MEMBERS PRESENT

Representative John Lincoln, Co-Chair
Representative Geran Tarr, Co-Chair
Representative Grier Hopkins, Vice Chair
Representative Sara Hannan
Representative Chris Tuck
Representative Ivy Spohnholz
Representative Dave Talerico
Representative George Rauscher
Representative Sara Rasmussen

MEMBERS ABSENT

All members present

OTHER LEGISLATORS PRESENT

Representative Zack Fields

COMMITTEE CALENDAR

PRESENTATION(S): ALASKA’S CHANGING CLIMATE
- HEARD

HOUSE RESOLUTION NO. 12
Establishing a House Special Committee on Climate Change.

- HEARD & HELD

HOUSE BILL NO. 27
"An Act relating to the manufacture, sale, distribution, and labeling of child-related products containing certain flame retardant chemicals; relating to an interstate chemicals clearinghouse; adding unlawful acts to the Alaska Unfair Trade Practices and Consumer Protection Act; and providing for an effective date."

- SCHEDULED BUT NOT HEARD

PREVIOUS COMMITTEE ACTION

BILL: HR 12
SHORT TITLE: HOUSE SPECIAL COMMITTEE ON CLIMATE CHANGE
SPONSOR(s): REPRESENTATIVE(s) JOSEPHSON

05/14/19  (H)  READ THE FIRST TIME - REFERRALS
05/14/19  (H)  RES
01/24/20  (H)  RES AT 1:00 PM BARNES 124

WITNESS REGISTER

BRIAN BRETTSCHNEIDER, PhD, Research Associate Academic
University of Alaska Fairbanks
Anchorage, Alaska
POSITION STATEMENT: Provided a PowerPoint presentation entitled, "Alaska House Resources Committee Presentation on Climate Change in Alaska," dated 1/24/20, and did not express support of or opposition to proposed legislation.

REPRESENTATIVE ANDY JOSEPHSON
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Speaking as the sponsor, introduced HR 12.

NATHANIEL GRABMAN, Staff
Representative Andy Josephson
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: On behalf of Representative Josephson, sponsor, provided a PowerPoint presentation entitled, "HR 12, Establishing a House Special Committee on Climate Change."

ACTION NARRATIVE

2:20:07 PM

CO-CHAIR JOHN LINCOLN called the House Resources Standing Committee meeting to order at 2:20 p.m. Representatives Hannan, Talerico, Tarr, Hopkins, and Lincoln were present at the call to order. Representatives Spohnholz, Rasmussen, Rauscher, and Tuck arrived as the meeting was in progress. Representative Fields also was present.

PRESENTATION(S): Alaska's Changing Climate

2:20:52 PM

HOUSE RES COMMITTEE -3- DRAFT January 24, 2020
CO-CHAIR LINCOLN announced the first order of business would be a presentation on climate change in Alaska.

2:21:21 PM

BRIAN BRETTSCHNEIDER, PhD, Research Associate Academic, University of Alaska Fairbanks, provided a PowerPoint presentation entitled, "Alaska House Resources Committee Presentation on Climate Change in Alaska." Dr. Brettschneider said his climate research on behalf of the University of Alaska Fairbanks (UAF) is funded primarily by federal taxes and he is a representative of UAF, but he is not speaking for UAF. He said the presentation will provide a factual record of climate in Alaska.

CO-CHAIR LINCOLN noted the aforementioned presentation and proposed legislation are not related; UAF does not advocate for or against specific legislation.

DR. BRETTSCHNEIDER restated he seeks only to provide background information and current status on climate in order to inform future legislative discussion. He directed attention to slide 2, which was a map with Alaska climate divisions superimposed over Lower 48 climate divisions, and pointed out the various climate divisions in Alaska vary greatly, but are still more closely related than to climate divisions in the Lower 48. Dr. Brettschneider explained climate is the slowly varying aspects of the atmosphere, hydrosphere, and land surface systems (slide 3). For example, thousand-year-old ice in a glacier represents climate and seven-day-old ice on a lake represents weather (slide 4). Slide 5 showed two maps representing annual
Dr. Brettschneider continued to slide 11, noting salmon may not adapt to warmer water and ocean acidification, thus may not be able to support subsistence fishing or a commercial fishery. All aspects of Alaska, such as its economy, way of life, and cultural heritage, are related to its climate. Slide 13 illustrated mean temperature percentiles for 2019; 2019 was the warmest year for Alaska since 1925 and the first year above freezing, and he described the effects of above freezing average temperatures (slides 13-14).

