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### Written Testimony of Ryan Anderson

Commissioner

Alaska Department of Transportation and Public Facilities

Before the

**U.S. Senate Committee on Environment and Public Works**

Hearing on

**S. 3135 – Cold Weather Diesel Reliability Act**

March 11, 2026

Chairman Capito, Ranking Member Whitehouse, and Members of the Committee, thank you for the opportunity to testify regarding S. 3135, the *Cold Weather Diesel Reliability Act*. My name is Ryan Anderson, and I serve as Commissioner of the Alaska Department of Transportation and Public Facilities (DOT&PF).

Transportation workers, equipment operators, and the many people who rely on Alaska's highways and airports operate in prolonged periods of cold and darkness, and across vast, remote areas where assistance may be hundreds of miles away. In these conditions, equipment reliability is directly tied to life safety and the continued movement of freight, fuel, and essential supplies. The Cold Weather Diesel Reliability Act addresses reliability challenges that modern diesel emissions systems can encounter when operating in sustained below-freezing temperatures.

I reside in Fairbanks, Alaska, and have worked for DOT&PF for more than 25 years, including two decades working on transportation projects across Northern Alaska and above the Arctic Circle. Throughout my career I have worked closely with maintenance and operations crews, contractors building transportation infrastructure, and the transportation operators who rely on these systems across some of Alaska's most challenging environments. I am a registered civil engineer in the State of Alaska and have been practicing since 2003.

Alaska law directs the Alaska Department of Transportation and Public Facilities to maintain a transportation system that supports national defense, connects communities, and enables the commerce and resource development that sustain the state's economy. In carrying out this responsibility, Alaska DOT&PF operates and maintains one of the most geographically extensive transportation systems in the United States.

The department maintains more than 5,600 centerline miles of state highways and over 840 bridges, much of which forms part of the National Highway System, including corridors designated as part of the Strategic Highway Network (STRAHNET) that support national defense mobility in the Arctic region. These highways serve as the primary surface transportation connection between major regions of the state, and in many cases function as the only route between communities with no alternate corridors available when disruptions occur.

In addition to the highway system, DOT&PF operates a statewide aviation network of 237 state-owned airports, including 235 rural airports that provide year-round access for many communities not connected to the road system. The department

*"Keep Alaska Moving."*

also operates two international airports, the Alaska Marine Highway System, and the Statewide Equipment Fleet. Alaska's broader transportation system also includes the Alaska Railroad Corporation, a state-owned railroad that transports freight, fuel, and passengers across more than 500 miles of rail corridor along the railbelt. As Commissioner of DOT&PF, I also serve as a statutory member of the Alaska Railroad Corporation Board of Directors.

In Alaska, state agencies, local governments, transportation operators, and private industry work closely together to keep transportation systems functioning across remote and challenging environments. As Commissioner, part of my responsibility is to ensure that the policies affecting transportation infrastructure support not only DOT&PF operations, but also the many public and private partners who depend on reliable transportation systems across Alaska.

The issue before the Committee today is how modern diesel emissions technologies perform in cold temperature operating environments. Alaska supports the national goal of reducing transportation emissions, and over the past two decades diesel engine technologies have made significant progress in improving air quality.

At the same time, transportation operators, maintenance crews, and industries that rely on Alaska's transportation corridors have faced ongoing reliability challenges associated with certain emissions-control components when equipment operates in cold temperatures. Because transportation systems across Alaska routinely operate in prolonged winter conditions with temperatures far below freezing, these reliability challenges occur in greater frequency, and with greater impact, across our vast transportation network.

Certain emissions-control systems rely on components and fluids that are sensitive to low temperatures. In sustained below-freezing temperatures, these systems can malfunction, degrade equipment performance, or trigger protective engine derates—automatic reductions in engine power designed to prevent damage to the engine or emissions system.

The Cold Weather Diesel Reliability Act seeks to address this operating-environment challenge by ensuring that modern diesel equipment can function reliably in cold weather conditions while continuing to support the broader national goals of reducing transportation emissions and improving air quality.

