

Model Results for Year 2020

	ARB	CRA International	Tanton	U.S. EPA (analysis of federal policy -- Waxman- Markey bill)
	Energy 2020 and E-DRAM models	Integrated MRN-NEEM Model (runs ARB1, ARB2, and CRA10)		(IGEM and ADAGE models)
Specified Emissions Reduction	25%	25%	25%	17%
Allowance Price Range	-	\$52-\$78	\$20, \$60, \$200 (assumed)	\$18
Gross State Product (% change)	-0.2 to -1.4	-1.4 to -2.2	-2.0	-0.3 to -0.7
Income Gain (+) or Loss (-) per household	+\$86 to -\$270	-\$1175 to -\$1380	-\$930, -\$2800, and -\$9330 for allow prices of \$20, \$60, and \$200	-\$80 to -\$146
Jobs Gained (+) or Lost (-) (thousands)	+10 to -320		-162, -485, -1617 for allow prices of \$20, \$60, and \$200	

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Important to note that allowance value is not the same as economic cost. The costs in the ARB and CRA models are a very small fraction of allowance value.

Potential Limitations of the Models And Their Implications for Cost Estimates

	ARB	CRA International	Tanton
Model Characteristic			
Optimistic Assumptions regarding Costs of VMT and Pavley II Efforts	-		
Inattention to Emissions Leakage	-		-
Restricted Scope for Pre-Existing Market Failures		+	+
Absence of Potential for Input Substitution			+
Absence of Technological Change			+
Optimistic Assumptions for Growth of Economy under Business as Usual	+		
Inattention to Alternative Methods for Auction Revenue Recycling	+	+	+
Disregard of Co-Benefits	+	+	+

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Inattention to Alternative Methods for Auction Revenue Recycling	+	+	+
Disregard of Co-Benefits	+	+	+

Differing Impacts of Pavley II Requirements

ARB analysis: Pavley II reduces AB 32 cost

- fuel savings exceed additional purchase (capital) cost

CRA analysis: Pavley II adds to AB 32 cost

- fuel savings fall short of additional purchase cost

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Absence of Technological Change			+
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Disregard of Co-Benefits	+	+	+

Overall Impacts

ARB and CRA models have different structures and employ different inputs

Yet taken together they yield a similar general conclusion: AB 32's net costs are small relative to the CA economy

Annual Growth Rate of Gross State Product					
		ARB Analysis		CRA Analysis	
Business As Usual	▲	2.4%		▲	2.4%
AB 32		2.3%-2.4%		▲	2.3%

Impacts on Specific Industries

In absence of offsetting design components, energy-intensive trade-exposed industries could experience significant profit losses.

- ARB's analysis: value-added in mining and utilities declines ~ 10% relative to BAU (value-added grows, but at slower rate)

These losses can be reduced or avoided through

- Output-based free allowance allocation, or
- Border adjustments