Representative Hopkins asked whether the source of the aforementioned data is the [USArray Transportable Array] system.

Dr. Brettschneider said no. The USArray system is a resource that will provide data for short-term gaps where Alaska does not
have weather stations, but its data is not included in climate analysis. Slide 15 illustrated Alaska's statewide temperature was above normal 1/1/19-12/31/19. Slide 16 reflected Alaska statewide temperature data from 1850-2019. Dr. Brettschneider observed cold spells in Alaska historically occurred every two to three years and recently occur every seven to eight years. Globally, temperatures are higher from Portugal to Siberia and elsewhere (slide 17).

2:38:25 PM

CO-CHAIR TARR asked for clarification on the key to the map on slide 17.

DR. BRETTSCHNEIDER explained the increase reported in Celsius is 1.5 degrees Fahrenheit globally, and approximately 2.0 degrees Fahrenheit for the Arctic and Antarctica; Earth's atmosphere provides six degrees of warmth and an increase of two degrees is significant. Slide 18 illustrated the 100 warmest and coldest days in Alaska between 1953 and 2020. He acknowledged record cold can occur in a warming world.

REPRESENTATIVE HANNAN asked about a gap in data on slide 18 between 1977 and 1988.

DR. BRETTSCHNEIDER returned attention to slide 16 and explained a cooling trend from 1950 through 1970 and occurred when air pollution from coal power plants and soot blocked sunlight, resulting in lower temperatures worldwide; after efforts cleaned the air of pollution, the Earth resumed heating. Slides 19 and 20 depicted recent trends in Alaska during the four seasons;
slides 21 and 22 illustrated the warmest and coldest decades since 1900 worldwide.

2:44:36 PM

DR. BRETTSCHNEIDER turned attention to the history of global warming science: in 1856, a scientist discovered CO2 is a greenhouse gas that warms the Earth; greenhouse effect recognized in 1859; amount of warming predicted in 1896 (slide 24). Slide 25 demonstrated the greenhouse effect; slide 26 acknowledged there are myths about the causes of climate change such as volcanos, sunspots, and natural cycles, that have been contradicted when compared to industrial activities.

REPRESENTATIVE TUCK surmised [emissions from] volcanos would not measure on the slide 26 graph.

DR. BRETTSCHNEIDER said a volcano would register as a specific event but would not [affect] an average year. In further response to Representative Tuck, he explained the slide 26 graph represents approximately 100 years in time.

REPRESENTATIVE TUCK questioned the effect of cycles of the sun [on climate change].

DR. BRETTSCHNEIDER said the effect of solar changes may be 2 percent.

2:49:41 PM
REPRESENTATIVE RASMUSSEN asked for information related to the amount of Alaska's contribution to emissions [of greenhouse gases], separate from the amount of global emissions.

DR. BRETTSCHNEIDER offered to provide an accounting of Alaska's emissions. He directed attention to slide 27 which illustrated the amount of warming due to changing energy from the sun; the main solar cycle follows an 11-year cycle and is a minor component compared to other factors. Also shown on slide 27 was the impact of greenhouse gases, aerosols, and changes in land use; for example, clearing of land has a short-term cooling effect. In 1982, Exxon released a climate study on the effect of CO2 emissions that accurately projected current temperatures; in fact, the science is a straight-forward chemical equation (slides 28 and 29).

REPRESENTATIVE TUCK returned attention to slide 27 and surmised the red bars represent warmer temperatures. He asked what the brackets represent.

