



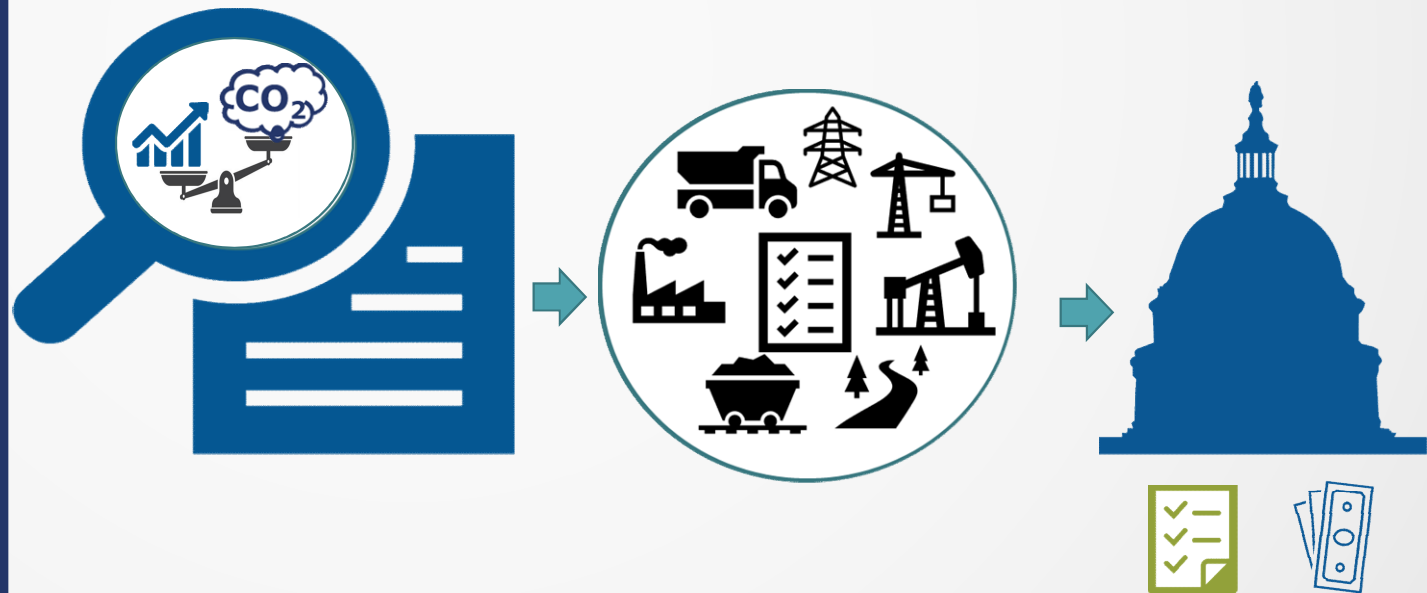
# **Social Cost of Carbon Accounting as a Policy Tool**

**May 11, 2022**



# What is the social cost of carbon (SCC)

- A price on carbon emissions
  - Dollar estimate of avoided damages of emitting one ton of carbon dioxide into the atmosphere
- Accounting and policy tool for cost-benefit analysis



## How is it used?

- Like other cost-benefit tools, SCC is a tool for including climate considerations in decision-making
- Corporate governance and decision-making
  - Inform capital investment decisions
  - Identify/quantify potential physical and transitional risks
- Rulemaking and permitting
  - Support cost-benefit analyses of regulatory alternatives
  - Justify rationale for accepting or rejecting alternatives
- Recent administrations
  - 2010-2017, used in 69 final rules and 80 proposals
    - E.g., Estimated \$78 billion to \$1.2 trillion in benefits from the light-duty and heavy-duty GHG stds.
  - 2017-2021, significant reduction in use, price as low as \$1.
  - 2021, interim SCC guidance set value at \$51/ton
- State Usage:
  - Allowance market price ceiling factor (e.g., CA at \$65/ton)
  - General state policy use (e.g., NY @ \$125/ton, CA, NJ)

## What are the origins of SC-GHGs

### Notable Court Cases

- 2007 - Supreme Court decision *U.S. EPA v. Massachusetts* Giving EPA Authority to Regulate GHGs
- 2007 - 9<sup>th</sup> U.S. Circuit Court of Appeals [Ruling](#) Faults NHTSA Not Explicitly Monetizing Climate Benefits

### Early Executive Actions

- [2010](#) – Interagency Working Group (IWG) Issues Social Costs of Carbon (SCC), Methane (SCM), and Nitrous Oxide (SCN)
- Updates made in 2013, 2015, 2016, 2017, and 2021
- Update planned for 2022 but delayed by litigation

