

**DOCKETED**

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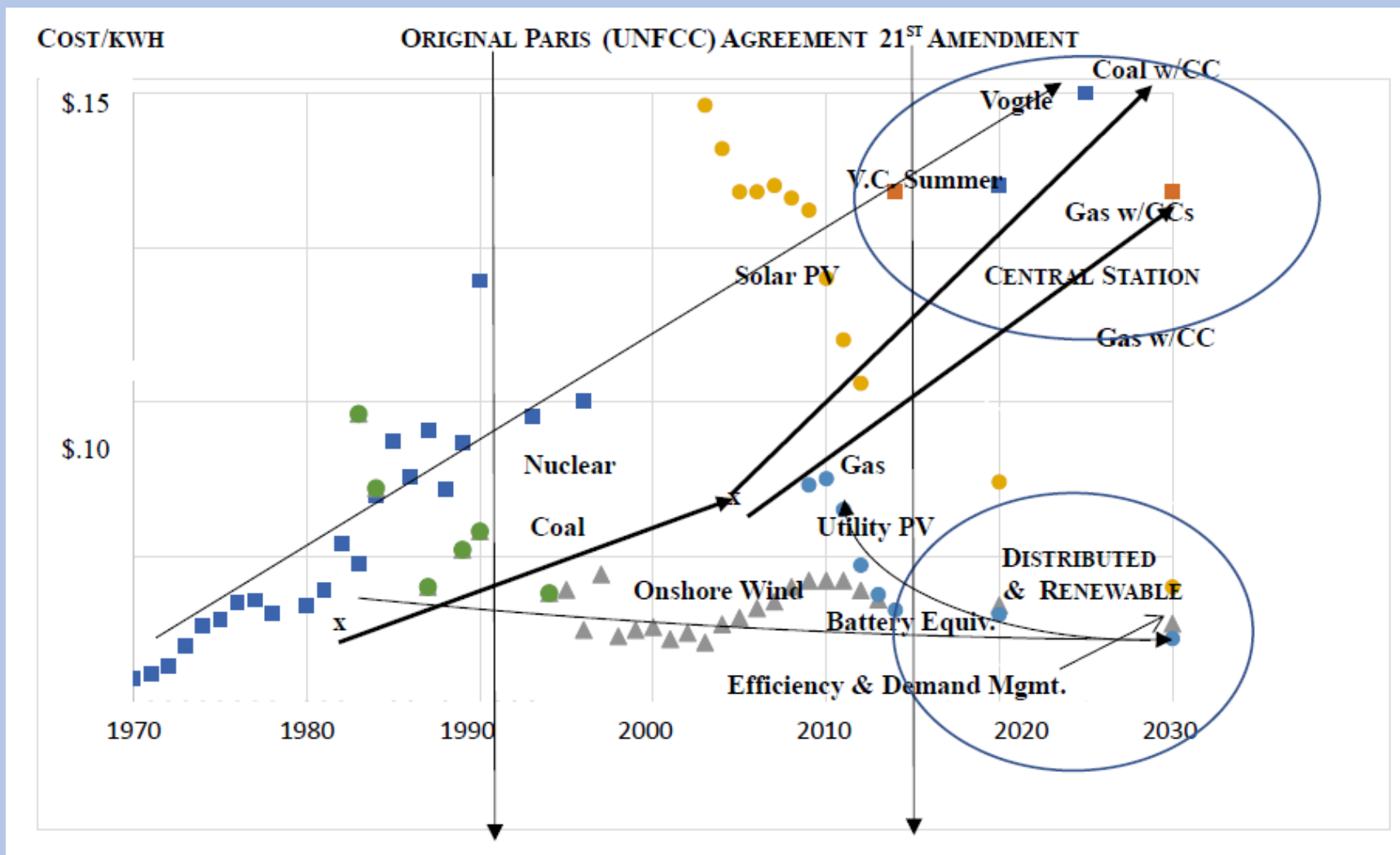
**BUILDING A LEAST-COST, LOW-CARBON, ELECTRICITY SYSTEM WITH  
WIND, SOLAR, EFFICIENCY, & INTELLIGENT GRID MANAGEMENT:  
ELECTRICITY IS THE CORE INFRASTRUCTURE OF THE 21<sup>ST</sup> CENTURY, DIGITAL ECONOMY**

