

III. FINAL SUMMARY OF OPTIONS

The following tables and charts order the options based on the number of votes of support and the Priority assigned by the BRAC. Descriptions of the Sectors, Priority and Bin ranking, and designations of GHG reductions and cost per ton are summarized below.

Table 1: Options Organized by Sector with Page Number

Table 2: Options Organized by Number of Votes

Table 3: Options Organized by Priority, then by Number of Votes

Chart 1: Estimated Greenhouse Gas (GHG) Emission Reductions by Option (based on information from other States)

Chart 2: Estimated Cost per Ton CO_{2e} Reduced by Option (based on information from other States)

Sector Abbreviations

AF = Agriculture/Forestry; CC = Cross Cutting; ES = Energy Supply; RCI = Residential/Commercial/Industrial; TL = Transportation/Land Use. Details of each option are in the Appendices.

Priority Ranking – High, Medium, or Low

Considerations:

- How much “bang for the buck” in terms of cost and CO_{2e} reduction potential?
- Is it critical to the accomplishment of an end result? (Keep in mind that some options are “enablers.”)
- Can we assign it a higher priority, if we can’t afford to do it?
- Does it have an immediate or a long-term pay-off?

Bin Ranking – Difficulty

BIN A: "No-Brainers" - Benefit appears to be high; it can be readily implemented; changes to existing laws and regulations are minimal or will be readily supported; the cost is modest or reasonable; and there is little or no harm associated with it.

BIN B: "Worth Consideration" - Most of the Bin A conditions can be met and the rest can be met with some effort. It is the opinion of the group that the effort required, in terms of cost and do-ability, are worth the benefit gained.

BIN C: "Difficult" - While the idea may have merit, the cost and/or effort required to make it work will either be very difficult but something that needs to be done OR may not be worth the benefit realized. There is a likely probability of significant impact OR "unintended consequences" other than cost to implement.

BIN D: "Need more information" - The option is too general/vague or not enough analytical information can be obtained to evaluate in the time allowed.

Votes

Twenty-two BRAC members participated in the final vote (i.e. there were 22 potential votes for each item). Any of the original options that received less than 5 votes were not included in the report.

Table 1. Options Organized by Sector with Page Number

Number	Policy Option	Priority	Bin	Vote	Page
AF-1	Promote Production of Biomass Fuels	High	B	20	IV-2
AF-2	Improve Manure Management	Medium	B	13	IV-3
AF-3	Change Livestock Feed and Improve Productivity to Reduce Methane Emissions	Medium	B	9	IV-5
AF-6	Preserve Open Space/Agricultural Land	High	B	18	IV-6
AF-7	Protect Forestland by Reduced Conversion to Non-forest Uses (Urban, Suburban, and Rural lands)	High	B	9	IV-7
AF-9	Promote Urban and Community Trees	High	A	21	IV-8
AF-12	Increase Fire Management and Risk Reduction Programs	High	A	9	IV-9
AF-13	Increase Forest Health (pest/disease, invasive species) Risk Reduction Programs	High	B	15	IV-10
AF-15	Expand Use of Forest Biomass Feedstocks for Energy Production (Fuel Blending and/or Switching)	Medium	D	6	IV-11
CC-1	GHG Registry	High	A	19	V-2
CC-2	GHG Reduction Target	High	B	15	V-3
CC-3	Public Education and Outreach	High	A	18	V-5
CC-4	Research and Development into Low/No Carbon Energy Strategies	High	A	16	V-6
CC-5	Climate Adaptation Strategies and Policies	High	B	13	V-7
CC-6	Regional/State Cap and Trade Program, Carbon Tax, or Hybrid	High	B	13	V-8
CC-7	Guidelines for Climate Policy (in general); Coordination with Other Policies	High	A	16	V-11

