DRAFT

Minnesota's Climate Action Framework

Appendix 1

State action steps

MINNESOTA

cc-mn4-01a

APPENDIX 1: STATE ACTION STEPS

The following are tables of action steps Minnesota's state agencies propose to pursue to support getting the state on track to achieve our vision of a carbon-neutral, resilient, and equitable Minnesota. These actions will not get us all the way to our vision, but lay critical groundwork for reducing emissions and building resiliency.

Understanding the tables:

- The tables are organized by the goals, initiatives, and sub-initiatives discussed in the Framework chapters.
- The action steps are categorized as actions the state agencies can **lead** on by taking administrative action alone, actions the state legislature can **enact** through their authorities to write laws and allocate funds, and actions state agencies can **encourage** others to do.

GOAL 1: CLEAN TRANSPORTATION

Initiative 1.1: Connected Communities

Maintain and improve multimodal transportation connections to reduce emissions and congestion

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
1.1.1 Increase investment in safe, comfortable, and convenient walking, biking, and transit opportunities	Scope transportation projects, including projects in Greater Minnesota, to include facilities for people walking, bicycling, rolling, and taking transit	✔		✔
	Evaluate current funding priorities and direct more resources towards non-motorized transportation to support a comprehensive and connected statewide pedestrian and bicycle network	✔		✔
	Prioritize transit and high occupancy vehicles on MnDOT-owned right of way	✔		
	Increase transit service to create more reliable and convenient transit networks, with initial priority given to routes in communities where transit is essential for travel and residents are disproportionately impacted by air pollution	✔		
	Provide cost-sharing opportunities for developers, employers, and communities to include spaces for people to walk			✔
1.1.2 Create more opportunities for biking, walking, transit, and telecommuting	Deploy projects that temporarily demonstrate improvements for people walking and biking to assess opportunities for permanent improvements	✔		✔
	Use data and community input to understand active transportation needs and preferences of underserved communities	✔		✔
	Develop resource guides and provide technical assistance for transportation project managers to integrate complete streets into transportation projects	✔		✔
	Lead by example with telecommuting as an emissions reduction strategy through state employee telework and flexible work approaches	✔		
1.1.3 Plan for land use that supports multimodal transportation options	Create an Intergovernmental Climate Change Council to facilitate coordination between state, regional, county, tribal, and local governments on transportation and climate action.	✔		
	Encourage local governments to implement Transportation Demand Management policies			✔

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
1.1.3 Plan for land use that supports multimodal transportation options	Collaborate with partners on the transportation element of local government comprehensive plans through coordination and review			✔
	Promote land use planning that supports multimodal transportation options			✔
	Evaluate actions that reduce vehicle demand for highways to reduce congestion in upcoming transportation planning processes	✔		✔
1.1.4 Maintain and improve transportation infrastructure for resiliency, GHG mitigation, and other benefits	Prioritize the reuse of materials throughout construction process to the minimize carbon footprint of transportation construction projects	✔		✔
	Examine opportunities to advance Next Generation Highways by co-locating broadband and electricity transmission in highway right-of-way	✔		
	Support broadband connectivity, particularly for rural and underserved areas, to provide more options to access services	✔		
	Coordinate with partners to manage stormwater and support transportation infrastructure resilience to extreme weather	✔		✔

Initiative 1.2: Clean and efficient vehicles

Accelerate the transition to electric vehicles, alternative fuels, and greater fuel efficiency

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
1.2.1 Increase the use of clean fuels, including lower-carbon biofuels	Develop Minnesota Strategic Electric Vehicle (EV) Plan that includes state actions to increase EV charging infrastructure, increase EV access and availability, and educate communities about the benefits of EVs	✔		
	Coordinate with neighboring states, Tribes, and other potential partners to implement the Regional Electric Vehicle (REV) Midwest Memorandum of Understanding which will establish an EV charging network across the Midwest	✔		
	Develop a Clean Fuels Standard which will incentivize increased investment in a broad portfolio of cleaner fuels, including ethanol, biomethane, lower-carbon biofuels, renewable fuels, electricity, and charging infrastructure		✔	
	Follow the Governor's Council on Biofuels recommendations	✔		
1.2.2 Expand electric vehicle (EV) charging infrastructure	Establish a transparent and equitable process to distribute more grant funding for EV owners, workplaces, local governments, and other site hosts for Level 2 and DC fast charger stations.	✔		✔
	Provide more grant funding for medium and heavy-duty vehicle charging, including transit	✔		✔
	Create opportunities to better connect co-ops, municipal utilities, and investor-owned utilities to discuss best practices related to EV chargers	✔		✔
	Engage fuel providers to understand the role they would like to play in EV charger deployment			✔
	Amend state building code to support accessible EV charging and make new construction and commercial buildings EV-ready	✔		
	Support EV charging at state highway rest areas	✔		
1.2.3 Increase electric vehicle availability and access	Provide point-of-purchase rebates for new and used EVs, including e-bikes			✔
	Develop dealer and salesperson recognition and incentive program, building off efforts like the Xcel Energy Gold Status Dealer program			✔
	Provide more grant funding for medium- and heavy-duty vehicles, including transit and school buses, including funding available from the Infrastructure Investment and Jobs Act	✔		✔