The following sections of my testimony describe the operating environment in Alaska, the life safety implications associated with equipment reliability in extreme cold and remote conditions, and the operational pressures transportation providers face while maintaining critical transportation corridors and supply chains during severe winter conditions.

## **OPERATING ENVIRONMENT IN ALASKA**

Transportation systems across Alaska operate through some of the longest and most severe winter conditions found anywhere in the United States and among the most challenging environments in the world for maintaining year-round transportation infrastructure. In many parts of the state, winter conditions persist for six months or more each year, and in northern regions above the Arctic Circle these conditions can extend up to eight months.

During these months, transportation crews often operate through extended periods of darkness, when daylight may last only a few hours each day, particularly in Arctic communities. Highway and airport crews must operate heavy equipment for long periods in darkness or low-light conditions while responding to storms, maintaining transportation routes, and supporting emergency access across remote regions.

Despite these conditions, highways, airports, and other transportation facilities must remain operational in the face of frequent winter hazards including heavy snowfall, drifting snow, icing conditions, winter rain events, avalanches, and occasional winter flooding. Maintaining safe and reliable transportation under these conditions requires continuous operations by highway maintenance crews, airport operators, and transportation providers who must both maintain infrastructure and continue moving freight, fuel, and essential supplies across Alaska's transportation system during severe winter conditions.

### **Duration of Winter and Extreme Cold**

Winter conditions across Alaska are defined not only by storms but by prolonged periods of sustained cold. In Interior Alaska, locations such as Fairbanks experience freezing temperatures for much of the year, including more than 150 days annually where temperatures remain below freezing for the entire day. Winter temperatures commonly fall between  $-30^{\circ}\text{F}$  and  $-50^{\circ}\text{F}$  across Interior Alaska, while Arctic regions frequently experience even lower temperatures during severe cold events. The coldest temperature ever recorded in Alaska—and the coldest temperature ever recorded in the United States was  $-80^{\circ}\text{F}$ , measured near Prospect Creek north of Fairbanks on January 23, 1971.

During the winter of 2025–2026, temperatures in Interior Alaska fell below  $-50^{\circ}\text{F}$  in multiple locations, including a recorded low of  $-62^{\circ}\text{F}$  near Chicken, Alaska, while the Fairbanks region experienced one of the coldest 30-day periods in roughly fifty years. These prolonged cold periods frequently coincide with extended winter darkness, requiring transportation crews to maintain highways and airports in extreme cold while operating heavy equipment with limited visibility.

Even communities well south of the Arctic Circle experience long periods of freezing temperatures. While Fairbanks experiences more than 150 days each year where temperatures remain below freezing for the entire day, coastal communities such as Kipnuk, located near  $59^{\circ}$  north latitude along the Yukon–Kuskokwim Delta, experience roughly 130 days annually where temperatures typically remain below  $32^{\circ}\text{F}$  for the entire day. The region’s treeless tundra, persistent winds, and frequent blowing snow create severe winter conditions for transportation and emergency response equipment.

These challenges were evident following Typhoon Halong this past winter, when western Alaska communities including Kipnuk required emergency response and recovery operations that continued into below-freezing temperatures. Experiences like these demonstrate that sustained cold-weather operating conditions extend across much of Alaska, including regions near the 59-degree latitude threshold referenced in the legislation.

### **Winter Hazards Affecting Highway Corridors**

Heavy snowfall and drifting snow regularly create severe travel conditions across Alaska’s highway system, particularly along routes that cross open terrain and mountain passes. During the winter of 2025–2026, both the Richardson Highway and the Dalton Highway, National Highway System routes that support access to the Trans-Alaska Pipeline System and North Slope oil fields, were closed multiple times due to heavy snowfall and severe drifting caused by high winds. In the past month alone, both highways were closed for several days as crews worked to clear deep snow and restore travel. These closures disrupt the movement of people, freight, fuel, and industrial supplies across one of Alaska’s most important transportation routes connecting the Pacific Ocean to the Arctic Ocean.

