



SYRACUSE CENTER OF EXCELLENCE
in ENVIRONMENTAL and ENERGY SYSTEMS

Growing Renewable Energy Capacity in New York

Federal Incentives for Implementing Renewable Energy

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Why should the Federal
Government invest in or subsidize
renewable energy technologies?



How Should the Federal Government Invest in or Subsidize Renewable Energy Technologies?

Summary of Section 45 Credit

	Full Credit (1.9 cents/kWh)	Half Credit (0.9 cents/kWh)	10 Year Duration	5 Year Duration
Post 1992 facility 100% energy crops (closed-loop)	●		●	
Pre 2006 facility modified to cofire energy crops	●		●	
Wind	●		●	
Solar	●			●
Geothermal	●			●
New Landfill gas / MSW		●		●
New anaerobic digestors / poultry litter		●		●
Old and new dedicated biomass and CHP		●		●

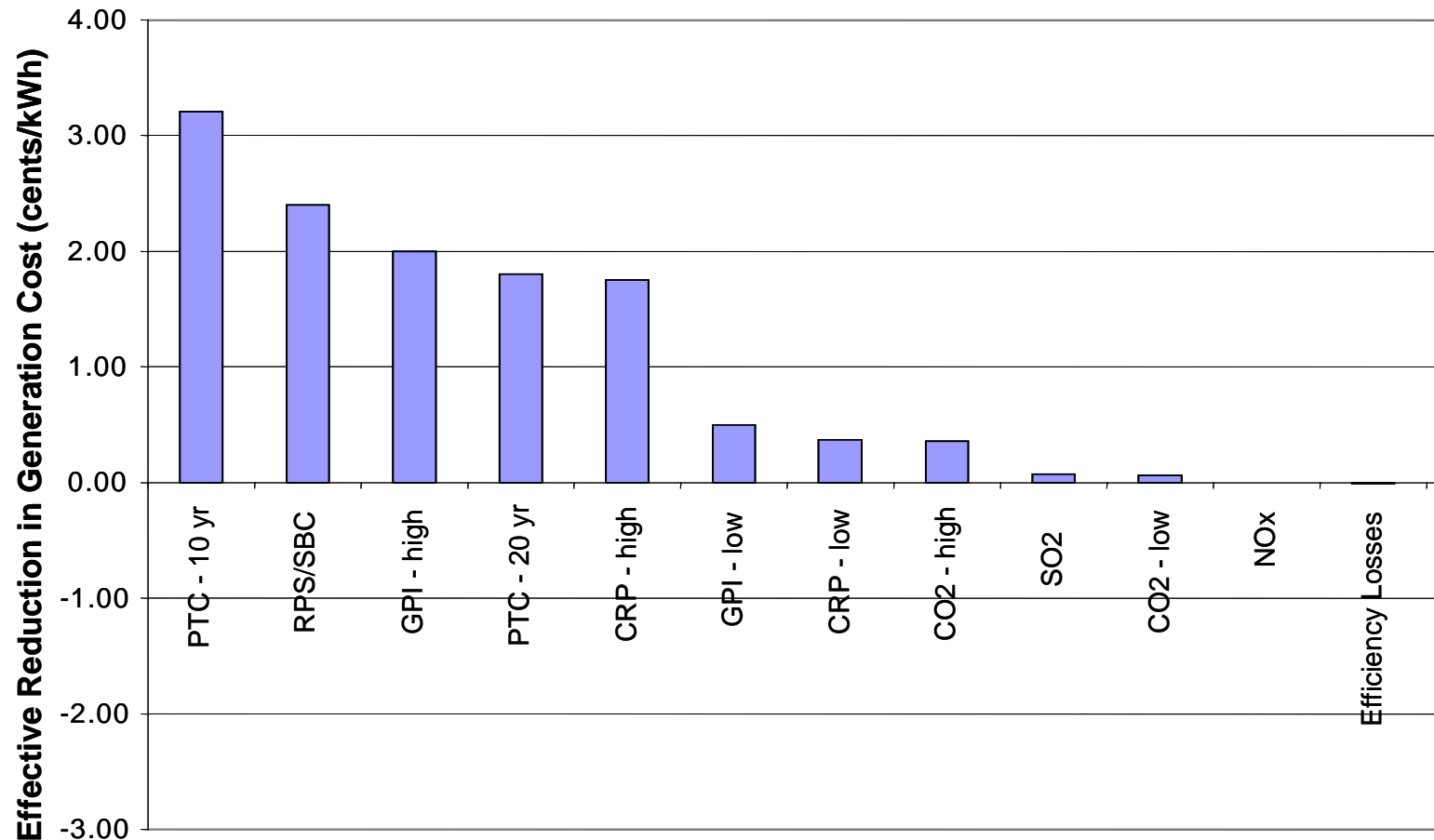
Revenue effect of an income tax credit

$$C/(1-t)$$

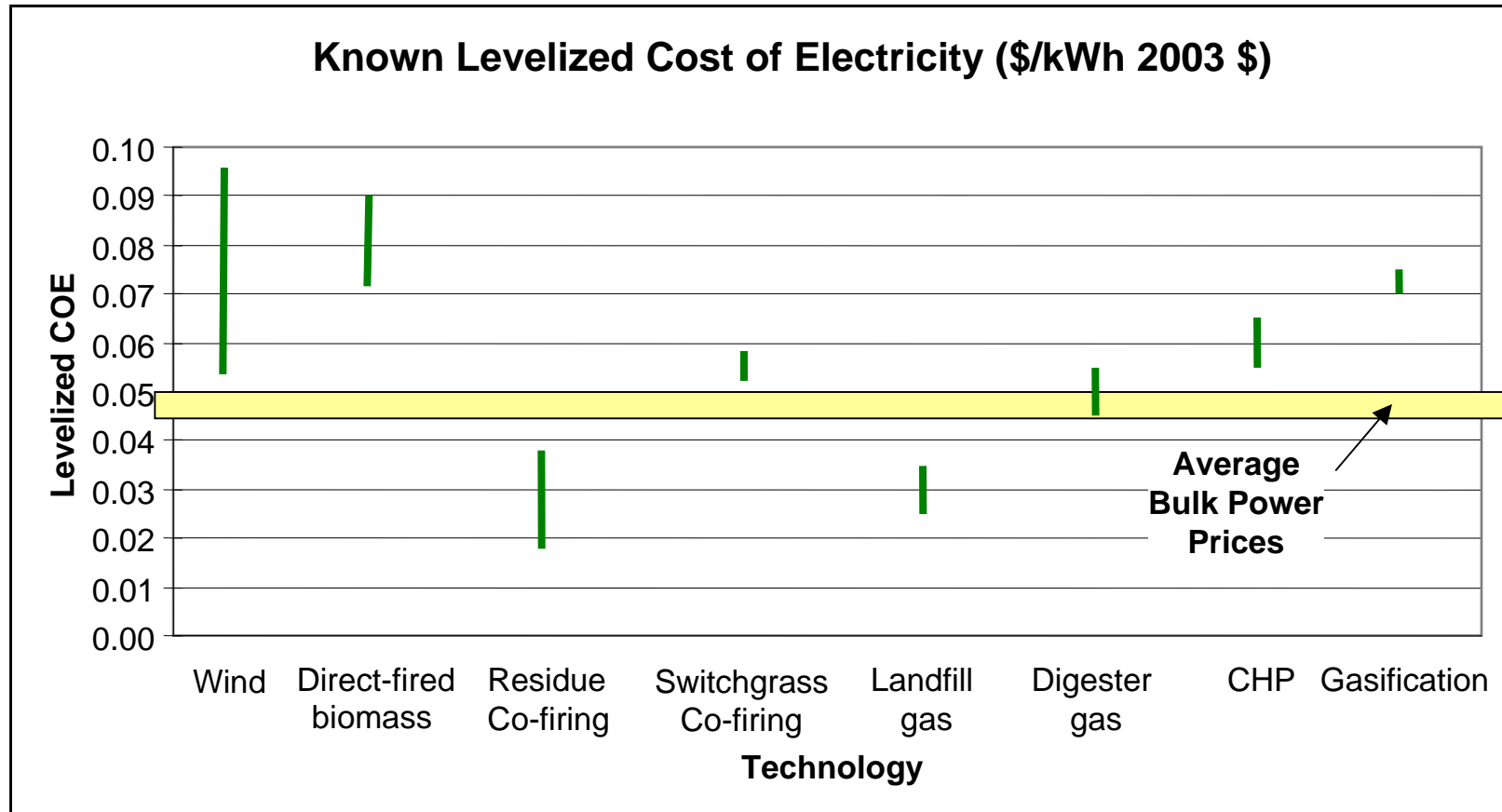
2.9c/kwh

(current basis)