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
1.2.3 Increase electric vehicle availability and access	Encourage EV targets for government and corporate fleets (light-duty, medium-duty, and heavy-duty vehicles)	✔		✔
1.2.4 Accelerate the transition to EVs through education, training, and outreach	Develop marketing campaign in collaboration with stakeholders (e.g. auto dealers) to improve consumer understanding of EVs and electrified off-highway equipment	✔		
	Provide financial incentives to BIPOC and low-income community organizers to educate about EVs			✔
	Develop partnerships with trade schools and colleges to develop a clean transportation workforce	✔		✔
	Create a multi-stakeholder initiative with the private sector, University of Minnesota, and public sector to assess opportunities and attract EV-related jobs and investment	✔		✔
1.2.5 Improve vehicle efficiency and emissions standards	Advocate for stricter standards at the federal level			✔
	Implement Clean Cars rules	✔		
	Create income-based car swap programs to replace older vehicles			✔
	Retire and replace inefficient on and off-road diesel vehicles across segments using state and federal funds	✔		

GOAL 2: CLIMATE-SMART NATURAL AND WORKING LANDS

Initiative 2.1: Carbon sequestration and storage in forests, grasslands, and wetlands

Manage forests, grasslands, and wetlands for increased carbon storage/sequestration

NB: Due to the diversity of landscapes and land uses across Minnesota, unlike with the other goal chapters, some of the "priority actions" identified in the Framework under Goal 2 are summaries of multiple state action steps listed in the following tables.

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
2.1.1 Maintain, expand, and actively manage forestlands	Accelerate tree planting to expand forest cover where ecologically and economically appropriate		✔	✔
	Increase statewide seedling production to support tree planting efforts, including rectifying pinch points in seed supply and enhancing production of climate-adapted species		✔	✔
	Invest in active forest management as a tool for promoting carbon uptake via forest growth and reducing emissions from diseases, pests, and wildfires		✔	✔
	Avoid conversion of forestland to other uses through conservation easements and sustainable timber harvests	✔		✔
	Broaden understanding of climate mitigation options among private forest owners	✔		✔
2.1.2 Protect, restore, and manage peatlands and other wetlands for carbon storage	Promote restoration of drained peatlands with an emphasis on cropped/pastured peatlands			✔
	Protect and restore existing peatlands and other wetlands through conservation easements, wetland banking and other land management programs/ tools		✔	✔
2.1.3 Protect, restore, and manage grasslands	Permanently protect and restore prairie and wetlands, particularly drained wetlands with organic rich soils that are losing CO2, through fee title, easement and cost-share projects	✔		✔
	Use high diversity seed mixes in restoration and rectify pinch points in seed sourcing and supply	✔	✔	✔
	Avoid grassland conversion as a potential unintended consequence in development of other climate policies.	✔		

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
2.1.4 Promote actions by all Minnesotans to store more carbon on natural and working lands	Explain how many small-scale actions – whether an urban pollinator garden, a suburban boulevard tree, or an agricultural woodlot planting – add up to impactful benefits	✔	✔	✔
	Help all Minnesotans understand their influence on ensuring climate-smart land management.	✔	✔	

Initiative 2.2 Climate adaptation of natural and working lands

Enhance the climate adaptation potential of the plant and animal communities – including crops – of natural and working lands

