

Ready for 100%!

Agenda

- Background presentation
- Question and answer
- Feedback forms and 1-1 discussion

Why Are We Here?

We have 12 years to limit climate change catastrophe, warns UN

Urgent changes needed to cut risk of extreme heat, drought, floods and poverty, says IPCC

● **Overwhelmed by climate change? Here's what you can do**



Are We Really Running Out of Time to Stop Climate Change?

'Bleak' U.N. Report on a Planet in Peril Looms Over New Climate Talks

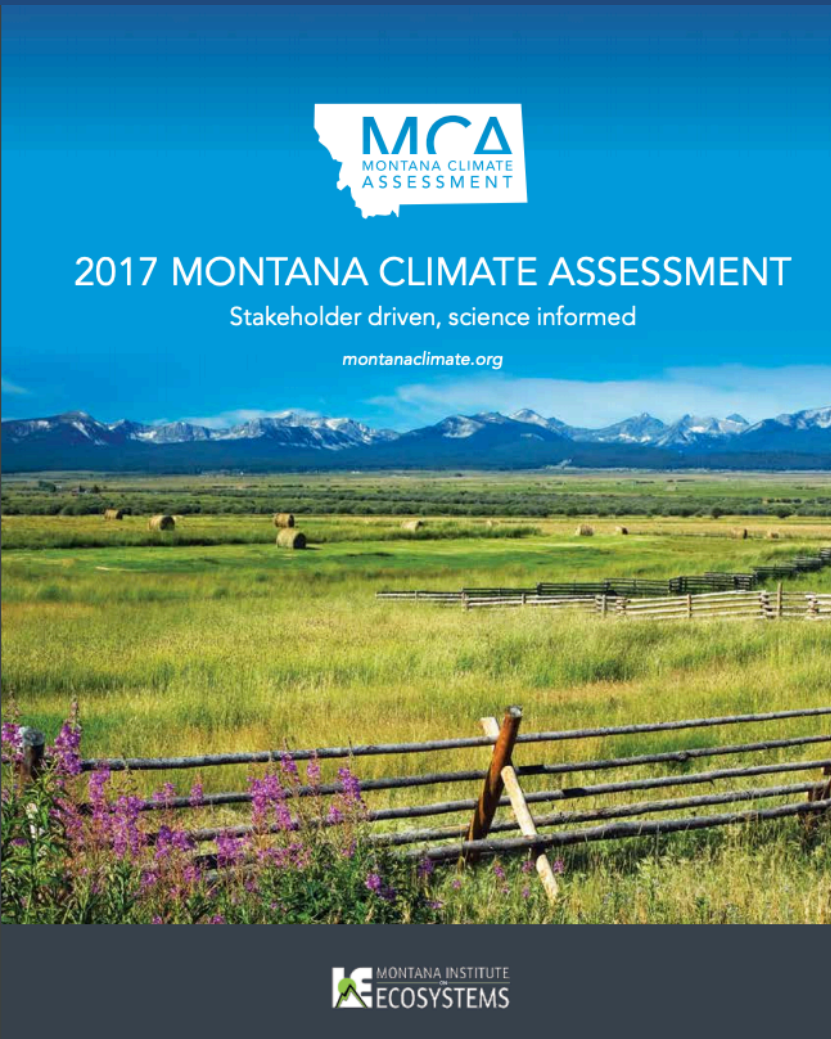
Why Are We Here?

Intergovernmental Panel on Climate Change (IPCC)

Major greenhouse gas emission reductions needed by 2030 to contain global mean temperature increase to 2 degrees Celsius.

Negative impacts will still be felt.

Why Are We Here?



For Central Montana, including Helena, climate change projected to cause:

- Increased annual temperatures
- Hotter summers
- Reduced low-elevation snowpack
- Earlier spring snowmelt
- More frequent and intense droughts, wildfires, and wildfire smoke
- Deleterious impacts to ecosystems, human health, and the economy

Change in Monthly Precipitation (in.) RCP 8.5 (2040–2069)

(B)



Figure 2-20. Projected monthly change in average precipitation (inches) for each climate division in Montana in the mid-century projections (2040–2069) for (A) stabilization (RCP4.5) and (B) business-as-usual (RCP8.5) emission scenarios.