Avalanche hazards present another major winter challenge across several Alaska highway routes. Mountain passes receive heavy snowfall and unstable snowpack conditions that can trigger avalanches capable of blocking travel.

Along the Dalton Highway, Atigun Pass serves as the primary mountain crossing for freight and industrial traffic traveling between Interior Alaska and the North Slope oil fields. Avalanche activity in this area regularly causes closures of the Dalton Highway. Just last week, avalanche conditions forced the closure of Atigun Pass for approximately 48 hours while crews worked to assess conditions and restore safe travel.

Avalanche conditions also affect the Richardson Highway at Thompson Pass, one of the snowiest highway corridors in North America. Thompson Pass regularly receives more than 700 inches of snowfall annually, creating frequent avalanche conditions that can close the Richardson Highway during winter storms. This corridor is part of the National Highway System and supports transportation associated with the Trans-Alaska Pipeline corridor while providing the only surface transportation connection to the City of Valdez and the Valdez Marine Terminal.

Avalanche hazards also impact major highways such as the Seward Highway, an Interstate route connecting Anchorage and the Kenai Peninsula. This route passes through steep terrain along Turnagain Arm where heavy snowfall and unstable snow conditions regularly require avalanche mitigation and temporary closures to protect the traveling public. These response operations often occur during severe winter storms and extended periods of darkness, when maintenance crews must operate heavy equipment in limited visibility while working to reopen the highway.

### **Extreme Icing Events**

In addition to heavy snowfall and avalanche hazards, Alaska’s transportation corridors are also vulnerable to winter rain, icing, and flooding events. During certain winter storms, temperatures may briefly rise near or slightly above freezing, causing precipitation to fall as rain rather than snow. Because pavement surfaces often remain supercooled after extended cold periods, this rain can freeze immediately upon contact with roadways, bridges, and other transportation infrastructure, creating widespread ice conditions. As temperatures drop again following the storm, often rapidly, transportation crews must respond to these hazardous conditions while operating equipment in extreme cold.

These icing events can significantly disrupt daily transportation activity across Alaska communities. Widespread ice conditions often force school closures, delay freight movement, interrupt deliveries of fuel and essential supplies to remote communities, and limit the ability of transportation providers to safely operate vehicles and equipment. A notable example

occurred in December 2021 when Fairbanks experienced an unusual winter rain event that was followed by rapidly falling temperatures, creating extensive icing across roadways and infrastructure throughout the region, disrupting all travel for days.

A notable example of Alaska winter challenges occurred in 2015 along the Dalton Highway near the Sagavanirktok River in northern Alaska, where a combination of cold temperatures and unusual groundwater flows led to the formation of extensive aufeis that created severe icing conditions and repeatedly closed portions of the highway for several months. Aufeis forms when groundwater or river flow emerges onto the surface during winter and freezes layer by layer, creating thick ice formations that can extend across roadways and surrounding terrain for hundreds, or in extreme cases, thousands of feet. Because the water source continues to flow beneath the ice, these formations can persist and expand throughout the winter season. During the 2015 event, large ice accumulations repeatedly covered sections of the Dalton Highway, requiring ongoing response from maintenance crews using heavy equipment to remove ice, construct ice roads, and restore travel along this singular corridor serving the North Slope oil fields.

### **Aviation Lifelines in Remote Communities**

While these winter hazards affect Alaska's highway system, similar conditions also impact the state's aviation network. DOT&PF operates a large statewide aviation system serving hundreds of rural communities that depend on air transportation for year-round access. For many residents of rural Alaska, nearly everything that arrives in their community, from food and mail to everyday items ordered online, arrives by small aircraft operating from these rural airfields.

Most rural Alaska airports operate with minimal infrastructure. Many are gravel runways located in remote environments with only a lighted runway, a small apron area, and a single State of Alaska snow removal equipment building used to shelter the equipment necessary to maintain the airfield. Unlike larger airport systems in other parts of the country, these facilities typically do not have permanent on-site staff or extensive maintenance infrastructure.