# How have the numbers evolved

## SCC rate determines priority of carbon impacts over other policy considerations

**2010 Obama**  
\$26/ton - \$56/ton

Year	\$/ton of CO2
	3% Discount Rate
2010	26
2015	30
2020	32
2025	37
2030	41
2035	45
2040	49
2045	52
2050	56

**2017 Trump**  
\$1/ton - \$12/ton

Year	\$/ton of CO2	
	7% Discount Rate	3% Discount Rate
2010	-	-
2015	1	6
2020	1	8
2025	1	8
2030	1	9
2035	2	10
2040	2	10
2045	2	11
2050	2	12

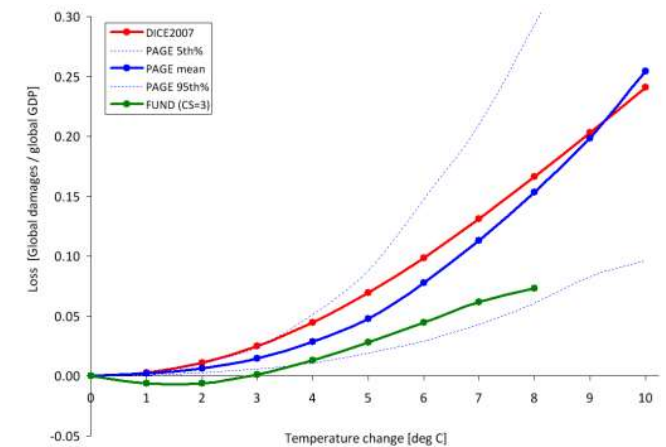
**2021 Biden**  
\$51/ton - \$85/ton

Year	\$/ton of CO2
	3% Discount Rate
2010	-
2015	-
2020	51
2025	56
2030	62
2035	67
2040	73
2045	79
2050	85

# How are SCC values derived

## Different Models and Approaches

- **Socioeconomic Projections** – forecast population, economic growth, resulting emissions
- **Climate Change** – predict temperature change and sea level rise
- **Damage Functions** – value impacts on agriculture, health, energy use, and economy at large
- **Valuation and Discounting** – convert future economic damages to present-day values



# Key Variables

- **Discount Rates**
  - Lower discount rate favors short-term impacts over long-term benefits
  - Higher discount rate incorporates uncertainty of future impacts
- **Modeling Timeframe**
  - How far out do you assess potential impacts and benefits?
- **Scope of Benefits**
  - Just domestic or consider both domestic and international
- **Others:**
  - Adaption
  - Fuels
  - Tipping Points



# Biden Climate EO and Guidance

## [EO 13990](#) on Climate Science (1/20/2021)

- Reestablish Interagency Working Group on SCC
- Solicit Public Input on:
  - **Climate Risk** – worth paying more to avoid catastrophic scenarios
  - **Environmental Justice** – how future damages impact some more than others
  - **Intergenerational Equity** – how apply discounting

EPA reinstates Interim Social Cost of Carbon guidance ([2/26/2021](#))

IWG working to develop final SCC guidance

## 2021 Interim Guidance

Year	\$/ton of CO2
	3% Discount Rate
2010	-
2015	-
2020	51
2025	56
2030	62
2035	67
2040	73
2045	79
2050	85



# Biden Climate Policy Agenda

## **Climate and environmental justice policy is influencing all federal decisions and programs**

- Regulation of energy, manufacturing, and transportation sectors
- Product reviews and approvals
- Government procurement
- New energy exploration and permits
- Federal funding for cleantech innovation
- Clean energy infrastructure investments
- Project siting, permitting, and approvals
- Investment in natural gas infrastructure
- Corporate risk reporting and disclosure

# Louisiana v. Biden

**April 2021:** 10 State AGs challenged EPA's use of interim SCC guidance on procedural and substantive grounds

- No notice and comment process
- Inconsistent with current law (
- Exceeds EPA authority (global impacts)

**Feb. 2022: Federal Judge (W.D. La)** grants stay, preventing use of interim guidance and limiting SCC to Trump's lower estimates

**Feb. 2022:** EPA & DOI halts or slows action on dozens of rules and major activities pending resolution

**March 2022:** 5<sup>th</sup> Circuit lifts stay, finding lack of injury, hence standing, absent actual final action relying on guidance.

**April 2022:** States seek Supreme Court review of appellate reversal

**Now:** Feds have the ability to apply interim SCC figures in decisionmaking

## Why is it a big deal?

ACC supports consideration of carbon impacts as part of regulatory cost/benefit analysis

But does the interim guidance promote good policy

- Methodological flaws
- Model and variable design can affect outcome
- Potential for gaming and misuse
- Potential to distort or ignore Congressional intent
- Potential for unintended consequences

Issue is even more acute as Administration views all actions through a climate lens

ACC pushing for federal engagement with industry



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