Monthly Change in Average Temperature RCP 8.5 (2040–2069)

(B)

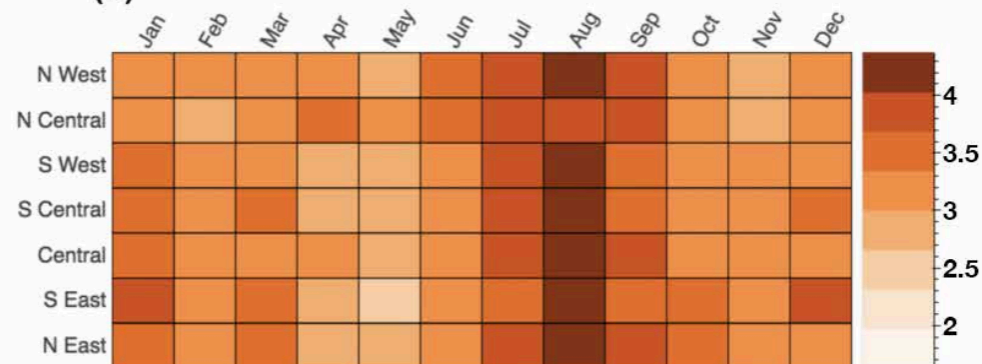


Figure 2-11. The projected monthly increase in average temperature (°F) for each climate division in Montana in the mid-century projections (2040–2069) for the (A) stabilization (RCP4.5) and (B) business-as-usual (RCP8.5) emission scenarios.

Local Action Needed



Federal govt
going backward
on climate



State legislature
same...



Local utility
same...

If we do nothing, Helena will be
taken backward on climate

Example of Local Action

More than 150 cities have passed resolutions setting a 100% clean/renewable goal of some kind (by 2030, 2035, etc)

- Spokane, WA
- Boise, ID
- Salt Lake City, UT
- Moab, UT
- Fort Collins, CO
- Columbia, SC
- Fayetteville, AR
- City and County of Missoula
- 150+ more

What Can We Do in Helena?

- Option: City resolution
- Declare Helena supports our community being powered by 100% clean electricity
- Purpose: clearly express to decision makers the direction we want to go
 - Help them make decisions that reach this future
 - Local utility
 - Legislature
 - State and federal govt agencies
 - Others

The Kickoff

September 20th worldwide climate strike!

