainability (14.35%), competitiveness (1.85%).
3. Carbon pricing methods: shadow price (32.43%), carbon offsets (25.83%), implicit price (28.19%), carbon fee (9.07%), CaT (4.48%).

Figure 3 – Distribution of Internal Prices on Carbon

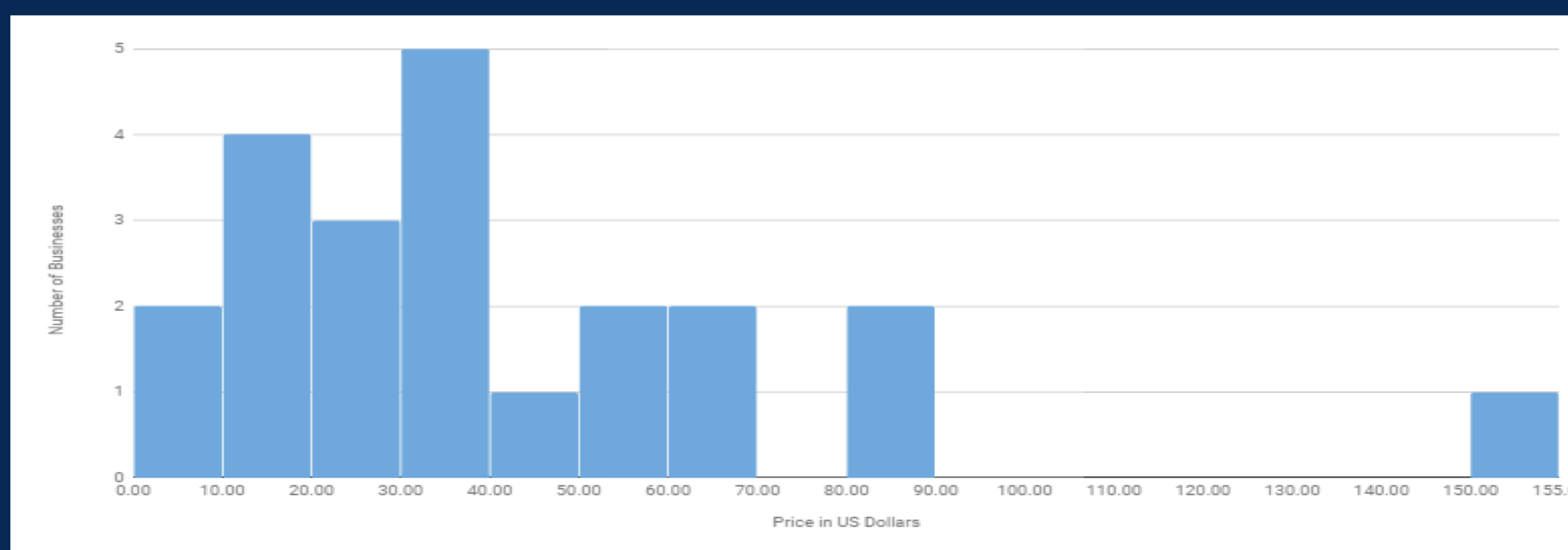
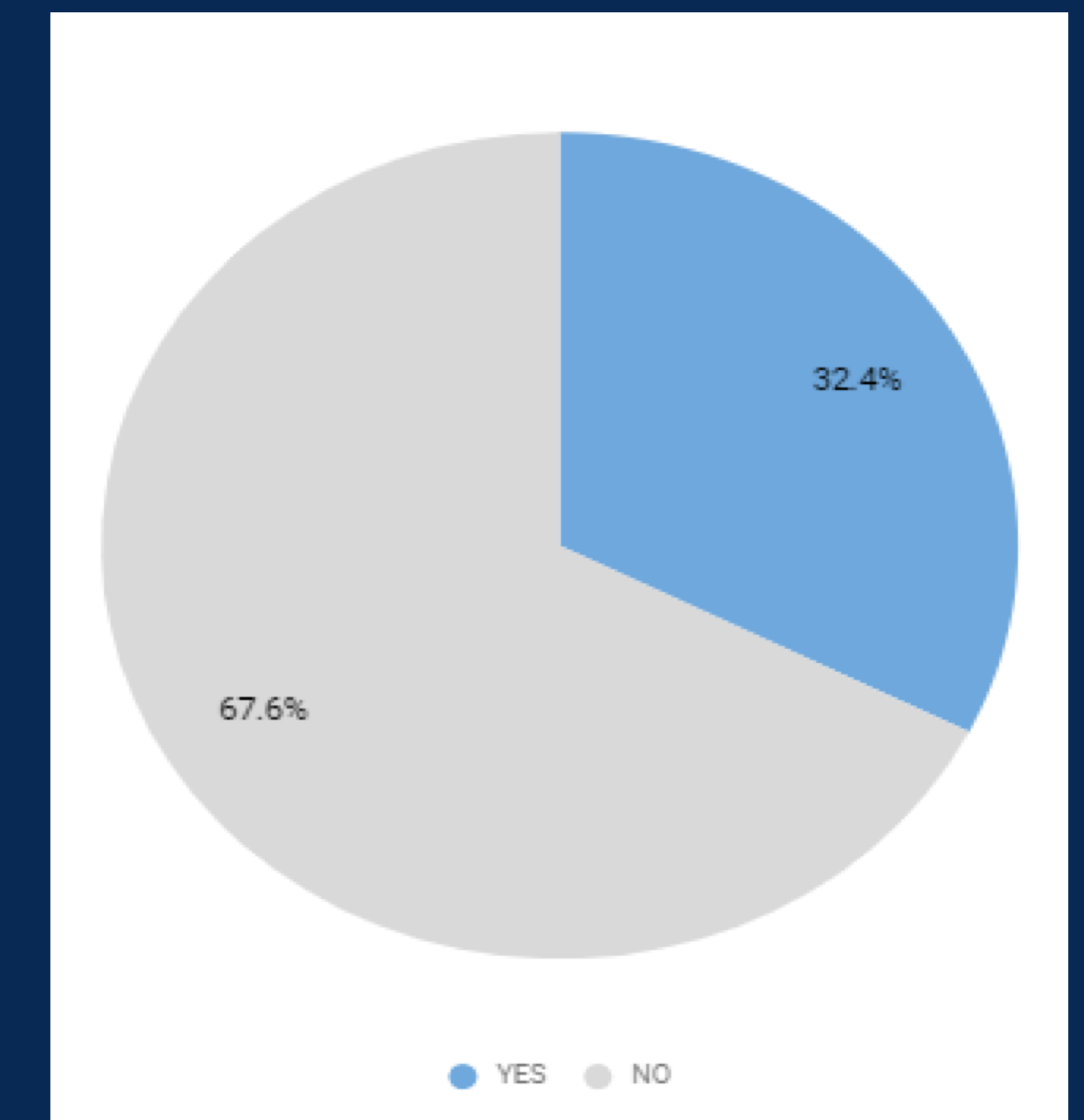


Figure 4 – Companies that internally price carbon and have a presence in Utah



Conclusions

Issues with carbon accounting, modeling, and discount rates plague the methodology of estimating the social cost of carbon

Even so, an increasing number of companies are responding to the rapidly evolving landscape of regulations, public opinion and science surrounding the social cost of carbon. These responses are often environmentally ineffective however.

Our research and metrics provide a comprehensive analysis of the motives and methods of company responses.