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
2.2.1 Conserve and enhance biodiversity	Restore and expand habitat complexes and corridors to protect wildlife and allow species to shift their range	✔	✔	
	Work with local governments in developing regional and local land conservation plans identifying priority locations for protection and restoration	✔		✔
	Promote climate resilience via effective management of invasive species through programs such as the Cooperative Weed Management Area Program and recreation outreach.	✔		✔
2.2.2 Identify and promote land management practices that enhance climate resiliency	Increase native species diversity in grasslands and forests through restoration and management using locally appropriate seed and plant mixes	✔		✔
	Plant, seed, or promote tree species projected to do well under changing conditions	✔		✔
2.2.3 Promote added benefits of natural lands in climate change adaptation	Broaden understanding of climate adaptation management options among private forest owners	✔		✔
	Invest in new markets and supply chains for new products that help land managers adapt to a changing climate (e.g., drought-resistant or anti-erosion crops and drought-resistant tree seedlings)	✔		✔

Initiative 2.3: Healthy farmland soils and systems

Accelerate soil health practices that reduce emissions and enhance carbon storage, water quality, and habitat

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
2.3.1 Increase soil organic carbon content and reduce erosion	Increase incentives and expand/enhance markets for practices such as cover crops, conservation tillage and perennial crops that sequester carbon and increase resilience by restoring soil health		✔	
	Investigate feasibility and develop programs for use of biochar on cropland, pastureland, and forestland	✔		
	Expand incentive programs for farmers to preserve woodlands and incorporate new trees and natural habitat into agricultural landscapes to protect against wind and water erosion and store carbon		✔	
2.3.2 Manage nutrients to reduce emissions	Manage use of nitrogen and encourage and incentivize nitrogen and methane management practices that will reduce emissions through grants, education, and the Groundwater Protection Rule	✔		
	Increase use of nitrogen management practices that will increase nitrogen use efficiency and reduce nitrous oxide emissions, such as nitrification inhibitors, split N applications and others.			✔
	Investigate feasibility and implementation of methane reduction activities related to livestock and manure such as anaerobic digestion and acidification management of manure storage		✔	
2.3.3 Enhance carbon capture on livestock grazing land and cropland	Increase options for working lands approaches such as haying, grazing, or tree crops on protected lands	✔	✔	
	Promote conversion of marginal farmland to pastureland, perennial crops, woodland, and forage crops to enhance carbon capture, water quality protection and wildlife habitat through set-aside programs.	✔		✔
	Coordinate with federal agencies to promote and fund production forestry, short rotation woody crops, and using trees as windbreaks			✔
2.3.4 Manage land for multiple climate benefits	Incentivize and expand climate-resilient agricultural and forestry Best Management Practices (BMPs) implementation assistance (such as access to technologies, equipment, and seed and plant material)	✔		
	Provide support to farmers to combine practices that decrease emissions, improve soil health, sequester carbon and improve water quality, through programs such as the Minnesota Agricultural Water Quality Certification Program's Climate Smart Farms endorsement	✔		✔

Initiative 2.4: Sustainable landscapes and water management

Reduce greenhouse gases and improve landscape resiliency through multi-purpose water storage and management practices

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
2.4.1 Manage landscapes to hold nitrogen and retain rainfall and snowmelt	Prioritize groundwater and drinking water protection in vulnerable areas	✔		
	Protect, restore, and increase perennial cover in priority Drinking Water Supply Management Areas	✔		
	Protect, restore, and increase wetlands to absorb, filter, and use excess nutrients and help recharge and protect groundwater and drinking water	✔		
	Implement the Nitrogen Fertilizer Management Program in vulnerable areas as defined by township testing results	✔		
	Promote fertilizer and manure application practices that minimize nitrogen loss through implementation of the Feedlot Rule and General Permit	✔		
2.4.2 Manage landscapes to hold water and reduce runoff	Increase water storage, infiltration and drainage management to reduce runoff and minimize downstream flooding, erosion and habitat loss	✔		
	Restore natural stream stability where possible to reduce erosion, increase habitat diversity, and decrease maintenance and infrastructure costs	✔		
	Assist local government units with identifying and prioritizing locations for water storage as part of watershed planning	✔		✔
	Encourage water recycling where feasible to sustain aquifers and lessen demands on drinking water supplies			✔
	Encourage multipurpose drainage design and retrofitting that provides adequate drainage capacity while reducing downstream peak flows, erosion and sedimentation, and improving water quality and aquatic habitat.			✔

Initiative 2.5: Investments in emerging crops, products, and local economies

Invest and support research in emerging agricultural and forest products, reduce waste and expand economic opportunities