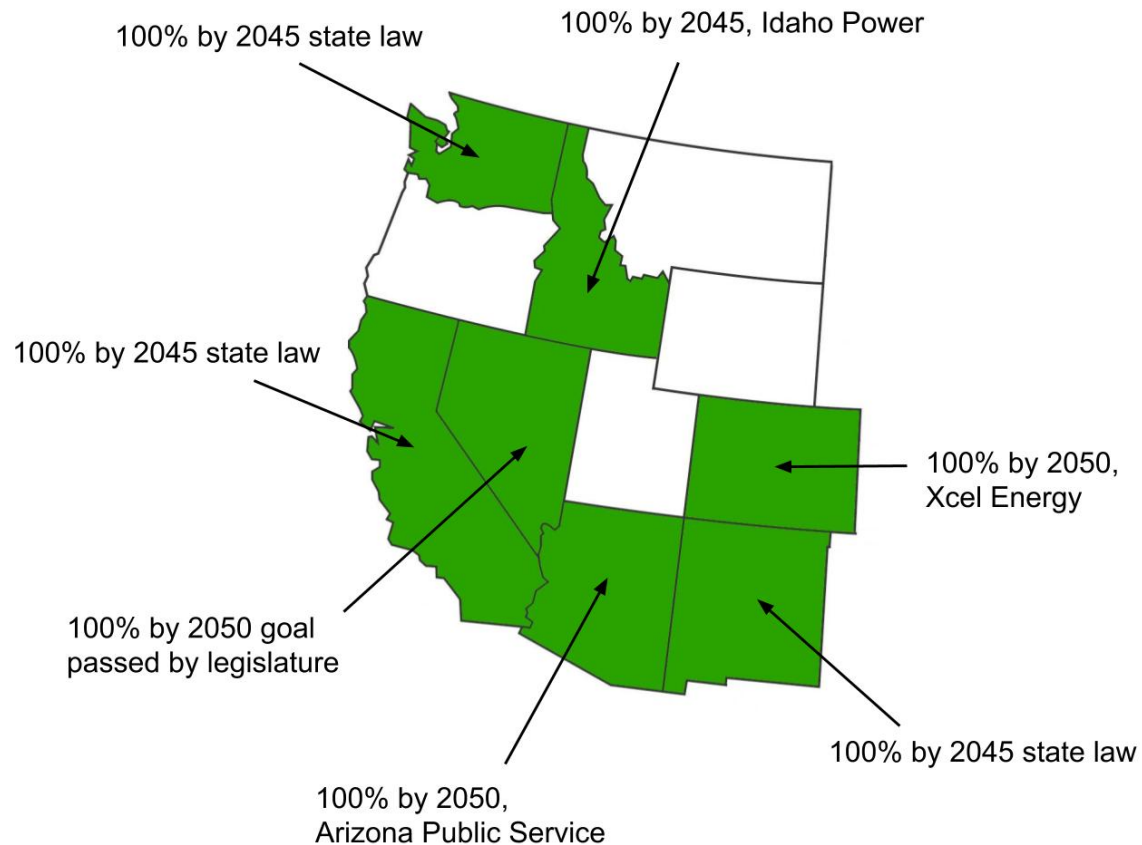


Helena Would Not Be Alone

Cities, states, and utilities around the country are aiming for 100%

Helena Would Not Be Alone

100% Clean, Renewable, or Carbon-Free Energy (State Law or Goal of Largest Utility)



Example: Spokane, WA

City of Spokane passed
100% ordinance

Local utility adopted 100%
clean electricity goal

THE SPOKESMAN-REVIEW

NEWS > SPOKANE

Spokane City Council adopts law calling for 2030 adoption of exclusively renewable electricity

UPDATED: Tue., Aug. 21, 2018, 10:39 a.m.



FILE - Spokane City Hall, seen here in a 2012 photo. (Jesse Tinsley / The Spokesman-Review)

By Kip Hill

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The city of Spokane legally challenged itself Monday night to receive all of its electricity from renewable sources by 2030, after a language change that addressed some of the concerns brought by business and utility interests.

Avista builds on commitment to renewable energy with goal of 100 percent clean electricity by 2045

04/18/19

Company plans for carbon-neutral electricity supply by the end of 2027



PDF Version

SPOKANE, Wash., April 18, 2019 (GLOBE NEWSWIRE) -- Avista(NYSE:

AVA), a leader in clean electricity, today announced its goal to serve its customers with 100 percent clean electricity by 2045 and to have a carbon-neutral supply of electricity by the end of 2027. This announcement bolsters Avista's long-standing history of and well-established approach to providing clean, reliable and affordable energy to the customers and communities it serves.

"We're proud to announce this 100 percent clean electricity goal as an important step forward in caring for our environment while continuing to meet the energy needs of our customers and communities today and well into the future," said Dennis Vermillion, president of Avista. "Since Avista's founding on clean, renewable hydro power in 1889, we've served our customers with an electric generation resource

Example: Boise, ID

CITY of BOISE

Boise Becomes Idaho's First City to Set 100 Percent Clean Electricity Goal

April 3, 2019

Boise City Council passed a bold clean energy goal Tuesday night, committing to establishing community-wide use of 100 percent clean electricity in the City of Boise by 2035.

The commitment comes on the heels of two important announcements impacting clean energy in Boise. Last year, at his 2018 State of the City address, Mayor David Bieter set a municipal government goal of 100 percent clean electricity for city-owned buildings by 2030. Last week, Idaho Power, the electricity utility for the City of Boise [announced their own goal](#) of 100 percent clean energy system-wide by 2045.

"Our city continues to demonstrate our steadfast commitment to the environment, our economy and future generations," said Mayor Bieter. "Boise has always been a city of bold action to ensure the success of those who come after us, and this goal commits Boise as a national leader on policies that dramatically strengthen that commitment."

6 KIVI BOISE
ON YOUR SIDE

NEWS

Idaho Power announces 100% clean energy goal by 2045

Posted: 9:12 AM, Mar 26, 2019 Updated: 9:12 AM, Mar 26, 2019

By: Steve Bertel



BOISE — Idaho Power Tuesday announced a goal to provide 100-percent clean energy by the year 2045. In addition to its hydropower facilities -- which typically meet almost half its customers' energy demands, officials said -- Idaho Power plans additional investments in wind, solar and other clean sources.



How to join our team

The Utah pathway to 100% net clean electricity by 2030

Cities passed 100% resolutions

- Ogden
- Salt Lake City
- Salt Lake County
- Park City
- Moab
- Kamas
- Oakley

Launches Successful Collaboration

HB 411 Community
Renewable Energy Act



The Utah Process (v1.0?)

1. Cities pass ordinance setting goal of 100% clean electricity by 2030.
2. Utility customers in those cities mailed twice with info, chance to opt-out.
3. Utility procures enough clean electricity to offset annual electricity consumption of participating customers.
4. Participating customers pay separate utility rates based on a cost-benefit calculation.