DR. BRETTSCHNEIDER said the brackets are error bars and/or year-to-year variability. In further response to Representative Tuck, he said Freon is a chlorofluorocarbon; chlorofluorocarbons are potent greenhouse gases that trap heat and destroy the ozone and would be included in "short-lived gases that create ozone or destroy other greenhouse gases." Further, Freon would not be in the atmosphere in sufficient volume to be a major contributor to greenhouse warming.

2:55:42 PM
DR. BRETT SCHNEIDER pointed out data shown on slide 30 are Keeling Curves which indicate over the last 300 years there was a minor rise until the mid-20th Century. Slide 31 illustrated warmer and colder periods of time over 500 million years; however, during human civilization, there has been a stable climate. Also shown was a prediction of temperatures by 2050 and 2100 that would be the warmest temperatures in perhaps several million years. Dr. Brettschneider acknowledged the Earth has been warmer during pre-human times.

DR. BRETT SCHNEIDER, in response to Representative Tuck, said to disregard the bottom line on each graph shown on slide 30. Slide 32 was a list of major scientific organizations that believe global warming is primarily caused by greenhouse gas emissions, with the exception of the American Association of Petroleum Geologists. Slide 33 illustrated sea ice and sea ice concentration; Arctic areas and Alaska are warming faster than the rest of the world because ice and snow act like a mirror. He remarked:

When you remove the snow and ice, instead of that solar energy hitting it and going back out into space - which means it's like it never was there in the first place - now it's like a potato in the microwave ... that's getting that energy from the sun and it's heating it up, which then melts more snow and ice. We call that a positive feedback cycle. At lower latitudes, they don't have a lot of snow and ice, they feel the global effects, but not the regional effects like we do.
DR. BREITTSCHNEIDER continued to slide 34 which illustrated over the last ten years temperatures from the Arctic Circle north have increased five to six degrees Fahrenheit over temperatures prior to 1950, due to the ice and snow feedback cycle; slide 35 listed tangible effects of changing climate in Alaska. He stressed [negative] effects affect cultural identity.

3:01:27 PM

REPRESENTATIVE HANNAN asked when climate scientists and ocean scientists share data on issues such as ocean acidification.

DR. BREITTSCHNEIDER acknowledged his focus is on sea ice and he is in contact with marine biologists; climate scientists model how the ocean absorbs CO2 from the atmosphere and provide data to marine scientists.

REPRESENTATIVE HANNAN asked whether there is research specific to ocean acidification.

DR. BREITTSCHNEIDER said yes; marine biologists, coastal ecologists, and oceanographers use [climate] data differently for research in Alaska and elsewhere. Slides 36 and 37 listed media reports of climate impacts in Alaska such as a seabird die-off, fish dying in Bristol Bay, the cost of fighting fires, the loss of tourism, and the loss of life.

Slides 40 and 41 were projections of future below freezing temperatures in Alaska over the next 80 years.

3:05:20 PM
CO-CHAIR LINCOLN related very experienced Alaskans can fail to realize how rapidly winter conditions are changing in Alaska.

DR. BRETTSCHNEIDER continued: slides 40 and 41 were projections of below freezing temperatures and temperatures above 77 degrees Fahrenheit in Alaska over the next 80 years. Slide 42 listed Alaska entities that are addressing climate change; he advised it is the job of scientists to gain an understanding of changing climate and inform policymakers. Slide 43 reported on smoky days, warming rates across Alaska, and spruce bark beetle damage. Dr. Brettschneider related Alaskans are acting at local levels to adapt to, and mitigate for a changing climate, by creating climate action plans (slide 44).

3:09:06 PM

REPRESENTATIVE HOPKINS stated Moody's Investors Service has downgraded municipalities and governments without climate impact and/or climate action plans that outline how communities will respond to impacts; he urged the state to complete its plan because economic and financial impacts may be unexpected.

DR. BRETTSCHNEIDER said Alaskans understand Alaska's climate is changing; slide 45 reported statewide responses to a public opinion study. He restated he is not advocating for a certain policy; as a climate scientist he has been told Alaskans have to make a choice between "pro production or pro climate." However, he advised Alaskans can advocate for production and work to minimize the impacts or to slow changes to climate (slide 46). Without endorsement, he said Norway is an Arctic country, a production country, and a leader in climate policy (slide 47).
CO-CHAIR TARR surmised as resident of a production state, Alaskans [may question the need for climate policy] because Alaska does not have heavy industry and, therefore, produces low levels of greenhouse gases, which may be similar to Norway's situation.