Number	Policy Option	Priority	Bin	Vote	Page
CC-8	Evaluate Existing Climate Proposals at the Regional, Federal, and International Levels	High	A	19	V-12
CC-9	Bridging Strategies to Achieve Low-Carbon Economy	High	A	20	V-13
ES-1	Renewable Portfolio Standard	High	B	17	VI-3
ES-2	Create Renewable Energy Development Zones	High	B	11	VI-3
ES-3	Green Power Purchases and Marketing	High	A	15	VI-4
ES-4	Public Benefit Charge	High	B	9	VI-4
ES-5	Tax Credits and Incentives for Renewable Energy	High	A	18	VI-4
ES-6	Pricing and Metering Strategies	High	B	9	VI-4
ES-7	Renewable Energy and Energy Storage Research and Development	High	B	16	VI-5
ES-8	Develop CO2 Capture and Sequestration Policy	High	B	18	VI-6
ES-9	Issues for CO2 Transmission	High	B	10	VI-6
ES-10	Carbon Capture and Sequestration Research and Development	High	B	20	VI-6
ES-11	Incentives for Advanced Fossil Fuel Technologies that Yield Carbon Reduction Benefits	High	B	20	VI-7
ES-12	Landfill Gas/Waste to Energy that Yield Carbon Reduction Benefits	Medium	A	17	VI-7
ES-15	Nuclear Development	Medium	C	14	VI-7
ES-16	Generation or Emissions Performance Standards	High	B	7	VI-8
ES-17	Efficiency Improvements	High	A	18	VI-8
ES-19	Retrofit Plants w/CO2 Capture	High	C	15	VI-8
ES-20	Retire Old Plant; Build New Low-Carbon Greenfield Plant	High	B	9	VI-9
ES-21	Incentives and Barrier Reductions for CHP and DG	High	B	14	VI-10
ES-22	Remove Transmission/Distribution System Limitations and Other Infrastructure Barriers for Renewables and Other Clean Distributed Generation	High	B	16	VI-11
ES-23	Transmission System Upgrading	High	B	19	VI-11
ES-26	Research and Development	High	A	15	VI-12
ES-27	Remove Regulatory Barriers	High	B	18	VI-12
ES-28	Tax Credits and Initiatives	High	B	19	VI-12
RCI-1	Utility Demand Side Management	High	A	18	VII-2
RCI-2	Voluntary Efficiency Targets	High	A	19	VII-3
RCI-4	Green Power Purchasing	Medium	A	16	VII-4
RCI-5	Rate Design	High	A	15	VII-6

Number	Policy Option	Priority	Bin	Vote	Page
RCI-6	Distributed Generation with Combined Heat and Power Systems (including Reducing Barriers)	High	B	19	VII-7
RCI-7	Distributed Generation with Renewable Energy Applications	High	B	17	VII-8
RCI-8	State Appliance Efficiency Standards	High	A	17	VII-10
RCI-9	Solar Hot Water and Photovoltaic Codes for New Buildings	Medium	B	15	VII-11
RCI-10	Energy Management Training/ Training of Building Operators	Medium	B	17	VII-12
RCI-11	Government Lead by Example w/Mandatory Efficiency Targets	High	A	19	VII-13
RCI-12	State Promotion and Tax or Other Incentives for Efficient Products (e.g. EnergyStar)	High	B	19	VII-14
RCI-14	Fuel Switching to Less Carbon-Intensive Fuels	Medium	D	17	VII-15
RCI-15	Reinvestment Fund	Medium	B	11	VII-16
RCI-16	Focus on Small and Medium Enterprises (SMEs)	High	D	9	VII-17
RCI-17	Participation in Voluntary Industry-Government Partnerships	Medium	B	7	VII-18
RCI-19	Water Pumping, Treatment, and Use Efficiency	Medium	B	14	VII-19
RCI-20	Incentives for Improved Design and Construction (e.g. EnergyStar, green buildings, expedited permitting)	High	A	21	VII-20
RCI-21	Improved Building Codes	High	A	20	VII-21
RCI-23	Waste/Recycling	High	A	19	VII-23
TL-1	Develop and Implement Aggressive Mass Transit Strategy	High	B	19	VIII-2
TL-2	Quality Growth Program	High	A	17	VIII-3
TL-4	Trip Reduction, Rideshare, Vanpool, and Telecommuting	High	A	20	VIII-4
TL-6	"Buy Local" Program	Medium	B	10	VIII-5
TL-7	Promote Low-Carbon Fuels and Vehicle Technologies (Statewide)	High	A	20	VIII-6
TL-8	State Fleet Lead by Example	High	A	19	VIII-7
TL-9	Clean Car Program	High	B	16	VIII-8
TL-10	Idle-Reduction Program	High	B	18	VIII-10
TL-11	Vehicle Speed Reduction	High	B	9	VIII-12
TL-13	Education Program	High	A	18	VIII-13
TL-14	Explore Funding Options for the Suite of Transportation and Land Use Options	High	B	9	VIII-14
TL-15	Develop Congestion Pricing Programs	Medium	A	19	VIII-15

