Net-Negative CO_2 Baseload Power Initiative:

Coal Can Address Climate Change Concerns, Protect the Nation's Baseload Power Infrastructure, and Secure the Economic Future of Coal Communities

Presented to Southern States Energy Board

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Net-Negative CO_2 Coal-Fired Power Plant Technology

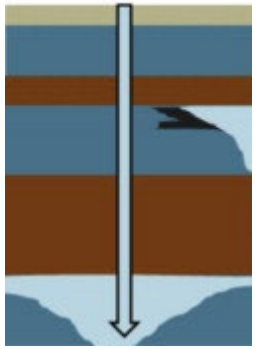
Coal

Biomass

Fuel Transport

Power Generation

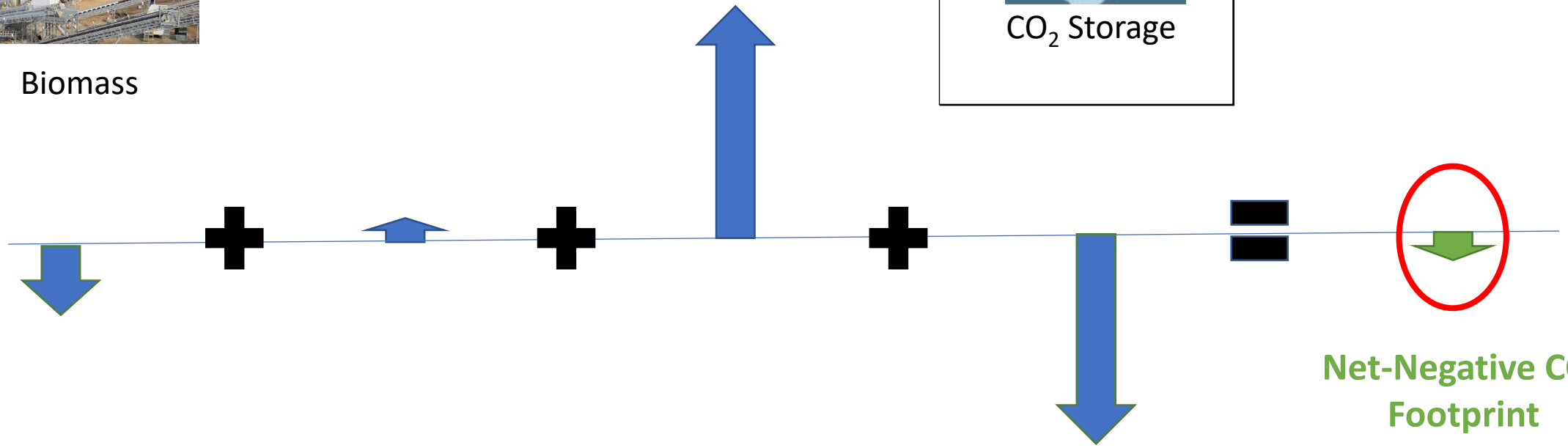
CO_2



CO_2 Storage

Baseload Power

CO_2 Footprint



Net-Negative CO_2 Footprint

Net-Negative CO_2 Baseload Power Program

Qualifying projects:

- Must retrofit/replace, at the same site, an existing coal-fired power plant to preserve state and community economic benefits.
- Retrofit or replacement must have net-negative emissions using coal/biomass co-firing with CCS
- Proposes a $30B DOE-managed trust
- Power plant owners may competitively apply
  - Grants for Concept Studies
  - Cost-share for pre-FID Project Development Activities
  - A package of incentives to attract commercial co-investment and limit ratepayer impacts

Why Do We Need Net-Negative CO_2 Baseload Generation?

- Aggressive Administration Targets

  2030 - 50% economy-wide reduction of U.S. GHG
  2035 - Net-zero emissions across the electricity sector
  2050 - Economy-wide net-zero GHG emissions

Impossible to achieve the goals without "net-negative" technologies

- Impact of these targets is premature coal retirements and possibly natural gas too
  - Strands valuable infrastructure
  - Severely damages coal and power plant communities
    - Tax base is significantly reduced
    - Loss of jobs
  - Damages electricity reliability
  - Raises electricity cost, further impacting manufacturing jobs and households

- Better to upgrade these coal plants with 21st Century, Net-Negative CO_2 Baseload Generation

- Provides technology export opportunity to countries that will continue to use coal for decades