**PRESENTATION OF  
MARK COOPER  
DIRECTOR OF RESEARCH, CONSUMER FEDERATION OF AMERICA  
to**

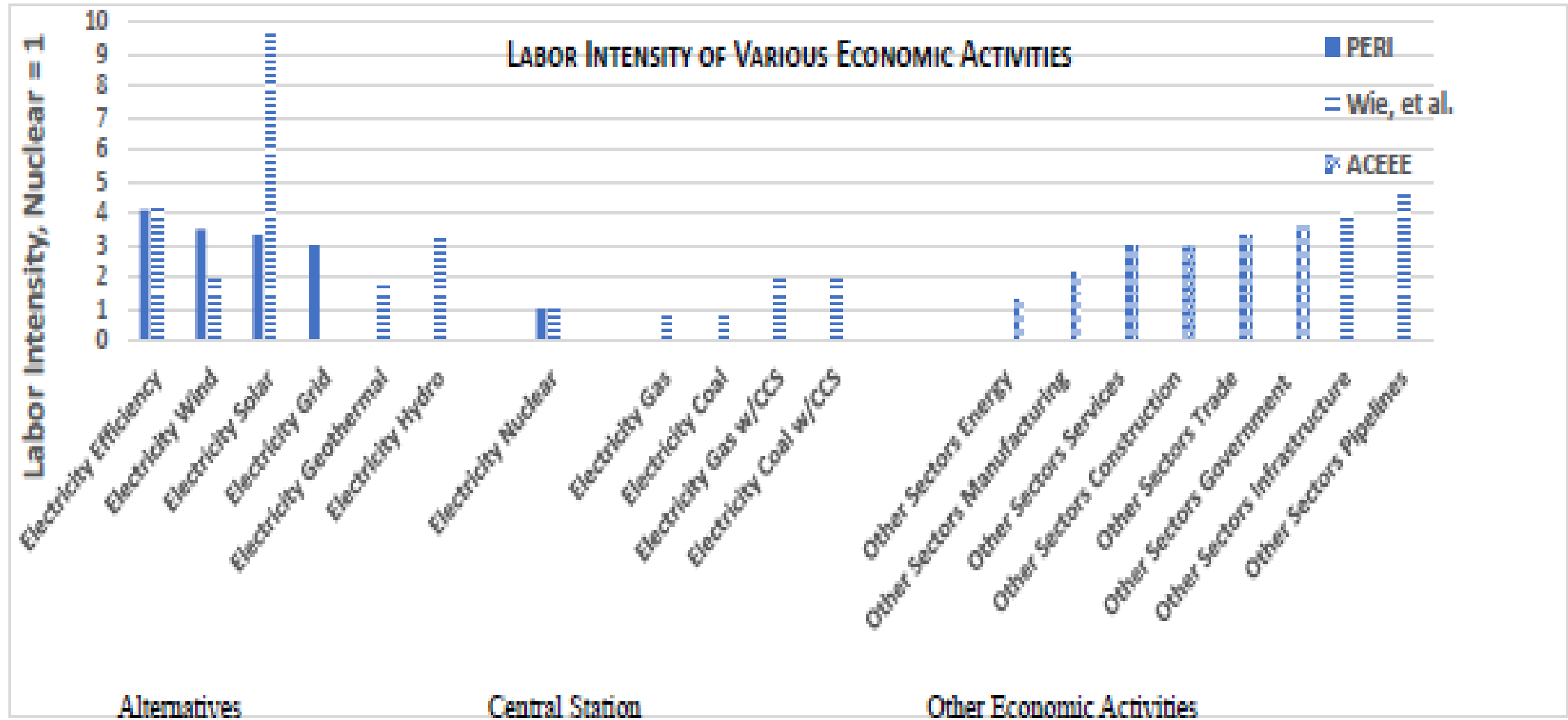


**California Energy Commission, IEPR Commissioner Workshop on  
Consumers, Financing, and Workforce  
Session 1 of 3:  
Consumers and Decarbonization  
Monday, July 12, 2021**