DR. BRETTSCHNEIDER estimated Norway - when compared to most other countries - with a small population and a very small carbon footprint has a policy in order to set an example.

3:14:03 PM

REPRESENTATIVE HANNAN asked for the meaning of climate neutral.

DR. BRETTSCHNEIDER expressed his understanding climate neutral is the same as carbon neutral, which means an even balance between emissions and reductions or savings [in emissions].

REPRESENTATIVE HANNAN stated Norway exports most of the production of its fossil fuels and asked whether it offsets the production of its fossil fuels by the end user.

DR. BRETTSCHNEIDER was unsure; he said he assumed climate neutral is the offset of Norway's local consumption by local offset, and not of [the production of exported fossil fuels by other countries].

REPRESENTATIVE HOPKINS related [climate neutral] is based on where the greenhouse gases are created; therefore, [greenhouse gases produced from] fuels shipped out of Norway do not count against its climate neutral calculation.
DR. BRETT SCHNEIDER continued: slide 49 illustrated U.S. total greenhouse gas emissions by sector; slide 50 listed media reports from businesses and investors related to climate and he elaborated; slide 51 listed final thoughts including climate change is here, greenhouse gases are largely responsible, Alaska is affected, [climate change is] bad for business, Alaska can be a producer state and a leader on climate policy, Alaskans are resilient and adaptive, activist shareholders exist, and the acknowledgement of the issue is good for business.

3:19:28 PM

The committee took an at-ease from 3:19 p.m. to 3:20 p.m.

^#hr12

HR 12-HOUSE SPECIAL COMMITTEE ON CLIMATE CHANGE

3:21:00 PM

CO-CHAIR LINCOLN announced the next order of business would be HOUSE RESOLUTION NO. 12, Establishing a House Special Committee on Climate Change.

3:21:22 PM

REPRESENTATIVE ANDY JOSEPHSON, Alaska State Legislature, speaking as the sponsor, informed the committee many Alaskans have spoken out on the importance of addressing climate change; he recalled an event in Anchorage where two hundred people urged members of the legislature to advance HR 12. Representative Josephson said the effects of climate change on Alaska are
widespread, although the state population is very small and Alaska's carbon emissions are low; however, due to Arctic amplification, northern latitudes are affected more severely than elsewhere. He referred to extreme weather events and other challenges in Alaska such as coastal erosion, drought, and fire. Conversely, there are opportunities created by change, such as new shipping corridors through the Arctic Ocean for cargo and tourism that will result in increased shipping traffic along Alaska's coastline, and additional revenue from Alaska's crude oil. The proposed resolution would create a special committee on climate change and policy which would hold hearings on referred legislation, engage with subject matter experts, provide a forum for education and action, and propose legislation. Further, the committee would be directed by public interest.

3:26:05 PM

REPRESENTATIVE JOSEPHSON advised climate change and policy are topics that generate a lot of research materials for review, and numerous media reports of climate-related events, and he said the special committee could make reports and review research, but maintain a focus on recommending constructive legislative action. Also, he noted entities of the federal government are currently "non-participatory," and the state government has disbanded its Climate Action for Alaska Leadership Team; even though there is a long history of interest in this issue, the legislature's current efforts in this regard are incomplete, which could be corrected by a special committee.