Table 2. Options Organized by Number of Votes

Number	Policy Option	Priority	Bin	Vote	Page
AF-9	Promote Urban and Community Trees	High	A	21	IV-8
RCI-20	Incentives for Improved Design and Construction (e.g. EnergyStar, green buildings, expedited permitting)	High	A	21	VII-20
AF-1	Promote Production of Biomass Fuels	High	B	20	IV-2
CC-9	Bridging Strategies to Achieve Low-Carbon Economy	High	A	20	V-13
ES-10	Carbon Capture and Sequestration Research and Development	High	B	20	VI-6
ES-11	Incentives for Advanced Fossil Fuel Technologies that Yield Carbon Reduction Benefits	High	B	20	VI-7
RCI-21	Improved Building Codes	High	A	20	VII-21
TL-4	Trip Reduction, Rideshare, Vanpool, and Telecommuting	High	A	20	VIII-4
TL-7	Promote Low-Carbon Fuels and Vehicle Technologies (Statewide)	High	A	20	VIII-6
CC-1	GHG Registry	High	A	19	V-2
CC-8	Evaluate Existing Climate Proposals at the Regional, Federal, and International Levels	High	A	19	V-12
ES-23	Transmission System Upgrading	High	B	19	VI-11
ES-28	Tax Credits and Initiatives	High	B	19	VI-12
RCI-2	Voluntary Efficiency Targets	High	A	19	VII-3
RCI-6	Distributed Generation with Combined Heat and Power Systems (including Reducing Barriers)	High	B	19	VII-7
RCI-11	Government Lead by Example w/Mandatory Efficiency Targets	High	A	19	VII-13
RCI-12	State Promotion and Tax or Other Incentives for Efficient Products (e.g. EnergyStar)	High	B	19	VII-14
RCI-23	Waste/Recycling	High	A	19	VII-23
TL-1	Develop and Implement Aggressive Mass Transit Strategy	High	B	19	VIII-2
TL-8	State Fleet Lead by Example	High	A	19	VIII-7
TL-15	Develop Congestion Pricing Programs	Medium	A	19	VIII-15
AF-6	Preserve Open Space/Agricultural Land	High	B	18	IV-6

Number	Policy Option	Priority	Bin	Vote	Page
CC-3	Public Education and Outreach	High	A	18	V-5
ES-5	Tax Credits and Incentives for Renewable Energy	High	A	18	VI-4
ES-8	Develop CO2 Capture and Sequestration Policy	High	B	18	VI-6
ES-17	Efficiency Improvements	High	A	18	VI-8
ES-27	Remove Regulatory Barriers	High	B	18	VI-12
RCI-1	Utility Demand Side Management	High	A	18	VII-2
TL-10	Idle-Reduction Program	High	B	18	VIII-10
TL-13	Education Program	High	A	18	VIII-13
ES-1	Renewable Portfolio Standard	High	B	17	VI-3
ES-12	Landfill Gas/Waste to Energy that Yield Carbon Reduction Benefits	Medium	A	17	VI-7
RCI-7	Distributed Generation with Renewable Energy Applications	High	B	17	VII-8
RCI-8	State Appliance Efficiency Standards	High	A	17	VII-10
RCI-10	Energy Management Training/ Training of Building Operators	Medium	B	17	VII-12
RCI-14	Fuel Switching to Less Carbon-Intensive Fuels	Medium	D	17	VII-15
TL-2	Quality Growth Program	High	A	17	VIII-3
CC-4	Research and Development into Low/No Carbon Energy Strategies	High	A	16	V-6
CC-7	Guidelines for Climate Policy (in general); Coordination with Other Policies	High	A	16	V-11
ES-7	Renewable Energy and Energy Storage Research and Development	High	B	16	VI-5
ES-22	Remove Transmission/Distribution System Limitations and Other Infrastructure Barriers for Renewables and Other Clean Distributed Generation	High	B	16	VI-11
RCI-4	Green Power Purchasing	Medium	A	16	VII-4
TL-9	Clean Car Program	High	B	16	VIII-8
AF-13	Increase Forest Health (pest/disease, invasive species) Risk Reduction Programs	High	B	15	IV-10
CC-2	GHG Reduction Target	High	B	15	V-3
ES-3	Green Power Purchases and Marketing	High	A	15	VI-4
ES-19	Retrofit Plants w/CO2 Capture	High	C	15	VI-8
ES-26	Research and Development	High	A	15	VI-12
RCI-5	Rate Design	High	A	15	VII-6
RCI-9	Solar Hot Water and Photovoltaic Codes for New Buildings	Medium	B	15	VII-11
ES-15	Nuclear Development	Medium	C	14	VI-7
ES-21	Incentives and Barrier Reductions for CHP and DG	High	B	14	VI-10

