

Episode 56FV July 6, 2023. The Alaska Railbelt, a concept of clean renewables powering a statewide electric grid along Alaska's railway.

United States

https://www.uaf.edu/acep/files/media/ACEP_Railbelt_Decarbonization_Study_Public_Survey_Report_final.pdf

Railbelt Decarbonization Pathways of The Alaska Center for Energy and Power (ACEP)

Study Public Comment Summary

June 2023.

Railbelt Decarbonization Pathways Study. The Alaska Center for Energy and Power (ACEP) is examining methods to reduce and ultimately eliminate net carbon emissions from Alaska's Railbelt electrical system. The Railbelt is the largest regional electric grid in Alaska, spanning about 700 miles from Fairbanks to Homer following the Alaska Railroad. This Railbelt serves about 70% of Alaska's population and about 75% of Alaska's electrical load. Currently, about 80% of the Railbelt's electrical generation comes from fossil fuels and 20% comes from renewable sources, mainly hydro. The Alaska Center for Energy and Power (ACEP) is exploring and quantifying pathways toward reduced Railbelt electric grid carbon emissions while promoting clean energy development. The project is funded by the State of Alaska and the University of Alaska Fairbanks with support from the Office of Naval Research. It has the active technical assistance of the Alaska Energy Authority and the four Railbelt utilities: Homer Electric Association, Chugach Electric Association, Matanuska Electric Association, and Golden Valley Electric Association. The project looks at a goal of zero net carbon emissions by 2050. Currently there are no state-wide carbon emission goals. The Railbelt electric co-ops have carbon reduction goals. The first phase of the project focuses on computer simulation models to understand the effects of technologies and their locations on the existing grid.

RAWSEP View: RAWSEP's editor does not agree with use of nuclear power, since continued use of nuclear power brings up extreme security and human health concerns in the mind of RAWSEP's editor. The author of this Opinion seems to look back fondly at use of nuclear power in Germany in the 1980's which RAWSEP's editor would not agree with. This Opinion writer seems to favor negotiating with utilities in Alaska to hand off some traditional electrical utility power to local community control, possibly in exchange for some electrical rate deregulation. The Opinion below is written by Gwen Holdmann, Senior Researcher, University of Alaska Fairbanks (U A F) Associate Vice Chancellor for Research, Innovation & Industry Partnerships. On one hand, in Alaska, there is the Alaska State Legislature that argues that the U S Environmental Protection Agency is moving too fast in requiring Alaska residents to leave behind polluting wood stove use. On the other hand, in Alaska, there is the University of Alaska Fairbanks, where plans are being made to extend the electrical grid to more and more areas of Alaska, along the path of the Alaska railroad, and this is called the Railbelt. From RAWSEP's point of view, extension of an electrical grid to all areas of a state with use of more and more truly clean renewable energy (mainly hydro power in Alaska, but including wind and solar energy) to power an electrical grid, will bring the day closer when there are no more wood stoves used in Alaska, and that is a good thing. The author describes home heating projects in isolated communities of Alaska: 1)A wind farm in Kongiganak, Alaska heats homes and 2) Kotzebue Electric Association heats a hospital. These are examples of rural successes where there is no electric rate regulation. 3)Aniak is an example of rural electric rates out of control, where there is no rate regulation. 3)The current situation in Aniak, with more than tripling rates in a month, is an example where the lack of rate regulation can create untenable situations for residents. The opinion author stresses that "Reducing the cost of heating is a big deal in rural Alaska. While the cost of electric power is subsidized through the Power Cost Equalization program for residential users, the cost of heating oil is not, with the exception of some low income heating assistance programs. Therefore, reducing the cost of heating, whether indirectly through home weatherization improvements or directly through a supplemental source of heating can make a big difference in rural household budgets." The author's colleague at ACEP, Dominique Pride, is working with residents in poor air quality areas (poor air quality caused by wood stove use) of 4)North Pole to install Steffes stoves in about 15 homes, artificially mimicking a time-of-use rate by providing a subsidy to the homeowner equivalent to a 10 cents power rate. Another colleague, Phylcia Cicilio, is working with the Railbelt utilities to develop scenarios for decarbonization of the Railbelt grid by 2050, (including potential uptake of electric vehicles (EV's) and electric heating), and potential impact to consumer rates. The opinion author concludes that "Technology transitions don't happen uniformly all at once. There are pockets of early adopters, or niche markets, where technology uptake is much faster than the norm. Rural Alaska is an example of such a market." And Alaskan Community example number 5) is Shungnak, a small community in the Northwest Arctic with some of the state's highest energy costs. In 2020, Shungnak installed a large solar farm, large enough to shut off their diesel power plant and

operate 100% off solar when the sun is shining. Given their location north of the Arctic Circle, this happens quite often in the summer months. [Globally, electricity accounts for roughly 20% of final energy demand today, up from around 15% twenty years ago.](#) That number is only expected to [grow in coming decades.](#) There is no reason to think Alaska can or should go in a different direction. Instead, we could choose to [embrace this future and electrify everything](#), or as much as we reasonably can.