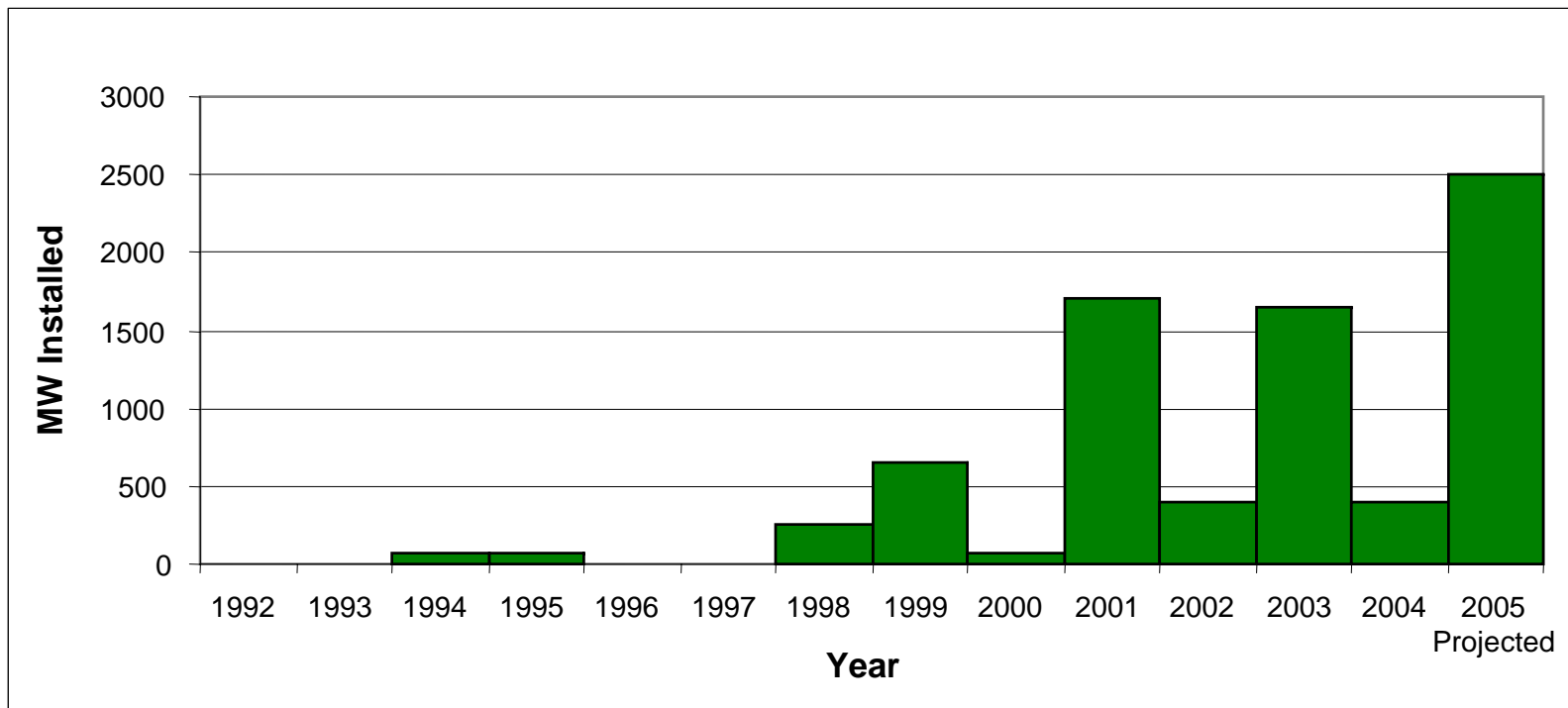
Energy Crop Co-firing Example Iowa Switchgrass




Wind & Biomass Energy Example Costs of Electricity



Effect of Sec. 45 on Wind Capacity Annual Additions



Existing Federal Motor Tax Fuel Excise Tax

- 18.4 cents/gallon of gasoline **and** ethanol blends
- 24.4 cents/gallon of diesel **and** biodiesel blends
- All revenue flows into the Highway Trust Fund (i.e., no excise tax reduction) 