3:28:49 PM
NATHANIEL GRABMAN, Staff, Representative Andy Josephson, Alaska State Legislature, provided a PowerPoint presentation entitled, "HR 12, Establishing a House Special Committee on Climate Change." Mr. Grabman paraphrased from slide 2 which read:

Climate change and Alaska

- Temperatures in Alaska have trended upward for decades, and 2019 was the hottest year in state history
- Drought conditions have become more common and more severe
- Higher temperatures with less precipitation lead to greater fire danger
- When possible, the natural ranges for plants and animals change as flora and fauna attempt to adapt to changing conditions. When this is not possible, massive die offs may occur
- Sea ice naturally acts as a buffer for high seas and storms; reduced sea ice accelerates coastal erosion
- Much of northern Alaska is underlain by permafrost; as temperatures rise, permafrost thaws, causing structural foundations to weaken
- Reduced sea ice opens new pathways for ships
- Alaskans are world leaders in Arctic research and innovation

MR. GRABMAN referenced a 2007 report published by the Institute of Social and Economic Research (ISER), University of Alaska Anchorage, which predicted billions of dollars in future costs
related to the effect of climate change on Alaska's public infrastructure (slide 3). Slide 4 illustrated Arctic shipping routes in 2018; slide 5 listed reports of fires in Alaska. He noted acreage burned during the 2019 fire season was not the greatest, but smoke and fires affected many Alaskans due to the location of fires; the cost of firefighting was over $300 million. Mr. Grabman said erosion, permafrost thaw, and relocation are interconnected, and recalled the climate change [subcabinet] formed by former governor Sarah Palin identified six communities in need of immediate action, as depicted on slide 6. Also shown on slide 6 was a map of near-surface permafrost sited along the Trans-Alaska Pipeline System. He pointed out many communities in Alaska are not located near large-scale power grids and thus utilize microgrids to provide power and integrate renewable energy sources into remote diesel grids; in fact, Kodiak is almost 100 percent powered by wind, and Igiugig has installed a river turbine which will provide approximately 50 percent of its energy (slide 7).

3:33:27 PM

MR. GRABMAN continued to slide 8 which described the Renewable Energy Grant Fund program that has developed many different renewable energy sources while utilizing leveraged funds; he estimated the program has saved approximately $50 million in fuel costs annually. He then paraphrased from slides 9 and 10 which read:

Previous Legislative Efforts
1990 - HCR 56: Relating to climate change.
• Resolved to ask the governor to investigate state policies and procedures to determine best practices to combat climate change. Failed on House floor 17-10

• 1995 – HJR 39: Relating to the Northern Sea Route. Resolved to push for research and planning to examine shipping routes in the Arctic. Passed House 35-0, Passed Senate 19-0

• 1999 – HJR 33: Urging the US Senate to decline to ratify the UN Framework Convention on Climate Change adopted in December 1997 at Kyoto, Japan. Passed House 29-7, died in Senate committee

• 2006 – HCR 30: Creating an Alaska Climate Impact Assessment Commission. Created commission tasked with studying and evaluating impacts of climate change around the state, suggesting policies, examine alternative measures, etc. Passed House 28-0, Passed Senate 17-0. Final commission report produced March 17, 2008

• 2015 – HB 1: Declaring the Arctic policy of the state. Outlines policies of the state with respect to the Arctic, stating that is the policy of the state to ‘sustain current, and develop new, approaches for responding to a changing climate, and adapt to the challenges of coastal erosion, permafrost melt, and ocean acidification.’ Passed the House 32-2, Passed the Senate 19-1

have created commission to advise the governor, consult with experts, liaise with non-State entities, recommend actions, provide annual report. Died in committee

Previous Administrative Efforts

- 2007 – Administrative Order 238: Governor Palin “establish[ed] a Climate Change Sub-cabinet to advise the Office of the Governor on the preparation and implementation of an Alaska climate change strategy.” Sub-cabinet was dissolved by Gov. Parnell, and AO 238 was rescinded and replaced by Gov. Walker’s AO-289.

- 2017 – Administrative Order 289: Governor Walker created a 20-person Climate Action for Alaska Leadership Team and an Alaska Climate Change Strategy to advise on ‘critical and timely actions to address climate change challenges that will safeguard Alaska now and for future generations.’ AO 289 Rescinded by Gov. Dunleavy in 2019.