Railbelt Decarbonization

Alaska, Anchorage

[OPINION: Innovation at the margins – lessons learned from rural Alaska](#)

Anchorage Daily News

July 4, 2023.

Anchorage Daily News

Children run along a boardwalk in Kongiganak, with the community's 475 kw wind farm in the distance. (Amanda Byrd / Alaska Center for Energy and Power

[Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates.](#)

Kongiganak, Kotzebue, Aniak, North Pole and Shungnak communities in Alaska are part of the Railbelt, using alternative renewable power and deregulated rates for electricity to work toward decarbonization. [This is part of a series of articles on Alaska's energy future published by the ACEP.](#)

Alaska

[Alaska to sue EPA over failure to comply with wood stove standards - KTVF](#)

KTVF

EPA current emission standards result in continued sales of high-emitting wood stoves that add smoke to the air and intensify the poor air quality ...

[Alaska and 10 other states tells EPA 'see you in court' over wood stoves](#)

Must Read Alaska

Many residents heavily depend on wood stoves to keep their homes warm. Atmospheric inversions in the winter cause smoke to settle and the air ...

Arizona, Phoenix

[Left Now Coming for Your Environmentally 'Damaging' Wood-Burning Stoves](#)

The Western Journal

Some blue states are red hot over the blue haze of smoke from a wood-burning stove. Alaska, Illinois, Maryland, Massachusetts, Minnesota, ...

California, Palm Springs

[How Fireworks Can Impact Air Quality - KESQ](#)

KESQ

Combustion particles and metallic compounds (like those released from fireworks) are PM2.5 pollutants. "PM 2.5 tends to be more hazardous because ...

Florida, Miami

[Wood pallets catch fire in Hialeah Gardens; no injuries reported - WSVN 7News](#)

WSVN

The fire appeared to be under control but heavy smoke could be seen in the area. Copyright 2023 Sunbeam Television Corp. All rights reserved.

Florida, Pensacola

[2 people, 1 dog, 1 cat dead after multiple residential fires in Pensacola area](#)

Pensacola News Journal

"Crews arrived on scene to find smoke and fire showing from the single ... "Upon arrival, there was an RV that showed flames and smoke," Wood told ...

Illinois, Alton

[Illinois suing EPA over wood stoves - Alton Telegraph](#)

Alton Telegraph

... general from Illinois and nine other states plan to sue the U.S. Environmental Protection Agency over emissions standards for wood-burning stoves.

Illinois, Chicago

[Chicago Weather Alert: Severe storms by late afternoon, evening - CBS News](#)

CBS News

... is very much like wildfire smoke, contributing large amounts of PM 2.5. That's the same type of particulate matter in wildfire smoke.

Illinois

[Illinois quick hits: Flood recovery; suspect killed in shootout; wood-burning stoves rule - KPVI](#)

KPVI

Wood-burning stoves rule. Attorneys general from Illinois and nine other states plan to sue the U.S. Environmental Protection Agency over its

Iowa, Dubuque

[EPA Wood Heaters Lawsuit Threat | National | telegraphherald.com](#)

Telegraph Herald

Don Sakis checks the fire in his Riteway wood stove at his home on Jan. ... Health · U.s. News · General News · Wood Smoke;wood Stoves;woodstove ...

Massachusetts, Greenfield

[Lawmakers weigh wood-burning for energy, heat - Greenfield Recorder](#)

Greenfield Recorder

The so-called climate roadmap bill approved in 2021 "inadvertently" defined woody biomass (burning wood for energy) as a non-carbon emitting resource, ...

Michigan, Ortonville

[Smoky air blankets community | The Citizen](#)

Ortonville Citizen

Lots of smoke. ... with the smoke traveling to Michigan via the jet stream. ... sometimes orange sky with the light smell of burning wood.

New York

[New York, Your Pizzas Will Be Just Fine - The Takeout](#)

The Takeout

... on how to enact a rule that aims to cut down airborne particulate matter from wood- and coal-fired pizzeria ovens installed prior to 2016.

[Air Quality Health Advisory Issued for New York City Metro and Long Island Regions](#)

New York State Department of Environmental Conservation

Elevated levels of fine particulate matter (PM2.5) pollution were ... PM 2.5 can be made of many different types of particles and often come from ...

Ohio, Ottawa

[Wildfire Smoke Impacts | Agriculture | putnamsentinel.com](#)

Putnam Sentinel

Fine particulate matter (PM 2.5) in smoke inhaled in the lungs can lead to many health problems. Wildfire smoke symptoms include coughing, ...

Oregon

[Oregon DEQ finds a silver lining in the arrival of the invasive emerald ash borer - KGW](#)

KGW

A group of state agencies are partnering in the beetle battle and the likely consequence of that fight: wood-smoke emissions from infected or dead ...