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
2.5.1 Invest in climate-smart agricultural products and practices through development of new or expanded markets, supply chains, research and promotion	Invest in new markets and supply chains for perennial crops and harvestable crops that keep soil covered year-round	✔	✔	
	Support and expand research and market/supply-chain development for crops that increase carbon sequestration and reduce nitrogen loss.			✔
	Identify opportunities for farmers and landowners to participate in ecosystem services markets (e.g., for carbon removal, flood protection, water quality) that incentivize best management practices for climate mitigation and adaptation			✔
2.5.2 Promote the use of forest products that store carbon and reduce GHG emissions	Enhance markets for long-lived wood products that increase carbon storage and substitute for more fossil-fuel intensive materials		✔	
	Stimulate research on emerging forest products—such as engineered wood, biochemicals, biofuels, and environmental remediation products—that have the ability to reduce GHG emissions by providing a low-carbon alternative to fossil-fuel intensive materials			✔
	Increase competitiveness of lower-value wood products that are generated from climate adaptation management practices	✔		✔
	Launch an educational campaign to tell the story of MN products and climate impacts to increase understanding and drive consumer preference	✔		
2.5.4 Support local food markets, urban agriculture and emerging farmers	Promote local and community-based agriculture to reduce transportation needs and increase food access, especially in underserved communities	✔		
	Continue and expand the Emerging Farmer Program, and similar programs for farmers and agricultural/food entrepreneurs, with particular attention on advancing inclusion and equity	✔		
2.5.5 Reduce waste and promote beneficial uses of materials	Investigate feasibility and develop programs to make composting an accepted agricultural BMP in MN to build soil health		✔	
	Incentivize and reduce barriers for local and regional public or commercial compost facilities		✔	

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
2.5.5 Reduce waste and promote beneficial uses of materials	Support local governments with guidance and resources to conduct public education campaigns such as Food Waste Reduction and Zero Waste challenges			✔
	Incentivize beneficial uses (wood products, mulch, waste-to-energy, etc.) for waste wood that results from increased tree pests and diseases	✔		

GOAL 3 – RESILIENT COMMUNITIES

Initiative 3.1: Climate-smart communities

Help Minnesota communities – urban and rural, large and small – become more resilient to climate change

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
3.1.1 Support communities with asset management and resiliency planning	Provide training to expand local capacity to assess vulnerabilities, and to plan for and implement adaptation strategies that increase public and critical facilities resilience, reduce private property damage, and limit public health impacts from climate change.	✔		
	Create an interactive, comprehensive website that improves visibility of and access to climate information and identifies strategies to help communities expand resilience capacity.	✔		
	Integrate ongoing adaptation strategies into county hazard mitigation plans using Minnesota's state hazard mitigation plan as a guide Encourage all communities have a preparedness plan for extreme weather events, include contingencies for multiple events such as a heat wave after flooding.		✔	✔
3.1.2 Develop new and updated resiliency financing mechanisms	Expand funding and staff resources for the assessment, planning, design and implementation of adaptation and resiliency projects		✔	
	Prioritize the use of state bonding funds in support of resilient infrastructure, including water quantity projects, and seek federal funding to address climate vulnerabilities and strengthen resilience.		✔	
	Use existing revolving loan funds, and created new public/private resilience financing such as green bank, and other financial tools to provide additional funds		✔	✔
	Establish a state tree canopy fund		✔	
3.1.3 Promote climate education, technical assistance, and learning networks assistance	Increase capacity of the GreenStep Cities program to develop and share resilience best practices and adaptation resources with communities, and expand pilot programs that include Tribal nations, schools, counties and townships.	✔	✔	
	Engage with the Minnesota Climate Adaptation Partnership (MCAP) and other partners to provide climate modeling data, technical assistance, and adaptation strategies.	✔		✔
	Hold regular town halls with communities and tribal governments throughout Minnesota to ask what would most help with increasing resilience.	✔		✔
	Provide community education resources on local climate impacts and actions to describe climate-related hazards and extreme weather events; and prioritize those groups most-at-risk from climate change.	✔		✔

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
3.1.4 Improve climate-related data sources	Implement the use of high-resolution, dynamically downscaled climate projections for planning and design efforts across Minnesota.			✔
	Accelerate updates to FEMA maps statewide, using LiDAR and improved forecasting tools to identify locations subject to repeated localized flooding.			✔
	Advance and promote use of Blue Spot mapping tools and update the Infrastructure Stress Transparency Tool that provides interactive maps of Minnesota's civil infrastructure.	✔		✔
	Map areas where people at greatest risk to climate impacts live and address environmental justice areas of concern across the state. Add climate related data overlays (e.g. urban heat island effect, drought) as needed.	✔		

Initiative 3.2: Healthy community forests and green spaces

Expand and protect tree canopies and green spaces that provide multiple community resilience benefits.