Number	Policy Option	Priority	Bin	Vote	Page
RCI-19	Water Pumping, Treatment, and Use Efficiency	Medium	B	14	VII-19
AF-2	Improve Manure Management	Medium	B	13	IV-3
CC-5	Climate Adaptation Strategies and Policies	High	B	13	V-7
CC-6	Regional/State Cap and Trade Program, Carbon Tax, or Hybrid	High	B	13	V-8
ES-2	Create Renewable Energy Development Zones	High	B	11	VI-3
RCI-15	Reinvestment Fund	Medium	B	11	VII-16
ES-9	Issues for CO2 Transmission	High	B	10	VI-6
TL-6	"Buy Local" Program	Medium	B	10	VIII-5
AF-3	Change Livestock Feed and Improve Productivity to Reduce Methane Emissions	Medium	B	9	IV-5
AF-7	Protect Forestland by Reduced Conversion to Non-forest Uses (Urban, Suburban, and Rural lands)	High	B	9	IV-7
AF-12	Increase Fire Management and Risk Reduction Programs	High	A	9	IV-9
ES-4	Public Benefit Charge	High	B	9	VI-4
ES-6	Pricing and Metering Strategies	High	B	9	VI-4
ES-20	Retire Old Plant; Build New Low-Carbon Greenfield Plant	High	B	9	VI-9
RCI-16	Focus on Small and Medium Enterprises (SMEs)	High	D	9	VII-17
TL-11	Vehicle Speed Reduction	High	B	9	VIII-12
TL-14	Explore Funding Options for the Suite of Transportation and Land Use Options	High	B	9	VIII-14
ES-16	Generation or Emissions Performance Standards	High	B	7	VI-8
RCI-17	Participation in Voluntary Industry-Government Partnerships	Medium	B	7	VII-18
AF-15	Expand Use of Forest Biomass Feedstocks for Energy Production (Fuel Blending and/or Switching)	Medium	D	6	IV-11