“Quantifiable costs and benefits to the qualified utility and all of the qualified utilities customers”

City Resolution = Start of Effort

“We don’t actually know how to get there right now.”
- *Arizona Public Service CEO Jeff Guldner (1/22/20)*

Guldner told Greentech Media he hopes the plan will inform a "constructive policy dialogue" on how to clean up the grid without sacrificing reliable, affordable power.

The screenshot shows a web page from Greentech Media (gtm:). The navigation bar includes links for Solar, Grid Edge, Storage, Wind, Trending, Podcasts, and Downloads. The article is categorized under 'GRID EDGE' and is titled 'Arizona Utility APS Commits to Carbon-Free Power by 2050'. The byline is 'JULIAN SPECTOR | JANUARY 22, 2020'. The main image is a cityscape at sunset with mountains in the background. Below the image is a caption: 'Sunshine, batteries and nuclear power will drive a push for carbon-free electricity in Arizona.' The article text states: 'Arizona Public Service, the largest utility in the sunny Southwestern state, committed itself Wednesday to 100 percent carbon-free power by 2050. The promise includes interim targets of 65 percent clean electricity by 2030, with 45 percent coming from renewables, and removing coal from its portfolio by 2031. With this decision, APS joins a growing list of major electric utilities committing to decarbonize their production. Xcel Energy, which spans eight states in the center of the'.

On the right side of the page, there is a sidebar with a 'TOP ARTICLES' section. The first article listed is 'How 4 Top US Utilities Are Grappling With the Energy...' with a 'MOST POPULAR' tag. Below it is another article titled 'Canada's e-Zn Raises Millions to'.

Clear Goals Organize Our Energies and Skills to Solve Problem

“We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills...”