# BROAD COST TRENDS OF THE TECHNOLOGICAL REVOLUTION IN ELECTRICITY

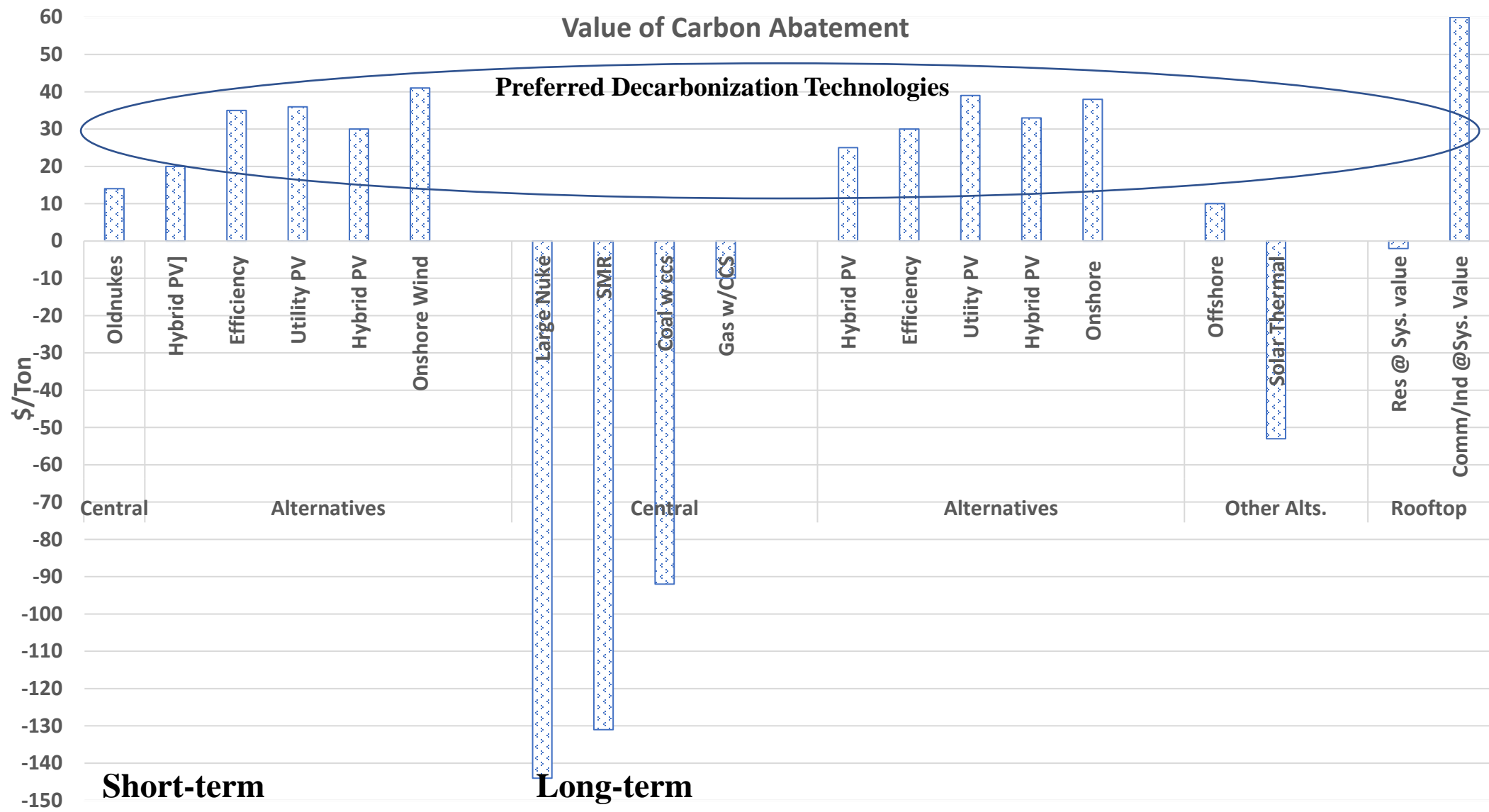


## IMPACT ON JOBS AND THE ECONOMY

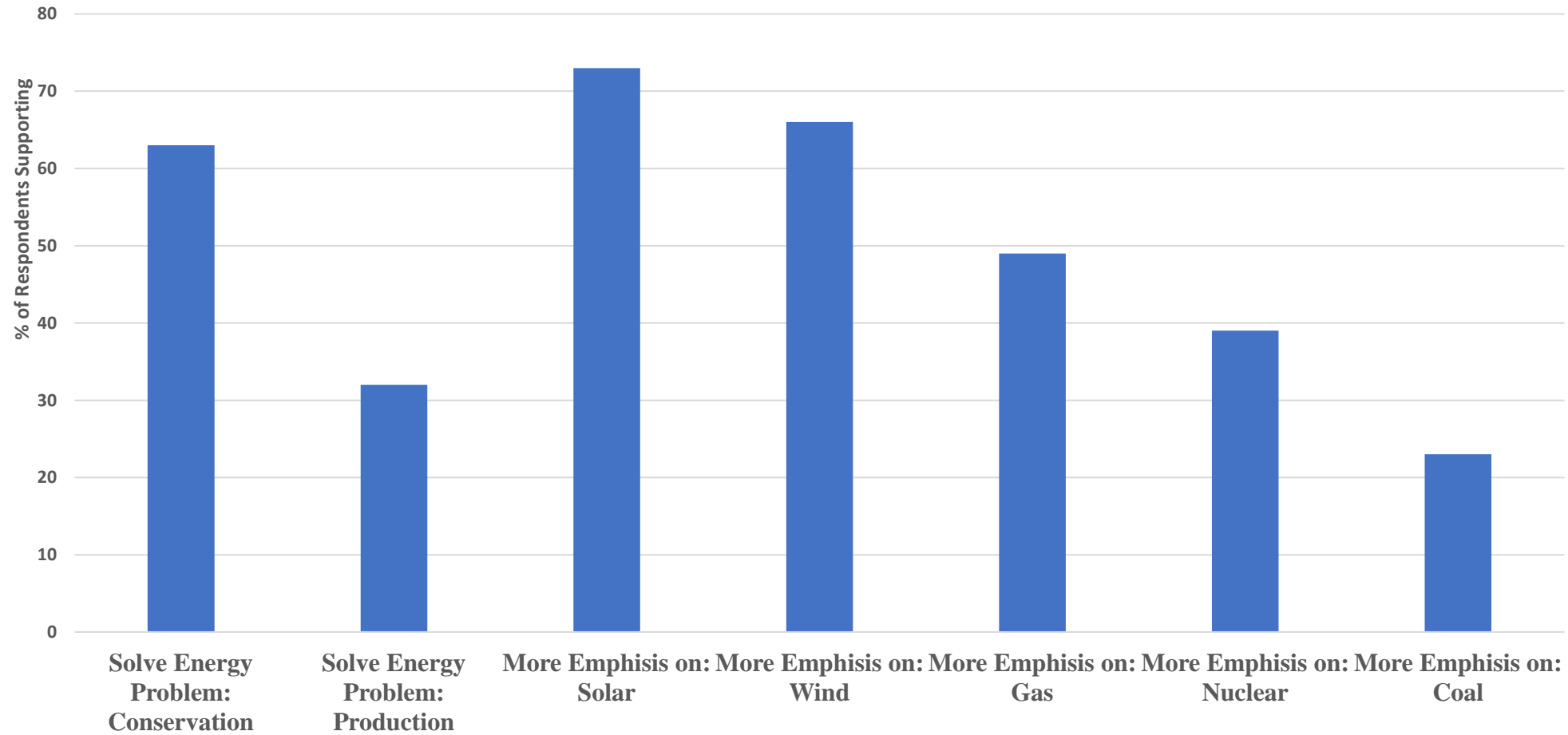


# Value of Carbon Abatement

**Preferred Decarbonization Technologies**



## PUBLIC OPINION (GALLOP) ABOUT MEETING ELECTRICITY NEEDS



## WHY FOCUS ON BUILDINGS?

- Buildings represent about two fifth (40%) of primary energy consumption in the U.S.
- Best practices could cut that in half early in the transition to a low carbon future.
- More aggressive mid-term technologies could cut consumption by another 10%.
- Building efficiency relieves the pressure on supply-side sources and buildings are particularly important for the dynamic matching of supply and demand.
- Efficiency is one of the most attractive resources from the cost, jobs and decarbonization points of view.
- Rooftop solar can play an important part in achieving the long term goal (the last 5% or 10%), once the institutional (rate structures) are put in place to recognize the impact and value of “behind the meter” options.

# MCKINSEY MARKET IMPERFECTIONS

## Consumers

- 1<sup>ST</sup> Cost Focus
- Low Priority, preference for other attributes
- Shop for price and features
- Limited understanding of use and savings
- Little attention at time of sale
- Emergency replacement
- Underestimation of load
- Aversion to change
- Alternatives perceived as inferior
- Unrealistic payback hurdles
- Limit payback to occupancy period
- Improper use and maintenance