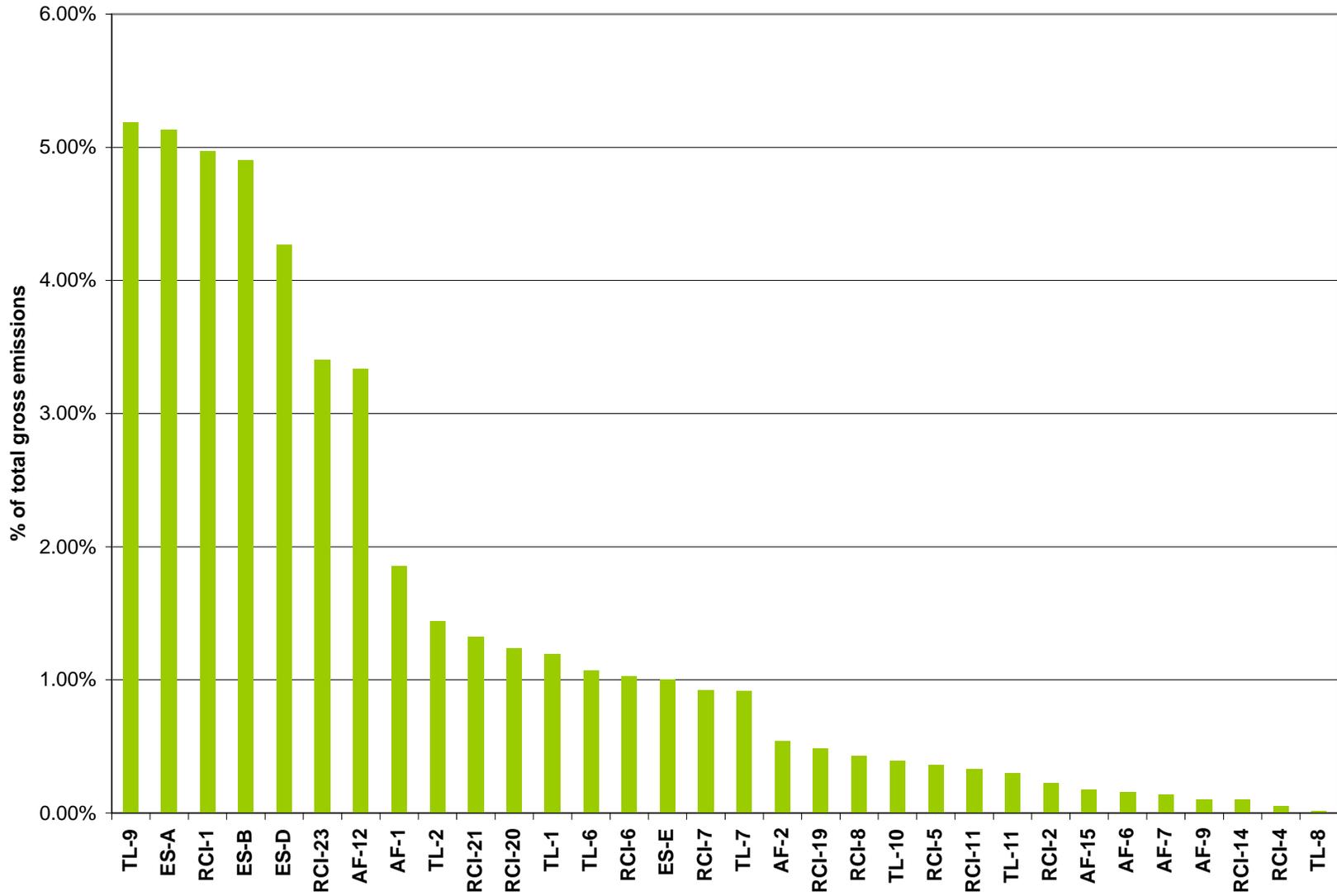
Table 3. Options Organized by Priority, then by Number of Vote

Number	Policy Option	Priority	Bin	Vote	Page
AF-9	Promote Urban and Community Trees	High	A	21	IV-8
RCI-20	Incentives for Improved Design and Construction (e.g. EnergyStar, green buildings, expedited permitting)	High	A	21	VII-20
AF-1	Promote Production of Biomass Fuels	High	B	20	IV-2
CC-9	Bridging Strategies to Achieve Low-Carbon Economy	High	A	20	V-13
ES-10	Carbon Capture and Sequestration Research and Development	High	B	20	VI-6
ES-11	Incentives for Advanced Fossil Fuel Technologies that Yield Carbon Reduction Benefits	High	B	20	VI-7
RCI-21	Improved Building Codes	High	A	20	VII-21
TL-4	Trip Reduction, Rideshare, Vanpool, and Telecommuting	High	A	20	VIII-4
TL-7	Promote Low-Carbon Fuels and Vehicle Technologies (Statewide)	High	A	20	VIII-6
CC-1	GHG Registry	High	A	19	V-2
CC-8	Evaluate Existing Climate Proposals at the Regional, Federal, and International Levels	High	A	19	V-12
ES-23	Transmission System Upgrading	High	B	19	VI-11
ES-28	Tax Credits and Initiatives	High	B	19	VI-12
RCI-11	Government Lead by Example w/Mandatory Efficiency Targets	High	A	19	VII-13
RCI-12	State Promotion and Tax or Other Incentives for Efficient Products (e.g. EnergyStar)	High	B	19	VII-14
RCI-2	Voluntary Efficiency Targets	High	A	19	VII-3
RCI-6	Distributed Generation with Combined Heat and Power Systems (including Reducing Barriers)	High	B	19	VII-7
RCI-23	Waste/Recycling	High	A	19	VII-23
TL-1	Develop and Implement Aggressive Mass Transit Strategy	High	B	19	VIII-2
TL-8	State Fleet Lead by Example	High	A	19	VIII-7
AF-6	Preserve Open Space/Agricultural Land	High	B	18	IV-6
CC-3	Public Education and Outreach	High	A	18	V-5
ES-5	Tax Credits and Incentives for Renewable Energy	High	A	18	VI-4
ES-8	Develop CO2 Capture and Sequestration Policy	High	B	18	VI-6
ES-17	Efficiency Improvements	High	A	18	VI-8