Day-to-day airport maintenance is usually performed by a single contractor, often a local community member, who is responsible for ensuring the runway remains open and safe for aircraft operations at all hours. During winter storms and extreme cold, these operators must perform snow removal and airfield maintenance using equipment such as graders, loaders, dozers, and snowblowers to keep runways clear for aircraft operations.

Maintaining this equipment in remote locations presents additional challenges. When equipment parts or mechanical service are required, those parts and technicians often must be flown in from regional hubs such as Anchorage or Fairbanks. Because many of these communities have no road access, distances for maintenance support can exceed 500 miles, and response times are dependent on weather conditions, aircraft availability, and runway conditions.

Under these circumstances, reliable equipment performance is essential to maintaining continuous aviation access. When snow removal or runway maintenance equipment becomes disabled during winter conditions, it can delay freight deliveries, disrupt passenger travel, and temporarily limit access for emergency medical evacuation flights. In communities without road connections, keeping these small rural airports operational is critical to maintaining access to essential goods, services, and medical care throughout Alaska's long winter season.

### **LIFE SAFETY IMPLICATIONS OF EQUIPMENT RELIABILITY IN EXTREME COLD**

In the operating environment described above, transportation equipment failures are not simply operational inconveniences. Alaska's transportation systems operate across long distances, remote terrain, and extreme winter conditions where temperatures may fall well below  $-40^{\circ}\text{F}$ , and wind chills can exceed  $-70^{\circ}\text{F}$ . When equipment experiences reliability failures in these environments, operators and maintenance crews may be exposed to severe conditions while waiting for assistance.

### **Safety of Highway Maintenance Crews**

The men and women responsible for maintaining Alaska's highways operate snowplows, graders, loaders, snowblowers, and other heavy equipment during winter storms, severe cold, and extended periods of darkness. Remote maintenance stations along corridors such as the Parks Highway and Dalton Highway may be separated by more than sixty miles, and operators often work alone while responding to storms or equipment needs across large sections of highway.

When equipment experiences emissions-related shutdowns or reduced-power conditions, operators have been stranded in remote areas during periods of darkness, extreme cold, and high winds. District operators report numerous instances where these failures have required rescue operations by other crews.

These risks can be even greater in extremely remote environments such as winter ice roads. Alaska works with local communities to construct and maintain seasonal ice roads that follow frozen rivers and tundra corridors, providing winter transportation access for freight, fuel, and essential supplies to communities that are not connected to the road system. Crews operating on these routes work in highly isolated areas where conditions can change rapidly due to weather, river flow, or shifting ice. In these environments, dependable equipment is critical to maintaining safe operations and protecting the safety of the crews working in these remote conditions.

### **Safety of Commercial Transportation Operators**

Commercial transportation operators traveling Alaska's highways face many of the same life-safety risks. Freight carriers regularly move fuel, industrial supplies, and essential goods along extremely remote corridors such as the Dalton Highway, a roughly 500-mile route connecting Fairbanks to Prudhoe Bay on Alaska's North Slope. This highway crosses vast stretches of isolated terrain where there are no local emergency responders, and assistance must travel from either Fairbanks or Prudhoe Bay, often hundreds of miles away. When emissions systems trigger engine derates or shutdowns during winter operations, commercial drivers can become stranded in remote locations where temperatures frequently fall below  $-40^{\circ}\text{F}$  and winds create dangerous exposure conditions. Operators have reported incidents where trucks were disabled hundreds of miles from mechanical support along remote highway corridors, leaving drivers stranded for extended periods in extreme cold while assistance traveled long distances to reach them.

These failures can also leave fully loaded commercial trucks disabled in unsafe locations along the roadway, such as on curves, grades, or narrow sections of highway, where blowing snow, extended periods of winter darkness, and limited visibility create additional hazards for other drivers traveling the corridor. In many cases, DOT&PF maintenance crews responding to highway conditions become the first personnel to reach stranded drivers. These situations are not hypothetical - they are occurring today on Alaska's highways while professional drivers are transporting the fuel, food, and industrial supplies that communities and energy infrastructure across the state depend on.