Ethanol Incentives

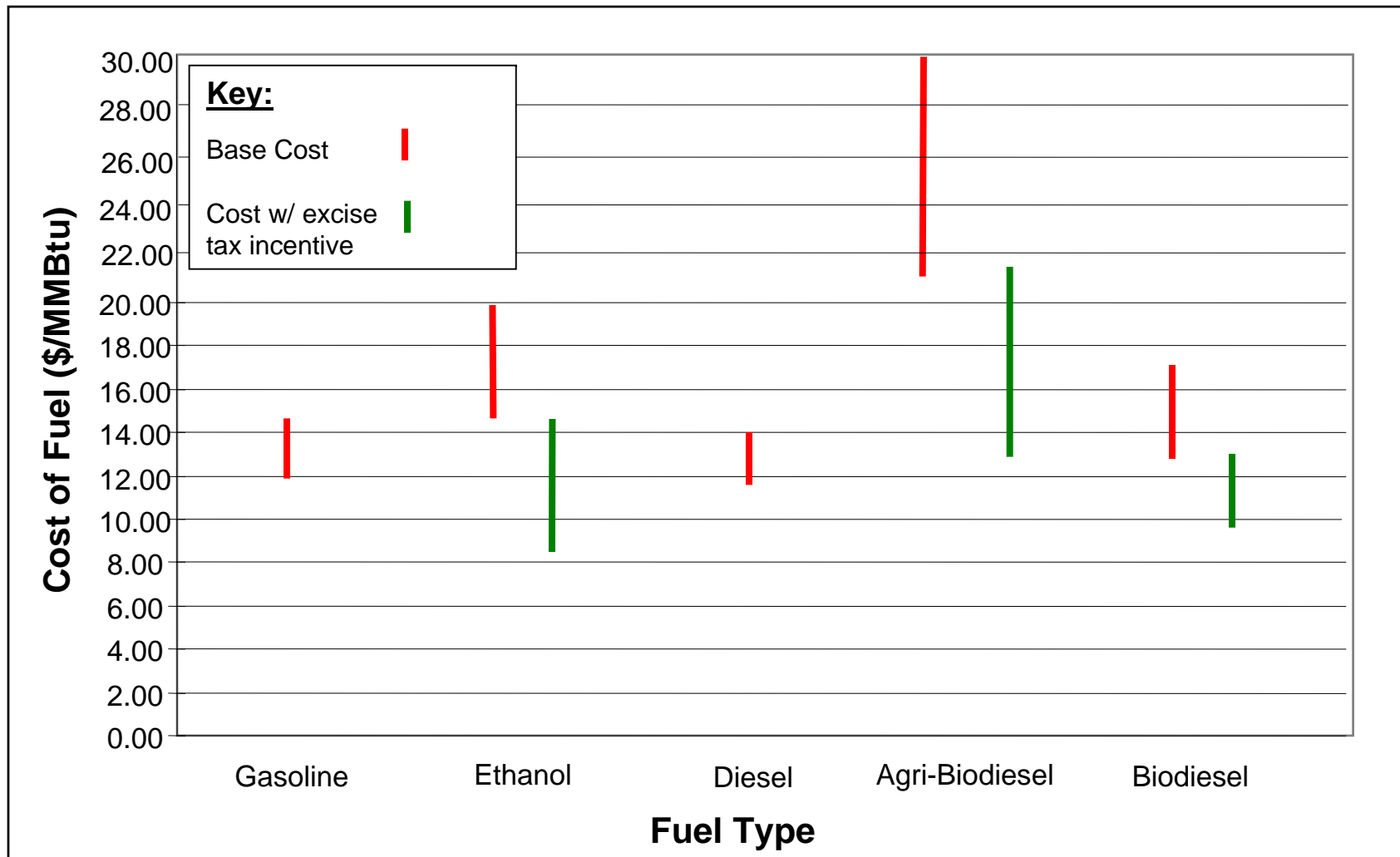
- \$0.51/gal of ethanol excise credit for tax paying blenders (\$0.60/gal for methanol)
- At rack and “below” rack allowed within simplified claim procedure
- Not subject to Alternative Minimum Tax (AMT)
- ETBE (special rule “pre-tax manufacture”) credit
- Small ethanol producer (<30 mgpy capacity, <15 mgpy production) income tax credit of \$0.10/gal – pass through to co-op owners