Number	Policy Option	Priority	Bin	Vote	Page
ES-27	Remove Regulatory Barriers	High	B	18	VI-12
RCI-1	Utility Demand Side Management	High	A	18	VII-2
TL-10	Idle-Reduction Program	High	B	18	VIII-10
TL-13	Education Program	High	A	18	VIII-13
ES-1	Renewable Portfolio Standard	High	B	17	VI-3
RCI-7	Distributed Generation with Renewable Energy Applications	High	B	17	VII-8
RCI-8	State Appliance Efficiency Standards	High	A	17	VII-10
TL-2	Quality Growth Program	High	A	17	VIII-3
CC-4	Research and Development into Low/No Carbon Energy Strategies	High	A	16	V-6
CC-7	Guidelines for Climate Policy (in general); Coordination with Other Policies	High	A	16	V-11
ES-7	Renewable Energy and Energy Storage Research and Development	High	B	16	VI-5
ES-22	Remove Transmission/Distribution System Limitations and Other Infrastructure Barriers for Renewables and Other Clean Distributed Generation	High	B	16	VI-11
TL-9	Clean Car Program	High	B	16	VIII-8
AF-13	Increase Forest Health (pest/disease, invasive species) Risk Reduction Programs	High	B	15	IV-10
CC-2	GHG Reduction Target	High	B	15	V-3
ES-3	Green Power Purchases and Marketing	High	A	15	VI-4
ES-19	Retrofit Plants w/CO2 Capture	High	C	15	VI-8
ES-26	Research and Development	High	A	15	VI-12
RCI-5	Rate Design	High	A	15	VII-6
ES-21	Incentives and Barrier Reductions for CHP and DG	High	B	14	VI-10
CC-5	Climate Adaptation Strategies and Policies	High	B	13	V-7
CC-6	Regional/State Cap and Trade Program, Carbon Tax, or Hybrid	High	B	13	V-8
ES-2	Create Renewable Energy Development Zones	High	B	11	VI-3
ES-9	Issues for CO2 Transmission	High	B	10	VI-6
AF-7	Protect Forestland by Reduced Conversion to Non-forest Uses (Urban, Suburban, and Rural lands)	High	B	9	IV-7
AF-12	Increase Fire Management and Risk Reduction Programs	High	A	9	IV-9
ES-4	Public Benefit Charge	High	B	9	VI-4
ES-6	Pricing and Metering Strategies	High	B	9	VI-4
ES-20	Retire Old Plant; Build New Low-Carbon Greenfield Plant	High	B	9	VI-9