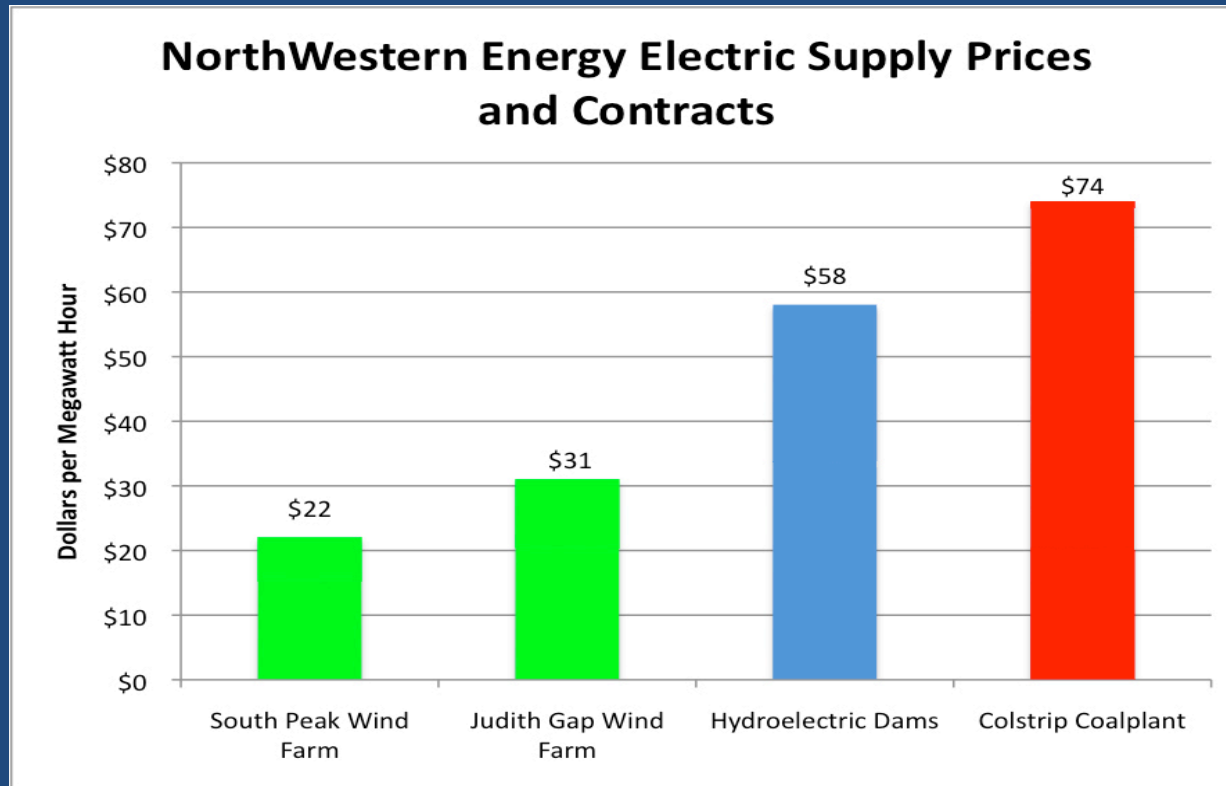
-JFK

Rice University

Sept 12, 1962



Low Cost of Renewable Energy Makes it Possible

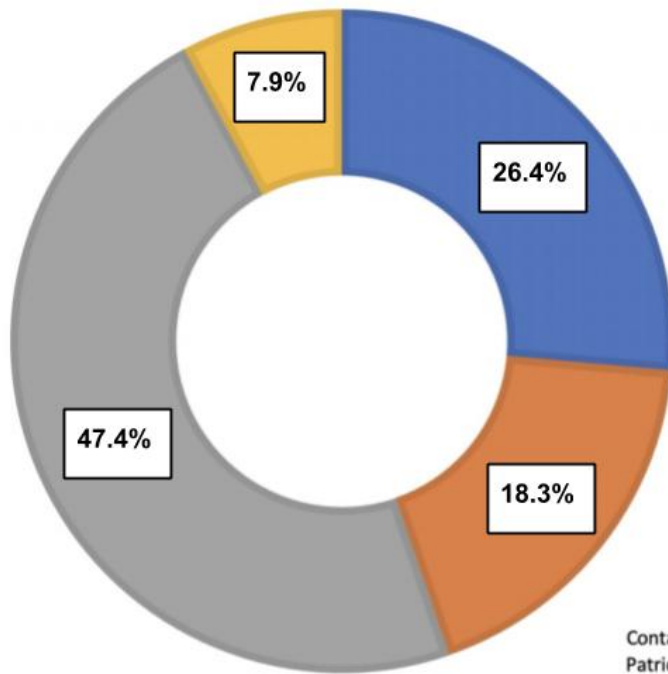


Source: Montana Consumer Counsel (2018)

Helena Emission Sources

DRAFT 2018 HELENA COMMUNITY CO₂ EMISSIONS 569,443 MT ≈ 19 MT/PERSON

■ Electricity ■ Natural Gas ■ Transportation ■ Waste



Contact:
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Theory of Change

- Electrify everything
- Clean up the grid

Striving for 100% clean electricity grid unlocks ability to decarbonize other sectors

Note: White boxes added for visual clarity

Some Potential City Steps

Expand the city's rooftop solar revolving loan program.

Convert to LED street lighting.

Improve energy efficiency of city buildings.

Deploy money-saving solar on city-owned properties.

Work collaboratively with NorthWestern and other MT cities to unlock new policy and regulatory options.

Around Montana

Missoula city and county:
100% clean electricity
by 2030

Bozeman mayor proclamation:
100% net renewable energy
by 2030

Kick the coal: Missoula city, county unite to pass 100 percent clean electricity resolution

BY MARTIN KIDSTON

APRIL 4, 2019

f Facebook t Twitter p Pinterest in LinkedIn e Reddit + 4.5K SHARES



Supporters of a joint resolution signed by the city of Missoula and Missoula County on Wednesday packed the City Council chambers to express support for the effort, saying climate change must be addressed without delay. (Martin Kidston/Missoula Current)

Driven by moral imperative and public demand, including that of Missoula's largest employers, the city and county on Wednesday adopted a resolution to kick fossil fuels and achieve 100 percent clean electricity across the urban area by 2030.



Proclamation of Intent Related to the City of Bozeman's Climate Action Plan

WHEREAS, an overwhelming body of scientific evidence indicates that climate change is occurring on our planet, and

WHEREAS, peer-reviewed scientific studies have concluded that climate change is caused in large part by human activity, and

WHEREAS, due largely to the combustion of fossil fuels, atmospheric concentrations of carbon dioxide, the principal greenhouse gas, are at a level unequalled for more than 400,000 years and as a result, an enhanced greenhouse effect is trapping more of the sun's heat near the earth's surface and gradually pushing the planet's climate system into uncharted territory, and

WHEREAS, global average temperatures have risen both on land and in the oceans, with observable impacts already occurring that foretell increasingly severe climate change, and

More to come?

Helena Can Be Next!



Thank you!

Q & A