Oregon

[10 states including Oregon plan to sue EPA over pollution standards for wood-burning ...](#)

Oregon Live

Published: Jul. 04, 2023, 11:13 a.m.. wood-burning stove. Don Sakis checks the fire in his Riteway wood stove at his home on Jan ..

Washington State

[Research led by UW undergrad shows ultrafine air pollution reflects Seattle's redlining history](#)

University of Washington

... long-term average levels of four pollutants: soot (or black carbon), fine particles (PM 2.5), nitrogen dioxide (NO₂) and ultrafine particles.

Washington, Seattle

[2 things just happened that could affect your wallet: Today So Far - KUOW](#)

KUOW

... 10 states plan to sue the EPA over standards for residential wood-burning stoves ... It's from a mix of fireworks smoke and wildfire smoke, ...

Washington DC

[Just Ask Asthmatics How Perilous Wildfire Smoke Can Be - The Washington Post](#)

The Washington Post

Combustion engines, industrial facilities and wood-burning stoves don't just pump out carbon dioxide; they also add pollutants that can inflame ...

Wyoming

[Wyoming DEQ to discuss commercial wood-burning permit for Wilson on Friday](#)

JHNewsAndGuide.com

The Department of Environmental Quality's air quality specialists will hold a meeting July 7 to gather information on a wood waste burner set to ...

Canada

[68% Link Wildfires to Climate Change as 2023 Sets Canadian Record - The Energy Mix](#)

The Energy Mix

... based on exposure to PM 2.5 fine particulate matter, a recognized, ... firefighting expenses, household costs to avert PM 2.5 exposure, ...

Canada, Northwest Territories, Yellow Knife, Cabin Radio

['No danger' over smoke plumes near YK, Tsiigehtchic, Tulita, Fort Smith - Cabin Radio](#)

Cabin Radio

In the distance, a grey, near-horizontal plume of wildfire smoke can be ... In the South Slave, two new wildfires were reported in Wood Buffalo ...

Canada, Northwest Territories, Yellow Knife, My True North Now

[Six New Fires in Wood Buffalo Update - My True North Now](#)

My True North Now

Fire 18, Fire 19, Fire 20 and Fire 21 currently pose no risk to any communities and are burning in remote areas of the park. They are being monitored ...

Canada, Ontario, Windsor

[Windsor West: Hourly Fine Particulate Matter Concentrations 12016 - Air Quality Ontario](#) - Air Quality Ontario
[Full Coverage](#)

United Kingdom

[Chris Witty: Air fresheners and wood burners are air pollution risk | The Independent](#)

The Independent

He also said people who use wood burners should only do so "when it really matters to them for aesthetic reasons" rather than as the main way of ...

[Chris Witty: Air fresheners and wood burners are air pollution risk - Yahoo Sport UK](#)

Yahoo Sport UK

Air fresheners and wood burners contribute to air pollution despite many people believing the reverse to be true, Sir Chris Whitty has said.

India

[Urban, Rural India Similarly Polluted, But Mitigation Focuses On Cities: Report - NDTV.com](#)

NDTV.com

The analysis found that Particulate Matter 2.5 levels in rural and urban regions across India are very similar. The decline in the levels has also ...

[PM2.5 pollution in India dips by 19 per cent between 2017 and 2022: Analysis](#)

Tribune India

Urban India's PM 2.5 levels in 2022 stood at 46.4 microgram per cubic metre, down by 18.7 per cent compared to 2017.

The study shows the annual

India, Mangalore

[Cities, villages see decline in air pollution but still hazardous: Report - Daijiworld](#)

Daijiworld

PM 2.5 is fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller. Rural regions saw PM 2.5 levels decline by 19.1 ...

Residents Against Wood Smoke Emission Particulates, see <https://RAWSEPresidents.wordpress.com> and click on the nearest right icon for the latest month, July 2023, of PDFs of articles with U R L's to search on. To the right of that, Stickers to handout for RAWSEP <https://rawsepresidents.wordpress.com/rawsep-sticker-templates-get-your-two-cents-in/> Games such as 1)Bingo for RAWSEP, 2)Crosswords for RAWSEP, 3)EndWoodSmokeJeopardy.

4)EndWoodSmokeMonopoly Games, 5) a RAWSEP Flyer, 6)the Un-Twist-it Game, and 7)"Vending Machines for PM2.5 monitors", and icon links to 30 minute Youtube videos and Spotify podcasts as well as podcasts on Amazon Music Prime (free for Prime subscribers), podcasts.google.com, Cast Box, and Pocket Cast (Pocket Cast is only free on the phone App. Pocket Cast works on Apple phones) and, below those icons, icon links to monthly PDFs of articles with URL's to search on, from June 2023 to May 2022.





Nonfatal heart attacks
 Irregular heartbeat
 Aggravated asthma
 Decreased lung function

PURPLEAIR.COM
PurpleAir Zen Air Quality Monitor 
 Measure real-time PM2.5 concentrations for residential, co...

[Learn more](#)

Timelapse of the 4th of July. Even now, numbers are still high in many places across the country. The last two pics are this morning.