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
3.2.1 Expand community tree plantings and tree preservation especially within low-income and historically marginalized areas	Preserve existing mature trees by encouraging heritage tree preservation and establishing tree maintenance			✔
	Manage emerald ash borer and other emerging plant pests and diseases in communities through treatment, removal/replacement, proper disposal and financial assistance	✔	✔	
	Grow and support climate-adaptive shade trees in urban areas to decrease energy use in homes and buildings, mitigate heat islands and replace pest infected or diseased trees.			✔
3.2.2 Increase biodiversity and use of climate-adapted species	Expand pollinator, prairie, and climate-adapted plantings to increase biodiversity and ecosystem resiliency on public and private lands		✔	✔
	Support parks, community gardens, and green spaces in communities at greater risk from climate impacts			✔
	Promote incorporation of prairie vegetation as part of ground-mounted solar development to support pollinators	✔		✔
	Increase the resilience of ecosystems and native species to provide habitat and water quality benefits; promote the right to exist and inherent value of wildlife and plants; and support Tribal authority to hunt and gather.	✔		✔

Initiative 3.3: Resilient buildings, infrastructure and business

Prepare the built environment and local economies to become more resilient to climate change

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
3.3.1 Advance climate adaptation in residential & commercial development	Research ways to increase resiliency of buildings to extreme precipitation, flooding, extended heat waves, urban heat island effects, grid failure from extreme weather, and other climate change impacts - especially in multi-family housing upgrades and for under-resourced communities. Enable the use of the Guaranteed Energy Savings Program for community resilience to multiple climate perils including design and audit assistance.	✔		✔
	Adopt resiliency provisions in codes, permits, and policies for new construction, rehabilitation and adaptive reuse, and create resilient design standards	✔	✔	
	Encourage new construction and rehabilitation of housing to plan for resiliency/adaptation (e.g., waterproofing basements, raising mechanicals and coordinating with energy improvements, installing mold resistant and passive cooling building features), ensuring new developments build outside of higher risk flood areas that retain the natural benefits those areas often provide.			✔
3.3.2 Fund resilient infrastructure and critical facilities	Assess vulnerabilities of critical facilities and use climate projections to identify ways to ensure continuity of operations.	✔		✔
	Modify infrastructure and update state floodplain management rules for critical facilities, mitigate risk in areas beyond current FEMA mapped floodplain areas, and encourage no-net-loss of floodplain storage in response to projected climate conditions. Create resilient design standards for building and updating critical facilities and infrastructure.	✔	✔	✔
	Design transportation infrastructure for long-term resiliency, including expanding use of culverts and crossings designed to allow better natural flow distribution, capacity for increased volume where appropriate, and aquatic organism passage.	✔		✔
3.3.3 Expand green infrastructure and natural stormwater management	Provide funding and technical assistance to establish green infrastructure and other nature-based adaptation in urban areas to control flooding, reduce urban heat, improve water quality, and restore lost habitat.	✔		✔
	Expand the use of green stormwater infrastructure practices in developments within stormwater regulatory programs.	✔		✔
	Promote water storage to hold water during and after large rain events in urban landscapes, including restoring wetlands to support water storage in flood prone areas, to protect buildings and infrastructure and support watershed health. Support reuse of water to increase resilience.			✔

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
3.3.4 Reduce the urban heat island effect in communities	Provide funding and technical assistance to help communities reduce their urban heat island	✔		✔
3.3.5 Support local businesses in adapting to climate change	Offer planning, funding, and technical support to help businesses such as tourism, sports and recreation, and construction and remodeling adapt to climate change impacts.		✔	✔
	Support resilience through local and regional economic development and community energy transition. Encourage flood preparedness and business disruption assistance for small businesses disproportionately impacted by climate change.	✔		✔