## Producers

- 1<sup>ST</sup> Cost Focus
- Competing Use of Capital
- Not accountable for use and efficiency
- Tenant pays, builder ignores
- Efficiency bundled with other attributes
- Business failure risk
- Lack of reliability
- Lack of premium at time of sale
- Lack of information
- Disruption during improvement process
- Difficult to identify efficient devices
- Costly time: research procurement & preparation
- Lack of qualified contractors
- Lack of available technology in area
- Lack of demand
- Lack of R&D

## A STANDARD VIEW OF IMPERFECTIONS POTENTIALLY ADDRESSED BY STANDARDS

Societal Failures	Structural Problems	Endemic Flaws	Transaction Costs	Behavioral
Externalities	Scale	Agency	Sunk Costs, Risk	Motivation
Information	Bundling	Asymmetric Information	Risk & Uncertainty	Perception
	Cost Structure	Moral Hazard	Imperfect Information	Calculation
	Product Cycle	Product differentiation		Execution
	Availability	Incrementalism		



## COMMAND-BUT-NOT-CONTROL POLICY:

1. **Long-Term**: Setting a progressively rising standard that targets a high long-term goal over the course of a decade or more will foster and support a long-term perspective by reducing the marketplace risk of investing in new technologies. The long-term view gives industry time to re-orient its thinking, retool its plants and help re-educate industry and consumers.
2. **Technology Neutral**: Taking a technology neutral approach to a long-term standard unleashes competition around the standard that ensures that the industry will get a wide range of choices at that lowest cost possible.
3. **Product Neutral**: The approach to standards must accommodate buyer preferences; it does not try to supplant them. This levels the playing field between producers and removes any pressure to push inappropriate products into the market.
4. **Responsive to industry needs**: Establishing a long-term performance standard recognizes the need to keep the standards in touch with reality. The standards can be set at a moderately aggressive level that is clearly beneficial and achievable. With thoughtful cost estimates, consistent with the results of independent analyses of technology costs, a long-term performance standard will contribute to the significant reduction of the cost of compliance.
5. **Responsive to consumer needs**: The approach to standards should be consumer-friendly and facilitate compliance. The attribute-based approach ensures that the standards do not require radical changes in the available products or the product features that will be available to consumers. The setting of a coordinated national standard that lays out a steady rate of increase over a long-time period giving the market and the industry certainty and time to adapt to change.
6. **Procompetitive**: All of the above characteristics make the standards pro-competitive. Producers have strong incentives to compete around the standard to achieve them in the least cost manner, while targeting the market segments they prefer to serve.