### **Safety of the Traveling Public**

The traveling public also faces risks when equipment failures occur during severe winter conditions. School buses, passenger vehicles, and other essential transportation services operate daily on the same highways that experience extreme cold, blowing snow, and extended darkness. Transportation providers in Interior Alaska have reported instances where school buses experienced DEF-related failures during extreme cold events, forcing crews to respond immediately to move students off disabled buses and transport them safely to school. When vehicles become disabled during severe winter weather, emergency responders often face long time periods in reaching the scene across hazardous roads and long distances.

### **Emergency Response and First Responder Access**

Emergency responders face similar risks when critical equipment is affected by emissions-system failures in extreme cold. Fire departments, ambulances, and other emergency response agencies across Interior Alaska operate in winter temperatures that routinely fall between  $-20^{\circ}\text{F}$  and  $-40^{\circ}\text{F}$ . Emergency vehicles depend on reliable diesel engines to respond immediately to fires, medical emergencies, and rescue calls. However, responders report that DEF systems can freeze or malfunction during sustained extreme cold, forcing emergency vehicles into reduced-power or "limp mode" conditions that limit their ability to respond. In many communities, emergency services operate with only a small number of response vehicles, and the loss of even one apparatus can significantly affect the level of protection available to the public. When mechanical failures reduce the availability or performance of emergency vehicles during winter conditions, the ability of responders to protect life and property can be directly affected.

### **Safety of Aviation Operations and Emergency Access**

Life safety considerations are equally significant within Alaska's aviation system. Pilots and aviation operators rely on properly maintained runways, and snow removal equipment must function reliably during storms and severe cold to maintain

safe airfield conditions.

In one recent instance in rural Alaska, a runway was temporarily closed when the community's snow removal equipment became inoperable during winter conditions. Because no qualified mechanic was located in the community, repair parts and a technician first had to be flown to a nearby airport with scheduled air service. The mechanic and parts were then transported to the affected community by snowmachine in order to complete the repair and restore runway operations.

In another non-road-connected community in western Alaska, the airport's only loader became inoperable due to DEF-related mechanical issues while heavy snowfall was accumulating across the airfield. With no other loader available in the community, local operators reported that the runway could soon become unusable until the equipment could be repaired and returned to service. Because aviation provides the primary year-round access to these communities, parts and maintenance personnel must often be diverted from other locations and priorities in order to restore runway operations as quickly as possible. These situations illustrate how equipment reliability directly affects the ability of rural aviation facilities to remain operational during winter conditions, particularly in communities where aviation provides the only year-round access for passengers, freight, and emergency services.

## **OPERATIONAL PRESSURES**

The operational challenges associated with emissions-control systems in extreme cold environments are not theoretical concerns. Transportation providers across Alaska are encountering these reliability failures today while operating the equipment required to keep highways open, maintain rural airports, and support the movement of freight, fuel, and essential supplies during winter conditions.

Maintaining Alaska's transportation system requires the ability to rapidly scale response operations during severe winter events. Highway maintenance crews must regularly mobilize snowplows, loaders, graders, and snowblowers to respond to major snowstorms, avalanche activity, extreme wind events, and other disruptions affecting transportation corridors. Restoring safe travel often requires sustained operations across multiple maintenance districts and long stretches of highway within very short time-frames. When equipment reliability issues reduce the availability of operational equipment during these events, the department's ability to scale response operations quickly can be constrained, increasing the time required to reopen critical transportation routes.

### **Fleet Reliability Challenges in Winter Conditions**

Within DOT&PF's Statewide Equipment Fleet, emissions-related failures associated with DEF and related after treatment systems have become one of the most significant operational challenges facing our maintenance operations. Our Director of the Statewide Equipment Fleet has identified DEF-related issues as the single largest source of maintenance problems affecting modern diesel engines in the department's fleet. Internal maintenance data and field experience indicate that between 70 and 80 percent of diesel engine maintenance issues encountered in the past two years are related to emissions-control systems and their associated components. On any given day, approximately 10 percent of the department's heavy equipment fleet may be unavailable for service due to emissions-system related faults or repairs.