GOAL 4: CLEAN ENERGY AND EFFICIENT BUILDINGS

Initiative 4.1: Clean energy

Transition to 100% carbon free energy for electrical power and heat

Initiative/Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
4.1.1 Transition to 100% carbon-free electricity	Establish a standard to achieve 100% carbon-free electricity by 2040		✔	
	Increase Renewable Energy Standard to 40% by 2025 and 55% by 2035		✔	
	Promote electrical grid upgrades, greater access to renewable energy and fund research and development to integrate more renewable energy in the grid		✔	✔
	Expand the use of low carbon heating sources through new policies and implementation of policies such as the Energy Conservation Optimization Act and Natural Gas Innovation Act	✔	✔	
	Capitalize on existing sustainability programs such as Energy Star, LEED, Green Communities, and others, which contribute to market demand for carbon-free living and work environments			✔
	Broaden existing incentives and establish new options for families and businesses to achieve greater resilience and address energy burden		✔	
4.1.2 Utilize and reduce waste heat and gas	Lower operating costs by expanding combined heat and power systems and energy efficiency measures in wastewater and water treatment plants		✔	
	Work with industry and businesses to identify strategies to enable greater utilization of waste heat			✔

Initiative 4.2: Smarter buildings and materials

Reduce greenhouse gas emissions in the building sector by promoting conservation, efficiency, and lower carbon materials and fuels

Initiative/Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
4.2.1 Increase efficiency and reduce emissions from existing buildings	Provide financial support and incentives in an informed and equitable manner for residential, commercial, educational and government building owners to make energy improvements such as upgrading to more efficient appliances, windows, insulation, and heating and cooling systems. Continue support of solar photovoltaic installations on existing buildings.		✔	
	Ensure that utility energy audit programs are equitably available across the state, so that all buildings throughout the state can have access to assessment tools that compare existing performance to target standards so that building owners can clearly understand where their investments will have the most impact.		✔	
	Work with industry to identify opportunities to improve efficiency across Minnesota's diverse industrial sectors			✔
	Improve codes and standards for all existing commercial and large multi-family projects undergoing renovation in order to optimize energy efficiency, resilience, and energy production and lower carbon outputs.	✔		
4.2.2 Increase efficiency and reduce emissions from new buildings and appliances and use climate smart building materials	Combine energy efficiency and climate resiliency design with on or off-site renewable energy			✔
	Develop clear options for building owners and families to make informed carbon-free selections for their appliances such as furnaces, water heaters, and cooktops/ovens.			✔
	Continue the uniform statewide energy code adoption process, evaluating and adopting national model energy codes to ensure aggressive energy savings	✔		
	Improve codes and standards for all new commercial and large multi-family buildings to achieve net-zero by 2036.	✔		
	Expand the use of low-carbon construction materials such as sustainably harvested wood, concrete, steel and reused and recycled construction materials			✔
4.2.3 Prevent waste and increase reuse and recycling	Support and promote adaptive reuse of existing buildings to reduce construction waste and retain embodied carbon in existing construction materials			✔
	Expand deconstruction and reuse of construction materials where demolition cannot be avoided			✔
	Expand recycling of construction waste that cannot be reused in construction market			✔

GOAL 5: HEALTHY LIVES AND COMMUNITIES

Initiative 5.1: Healthy communities

Support health through protecting communities and Minnesota ways of life from the impacts of climate change

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
5.1.1 Support healthy communities and workplaces	Develop a plan to that applies the intent and approach of the federal Justice40 Initiative, which targets 40% of benefits of certain federal investments in disadvantaged communities, to parallel state investments. Develop tools, guidance, and other resources to support agencies in implementing the plan.	✔		
	Educate communities about the health impacts of climate change and provide resources and strategies to prevent negative health impacts	✔	✔	✔
	Create resilience hubs based in community centers or other public buildings to provide support during climate-related events, such as extreme heat, flooding, air quality alerts, and power loss		✔	✔
	Provide guidance on extreme heat and poor air quality for the health and safety of outdoor workers, recreators, local sports, and recreational programs	✔		
	Promote or expand telecommuting opportunities where possible within all sectors of employment to improve wellbeing, reduce traffic injuries, and mitigate greenhouse gas emissions	✔		✔
	Create healthier communities by prioritizing environmental justice areas of concern for pollution reduction through clean-up and consideration of cumulative impacts in siting and permitting of new polluting industries	✔	✔	✔
5.1.2 Protect Minnesota cultures and ways of life	Conduct research and community engagement to address the impacts of changing ecosystems on mental health and well-being			✔
	Adapt outdoor recreation on public lands for a changing climate and to serve changing demographics	✔		✔
	Protect and recover important outdoor places from extreme weather impacts by engaging with outdoor recreational organizations that have staff and leadership that represent their communities	✔		✔
	Engage ethnic communities to identify and protect culturally significant places	✔		✔

Initiative 5.2: Climate smart public health infrastructure and healthcare systems

Support public health infrastructure and data system that protect the public's health and promote climate-smart health care systems.