Congress sets broad goals, agencies adopt specific performance targets, and the industry has the flexibility to meet the target in the least cost manner possible. The result is to give consumers the maximum range of choices that comply with the standards and capitalists are driven by consumer sovereignty to do what they do best, minimize cost. To the extent that there is some “restriction of choice”, i.e. the elimination of products that fail to meet the goals, that is governed by the broader principles that the overall rule must be is beneficial, least cost, foster innovation and address specific market failures.

# PRINCIPLES AND PRACTICES FOR POLICY IN PRAGMATIC, PROGRESSIVE CAPITALISM

WHY MARKETS ARE PREFERRED (Scherer and Ross)		PROGRESSIVE TAXATION (Stiglitz)	ENVIRONMENTAL POLICY (Hepburn)	PROGRESSIVE CAPITALISM Command-but-not-control Cooper (A)
Performance desired from markets	Workable Competition	Why and what to tax	Recognize complex uncertainty	Competition & Progressive policy go hand-in-hand
Progressive = Contribute to long run growth of income per capita		Stimulate investment, Raise money for social purposes	Subsidize R&D, promote coordination	<b>Long-term</b> , gradual and persistent targets
Exploiting science and technology to increase output	Profits should be just sufficient to reward innovation	Tax worse, not better activities	Tax bads, be impartial	<b>Technology Neutral:</b> Externalities: capture positive/reduce negative
Provide consumers with superior products	Promotion should be informative/ not misleading; promotional expense not excessive, Encourage	Tax things that do not disappear when taxed	Recognize (un)willingness to pay	<b>Responsive to consumer needs:</b> Demand-side ensures choice
Facilitate stable full employment	Guide markets to equilibrium	Stimulate job creation		Democratic equality Shared and Individual responsibility;
Promote Equity in the Distribution of income		Improve income distribution		Redistribution: Differential marginal utility of income & wealth
No excess profits	Prices should be just sufficient to reward efficiency, Independent action of firms	Reduce monopoly profits	Control rent seeking	<b>Pro-competitive:</b> Eliminates XS profits, Deconcentrate supply
Achieve reasonable price stability	Not intensify cyclical instability		Be stable and risk aware	
Efficient = Increase efficiency		Improve efficiency	Engage in market creation	<b>Supply-side controls cost</b>
Not wasteful	Largest # of suppliers consistent with Minimum Efficient Scale; inefficient should not be shielded permanently	Close loopholes	Externalize non-marginal effects	<b>Product Neutral:</b> Neutrality prevents bypass; avoid incumbent bias and mis-targeting of subsidies
	No artificial barriers to mobility & entry or unfair, exclusionary, predatory or coercive tactics			<b>Responsive to producer needs:</b> <i>Avoid XS profits &amp; Diseconomies of scale</i>
Responsive to Demand in variety, durability, safety, reliability/ Success accrues to sellers who best serve consumers			Recognize unwillingness to pay	<b>Responsive to consumer and producer needs:</b> Consumer choice is preserved
Address Market Imperfections = For a variety of reasons, markets may fail yielding performance that falls below norms considered		Raise money for social purposes	Address imperfections of price, principle agent problems, promote quality administration of rules	<b>Address multiple market imperfections:</b> that lead to market failure, Behavioral & Institutional;

### **CITATIONS:**

**2021:** <https://consumerfed.org/wp-content/uploads/2021/04/Building-a-21st-Century-Electricity-Sector-Report.pdf>

**2017:** <https://consumerfed.org/wp-content/uploads/2017/12/two-trillion-dollar-mistake.pdf>

**2013:** [https://consumerfed.org/pdfs/Energy\\_Efficiency\\_Performance\\_Standards\\_Report.pdf](https://consumerfed.org/pdfs/Energy_Efficiency_Performance_Standards_Report.pdf)