In response to these reliability challenges, DOT&PF has taken steps to rebuild and retain certain older heavy equipment at substantial cost in order to ensure that maintenance crews continue to have access to reliable machines capable of operating during extreme conditions. We have also been informed that transportation operators and other industries across Alaska are taking similar actions, investing in the refurbishment or continued operation of older equipment in order to maintain dependable performance during winter operations.

Commercial trucking companies operating across Alaska's highway system have reported experiencing similar emissions-system reliability issues during extreme cold operations, particularly along remote freight corridors. The Alaska Railroad has also informed the department of instances where DEF-related equipment failures have affected railroad operations during sustained cold-weather operations.

We have also heard directly from a range of other operators across Alaska whose work depends on reliable diesel-powered equipment during winter conditions. Rural transport operators responsible for delivering supplies to remote communities via ice roads and snow trails have reported similar equipment reliability challenges, as have school transportation providers operating buses during extreme cold. Fire departments in Interior Alaska have also raised concerns about emissions-system malfunctions affecting emergency response vehicles during sustained cold-weather operations.

In addition, operators supporting oil and gas development on Alaska's North Slope have informed the department that similar reliability issues are occurring in heavy equipment and industrial fleets operating in Arctic conditions. Because these industries rely on large diesel-powered equipment operating for extended periods in extreme cold, emissions-system reliability challenges can affect logistics operations and the movement of supplies supporting Alaska's energy infrastructure.

Together, these reports from transportation providers, emergency services, and industrial operators indicate that emissions-system reliability challenges in sustained cold-weather environments are affecting multiple sectors responsible for maintaining transportation access and public safety across Alaska.

### **Remote Repair Logistics**

The logistical challenges associated with repairing emissions-system failures are particularly significant in Alaska's remote regions. In many rural communities and maintenance districts, mechanics and specialized diagnostic tools are not located onsite. When equipment fails in these locations, repairs often require technicians and replacement parts to travel long distances by aircraft or highway before work can even begin.

For example, along the Dalton Highway, one of the most remote highway corridors in North America, maintenance equipment and commercial vehicles operate hundreds of miles from major maintenance facilities. When emissions-system failures occur along this corridor, mechanics and repair equipment must often travel long distances from Interior Alaska to reach the affected location. During winter conditions, these response times can be extended by severe weather, limited daylight, and hazardous travel conditions.

Similar challenges occur in Alaska's aviation-dependent rural communities. In Western Alaska, when a DEF-related system fault occurs on heavy equipment in communities such as Kotzebue, Nome, Bethel or surrounding villages, mechanics must first secure seats on limited regional air service to reach the affected community. Because these flights may operate only once per day, and are frequently delayed or canceled due to weather, it can take several days before a mechanic is able to arrive, diagnose the issue, and complete repairs.

During that time, critical equipment may remain out of service. In aviation-dependent communities, this can mean airport snow removal equipment is unavailable to clear runways during winter storms, potentially delaying or preventing aircraft operations until the equipment can be repaired and returned to service.

### **Workforce and Maintenance Capacity**

Maintaining modern diesel engines equipped with advanced emissions-control systems requires specialized diagnostic tools and highly trained mechanics. Across Alaska, transportation providers face ongoing challenges recruiting and retaining qualified mechanics with the expertise required to diagnose and repair these increasingly complex systems.

These workforce constraints compound the operational challenges created by emissions-system failures. When equipment requires specialized diagnostics or repairs, the limited number of qualified mechanics available across the state can extend repair times and delay the return of critical equipment to service.