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
5.2.1 Support public health infrastructure and adaptation resources to improve health	Provide education and funding to local public health departments to work with local communities to prepare for the health impacts of climate change	✔	✔	✔
	Track, monitor, and report on the health impacts of climate change in diverse populations in Minnesota	✔		
	Conduct research on the health impacts of climate change, including changes to vector-borne diseases, respiratory diseases, cardiovascular diseases, waterborne diseases, heat illnesses, and mental health illnesses	✔		✔
	Support and expand the Minnesota Climate & Health Program at the Minnesota Department of Health to implement and evaluate interventions to protect public health from climate change	✔	✔	
	Ensure access to uninterrupted, quality healthcare during and after disasters	✔	✔	✔
	Ensure access to culturally-appropriate mental health services for issues related to climate-driven events	✔	✔	✔
5.2.2 Support climate-smart healthcare systems	Ensure hospitals and healthcare facilities perform extreme weather and multiple-hazard assessments for climate resiliency	✔	✔	✔
	Encourage use of green building materials, chemicals, and supplies			✔
	Reduce the carbon footprint of healthcare systems by improving energy efficiency, switching to renewable energy sources, and implementing process improvements that reduce waste			✔
	Provide peer-to-peer education on the health impacts of climate change and populations that are disproportionately impacted by climate change			✔
5.2.3 Improve data sources related to health, equity, and climate risk	Improve local air and water quality monitoring and related public communications, including expanding pollen monitoring	✔	✔	✔
	Develop a public interface using GIS with data on social determinants of health (e.g., education access, economic stability), health information and climate projections to identify and anticipate harmful health effects related to climate change and develop vulnerability assessments	✔		✔
	Create a Climate & Health Equity Index that identifies communities disproportionately at risk for negative impacts of climate change	✔		

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
5.2.3 Improve data sources related to health, equity, and climate risk	Promote use of climate projection data in applications at the state and local level, particularly in efforts to characterize future exposures, disease outcomes, and economic burden			✔
	Establish a state Climate & Health Equity Committee that reviews climate-related state policies, programs, and processes to ensure equitable distribution of resources	✔	✔	

GOAL 6: CLEAN ECONOMY

Initiative 6.1: Greening jobs and businesses

Prepare and support workers and businesses for a clean economy through training, investments in research and development, and partnerships.

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
6.1.1 Grow green economy jobs through innovation	Grow clean economy businesses and jobs through innovation in partnership with Tribal Nations, universities, commercial consortiums, private research labs and public support.			✔
	Encourage clean energy/technology start-up growth through existing entrepreneurship efforts	✔		✔
	Work with industry to advance process improvements that are better for our climate and for worker health			✔
	Train, upskill, and reskill Minnesotans for clean economy jobs, with a focus on equitable outcomes, in collaboration with unions, education institutions, and businesses	✔		✔
6.1.2 Develop career pathways	Complete a green jobs workforce development plan for the state that includes transitioning displaced workers and connecting workers to job opportunities in and beyond the energy sector	✔		
	Create workforce strategies that train, upskill, and reskill workers to adapt to changing technologies and job needs	✔	✔	

Initiative 6.2: Ensure a just transition

Support workers in industries impacted by climate change and the transition to a cleaner economy to adapt and evolve their skills to new family-sustaining jobs.

Sub-initiative	State action steps	LEAD	ENACT	ENCOURAGE
6.2.1 Support transitions as industries evolve	Support existing large electricity generation power plant host communities to plan and implement strategies for a successful transition. Transition planning and support should be long-term and take into account the amount of time it may take to train workers, execute economic development strategies, and other considerations.	✔	✔	
6.2.2 Ensure good wages and benefits for workers and address systemic barriers	Promote inclusive and equitable transition into quality jobs that provide family sustaining wages and employment protections	✔	✔	✔
	Focus training on communities disproportionately impacted by climate change and disadvantaged workers	✔		✔