Biodiesel Incentives

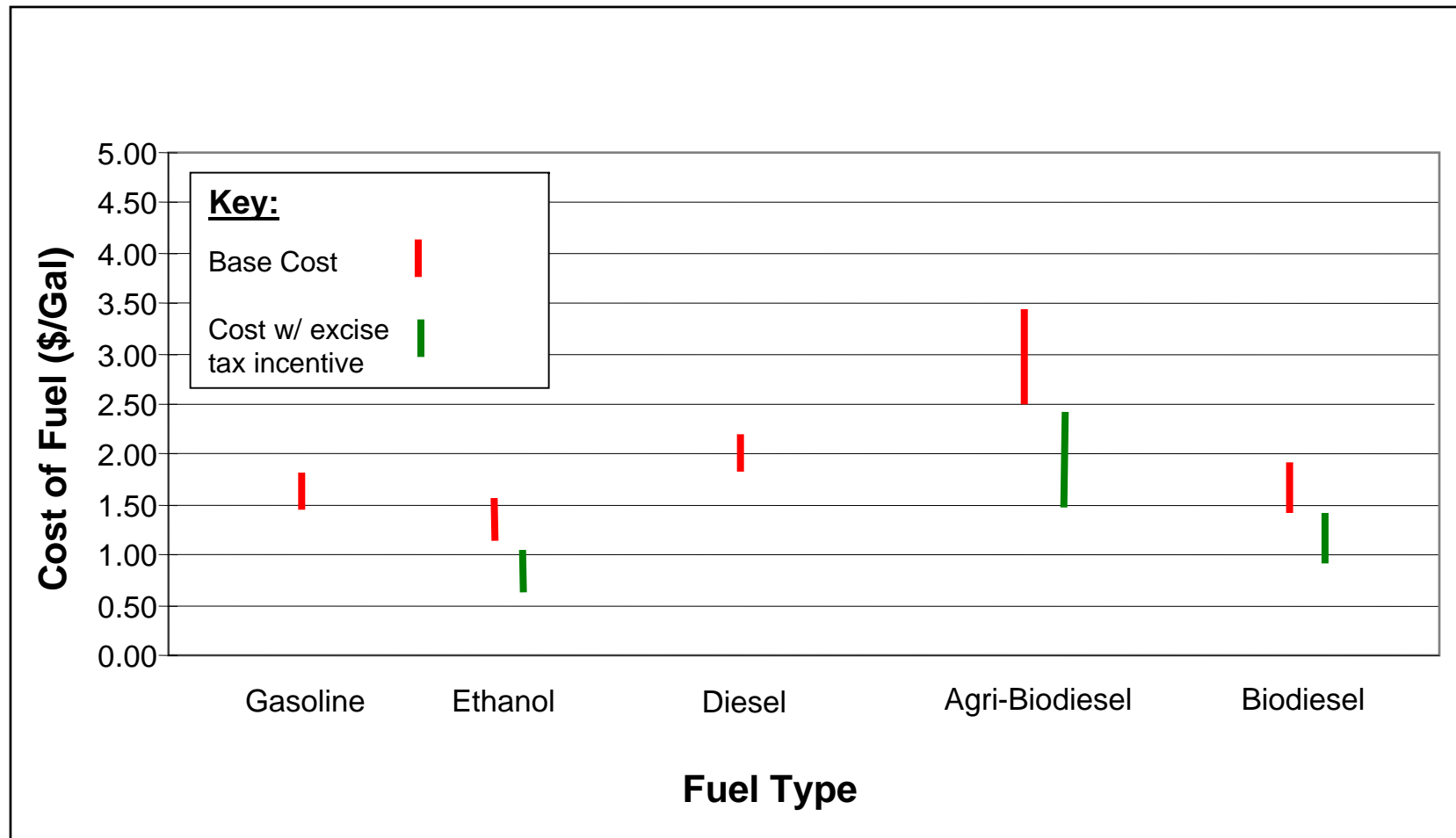


- \$1.00/gallon excise tax credit if from virgin oils from Ag. products & animal fats – Agri-BioDiesel
- \$0.50/gallon excise tax credit if from plant or animal matter - BioDiesel
- Applicable to taxable and nontaxable (diesel off-road) markets
- AMT not an issue
- Optional “income” tax credit for blends & B-100

Wholesale Fuel Cost Comparison



Wholesale Fuel Cost Comparison



Post Script – Energy Bill & Climate Change

- Potential market mandates: 6-8 bgpy renewable fuels market
- Federal renewable portfolio standard
- Sec. 48 investment tax credits - important for solar energy
- CO₂ cap and trade system

Thank You