These challenges are further intensified by Alaska's geography. When failures occur in remote maintenance districts, rural airports, or along isolated highway corridors, the mechanics capable of performing the repair may be located hundreds of miles away. The time required for technicians to travel to these locations, often by aircraft or long-distance highway travel, adds additional delays before repairs can even begin. As a result, workforce capacity limitations and Alaska's remote operating environment combine to extend equipment downtime during periods when transportation systems must remain fully operational during severe winter conditions.

### **WHY ACTION IS NEEDED**

The operational pressures described above are already producing measurable consequences across Alaska's transportation system. Emissions-system reliability issues are increasing safety risks for transportation operators and maintenance crews, driving higher fleet maintenance and repair costs, and reducing the ability to respond quickly to disruptive events affecting the transportation system.

For highway maintenance crews, equipment failures during severe winter storms can slow snow removal operations and

extend the time required to reopen highways after storms. In some cases, equipment has been transported hundreds of miles to reach facilities capable of performing repairs. One recent example involved a maintenance unit that had to be hauled more than 500 miles for repairs following an emissions-system failure, resulting in more than \$45,000 in operating and replacement costs while the equipment remained out of service.

The consequences are magnified in Alaska's remote regions. When emissions-system failures occur in rural maintenance districts or aviation-dependent communities, mechanics and replacement parts may need to travel hundreds of miles by aircraft or highway before repairs can even begin. During these delays, essential equipment such as airport snow removal machinery may remain out of service, potentially limiting aviation access for passengers, freight deliveries, and emergency medical services.

At the same time, Alaska's transportation system supports national priorities associated with Arctic logistics, national defense mobility, and the movement of energy and resource development supplies. Maintaining reliable equipment performance under these conditions is essential to keeping these transportation systems functioning safely and consistently.

Federal policy has already recognized that mission-critical systems operating in remote Arctic and sub-Arctic environments may require operational flexibility to maintain reliability. For example, EPA regulations provide accommodations for diesel-powered generators that supply electricity to isolated rural communities in Alaska, where power systems must operate continuously in remote cold-weather conditions. Similarly, military equipment operating in extreme environments has long been granted operational flexibility to ensure mission readiness in severe cold.

The Cold Weather Diesel Reliability Act reflects the same practical recognition, that equipment operating for extended periods in sustained below-freezing temperatures may require different operating considerations than equipment designed primarily for temperate climates.

## **CONCLUSION**

Transportation systems across Alaska operate under some of the most demanding environmental conditions in the United States. Long winter seasons, sustained below-freezing temperatures, vast distances, and remote transportation corridors create conditions where equipment reliability is directly connected to life safety and the continued movement of freight, fuel, and essential supplies. In many areas of the state, highways and airports provide the only transportation connection between communities, leaving no practical alternatives when disruptions occur.

The Cold Weather Diesel Reliability Act provides a targeted and practical response to these challenges by recognizing the unique operating conditions faced by transportation systems in Arctic and sub-Arctic environments. Providing flexibility for equipment operating in sustained cold-weather conditions would help ensure that transportation providers can maintain reliable operations while continuing to support national goals of reducing emissions and improving air quality.

Alaska also continues to support national efforts to reduce transportation emissions and adopt emerging technologies. DOT&PF has recently achieved federal certification that Alaska's Alternative Fuel Corridor under the National Electric Vehicle Infrastructure (NEVI) program between Anchorage and Fairbanks is fully built out, providing publicly accessible fast-charging infrastructure along approximately 358 miles of highway connecting Alaska's major population centers.

Members of the Committee are welcome to visit Alaska to see these operating conditions firsthand. Whether traveling Alaska's highways alongside the operators and truck drivers who keep freight moving during winter storms, or flying to rural communities that depend on aviation as their primary transportation lifeline, observing these operations directly provides a clear understanding of the challenges involved. The Alaska Department of Transportation and Public Facilities would be honored to host members of the Committee and their staff and provide the opportunity to experience these operating conditions directly.

Thank you for the opportunity to testify. I appreciate the Committee's attention to this issue and look forward to answering any questions.

Ryan Anderson, P.E.  
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