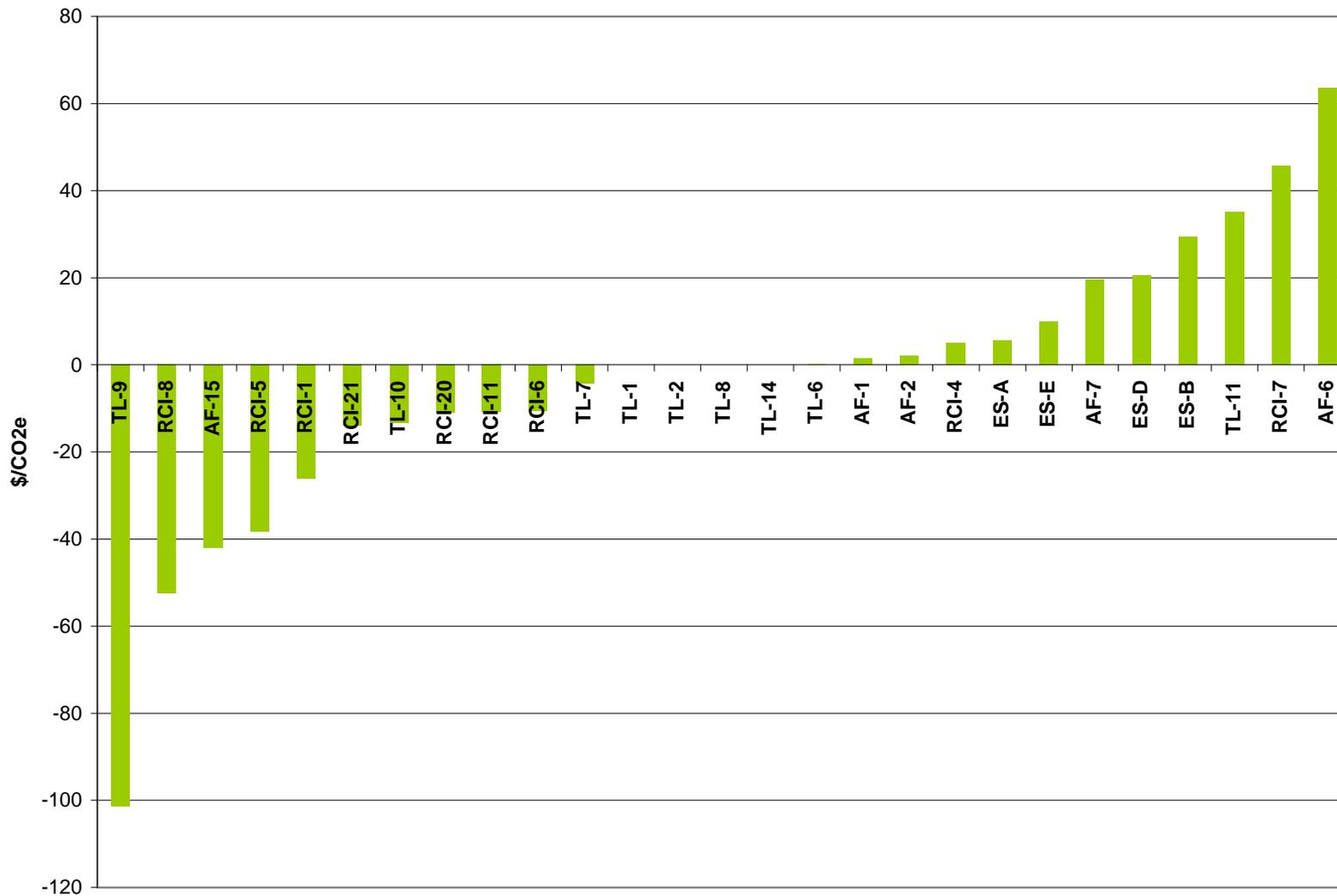
Number	Policy Option	Priority	Bin	Vote	Page
RCI-16	Focus on Small and Medium Enterprises (SMEs)	High	D	9	VII-17
TL-11	Vehicle Speed Reduction	High	B	9	VIII-12
TL-14	Explore Funding Options for the Suite of Transportation and Land Use Options	High	B	9	VIII-14
ES-16	Generation or Emissions Performance Standards	High	B	7	VI-8
TL-15	Develop Congestion Pricing Programs	Medium	A	19	VIII-15
ES-12	Landfill Gas/Waste to Energy that Yield Carbon Reduction Benefits	Medium	A	17	VI-7
RCI-10	Energy Management Training/ Training of Building Operators	Medium	B	17	VII-12
RCI-14	Fuel Switching to Less Carbon-Intensive Fuels	Medium	D	17	VII-15
RCI-4	Green Power Purchasing	Medium	A	16	VII-4
RCI-9	Solar Hot Water and Photovoltaic Codes for New Buildings	Medium	B	15	VII-11
ES-15	Nuclear Development	Medium	C	14	VI-7
RCI-19	Water Pumping, Treatment, and Use Efficiency	Medium	B	14	VII-19
AF-2	Improve Manure Management	Medium	B	13	IV-3
RCI-15	Reinvestment Fund	Medium	B	11	VII-16
TL-6	"Buy Local" Program	Medium	B	10	VIII-5
AF-3	Change Livestock Feed and Improve Productivity to Reduce Methane Emissions	Medium	B	9	IV-5
RCI-17	Participation in Voluntary Industry-Government Partnerships	Medium	B	7	VII-18
AF-15	Expand Use of Forest Biomass Feedstocks for Energy Production (Fuel Blending and/or Switching)	Medium	D	6	IV-11

Chart 1. Estimated Greenhouse Gas (GHG) Emission Reductions by Option



NOTE: The estimates shown in Chart 1 are based on the simple average of GHG reductions estimates from other states.

Chart 2. Estimated Cost per Ton CO₂e Reduced by Option



NOTE: The estimates shown in Chart 2 are based on the simple average of GHG emissions reduction cost estimates from other states.