3:36:07 PM

REPRESENTATIVE JOSEPHSON turned attention to the vision for the committee and explained by creating a special committee the House, with a simple majority vote, can independently set a path as follows:

- capture the attention of the public
• reflect the public's support
• the committee would engage in factfinding and "would not reinvent the wheel"
• create a direct and open forum for the legislature
• create recommendations for legislative action
• the committee would be dedicated to one purpose
• the committee would be recreated every two years
• create public engagement
• establish groundwork for the next legislature
• avoid difficult political questions that would prevent the creation of the committee

REPRESENTATIVE RASMUSSEN observed the legislature does not often adjourn within its allotted 90-120 days; she pointed out the House Special Committee on Arctic Policy, Economic Development, and Tourism (HAET) and other committees are in place to hold hearings and take legislative action on climate change if needed.

3:40:00 PM

REPRESENTATIVE JOSEPHSON suggested the House Special Committee on Climate Change would meet monthly during session; he said the committee staff's time may be extensive, and noted legislators have some time available during interim. Although HAET could address climate change in the Arctic] many facets of climate change do not occur in the Arctic, such as fires in the Tongass National Forest; further, other committees do not have a dedicated focus on the adaptation and mitigation of climate change. He referred to previous [failed] legislation to create a state climate change commission and stated the current
administration has no interest in this issue. Representative Josephson expressed his personal foreboding about the summer of 2020.

REPRESENTATIVE RASMUSSEN questioned how an [Alaska state government] policy to fight climate change could affect areas of the world outside of Alaska. She then asked whether the proposed committee would require a budget for staff.

REPRESENTATIVE JOSEPHSON, in response to staffing, said no. In 2021, he acknowledged the committee may require a small budget for travel to rural Alaska. In response to Representative Rasmussen's first question, he gave the example of the U.S. states and [two territories] that have joined the U.S. Climate Alliance to oppose U.S. withdrawal from the [2015 Paris Agreement on climate change mitigation], and observed the committee may explore this action. Finally, he characterized the issue as "a moral responsibility."

3:44:39 PM

CO-CHAIR TARR recalled the House Resources Standing Committee (HRES) experienced difficulty scheduling the presentation on climate change; she suggested members of a dedicated special committee would be more focused on this topic.

REPRESENTATIVE RASMUSSEN inquired as to why the sponsor prefers a special committee to forming a climate change caucus.

CO-CHAIR TARR advised a caucus cannot hear bills.
REPRESENTATIVE JOSEPHSON added bills can be referred to a special committee; further, the committee deliberative process provides a certain structure for members.

REPRESENTATIVE SPOHNHOLZ told of her personal experience related to the heat and smoke suffered by Alaskans [in summer, 2019], and of the health issues related to climate change; she asked whether the sponsor considered creating a taskforce.

3:48:47 PM

REPRESENTATIVE JOSEPHSON said he did not; he opined people envision a taskforce as temporary and ephemeral.

REPRESENTATIVE SPOHNHOLZ directed attention to the bill on page 3, lines 2 and 3, which read [in part]:

to explore policy options relating to climate change effects, mitigation, resilience, and adaptation in the state

REPRESENTATIVE SPOHNHOLZ pointed out Alaska also has an economic opportunity; for example, entrepreneurism that has capitalized on Alaska's need to adapt, such as the solar industry.

REPRESENTATIVE TALERICO questioned whether appointments to a special committee are required to follow the legislature's uniform rules of procedure.

UNKNOWN SPEAKER said yes.
REPRESENTATIVE JOSEPHSON, in further response to Representative Talerico, said he had no opinion as to the number of members appointed to the proposed committee.

REPRESENTATIVE HANNAN asked whether there are any funds remaining in the Renewable Energy Grant Fund [described on slide 8].

3:52:34 PM

REPRESENTATIVE JOSEPHSON advised members of the [former] Climate Action for Alaska Leadership Team (CAALT) have inquired [about the status of the fund] of the fund's manager, the Alaska Energy Authority, Department of Commerce, Community & Economic Development; he opined the fund needs to be recapitalized. Representative Josephson closed by reading a statement from a CAALT document [document not provided].

HR 12 was held over.
#
3:53:49 PM

ADJOURNMENT

There being no further business before the committee, the House Resources Standing Committee meeting was adjourned at 3:53 p.m.