

MAR 08 2024

SENATE RESOLUTION

REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONDUCT A STUDY OF THE DIFFERENT ENERGY CONSUMPTION SECTORS TO DETERMINE WHICH MAY BE MOST QUICKLY AND COST-EFFECTIVELY DECARBONIZED THROUGH ADDITIONAL PUBLIC INVESTMENTS IN COMBUSTION-FREE ALTERNATIVES.

1 WHEREAS, it is important to use state taxpayer funds wisely
2 to support a clean environment without speculative investments,
3 unnecessary subsidies, or promotion of energy technologies or
4 fuels that conflict with the State's climate change goals or the
5 peoples' constitutional right to a clean and healthful
6 environment under article XI, section 9, of the State
7 Constitution; and

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9 WHEREAS, there are three sectors of energy that is traced
10 by the United States Energy Information Administration--
11 electricity, transportation, and heating--with heating further
12 broken down into industrial, commercial, and residential
13 sectors; and

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15 WHEREAS, modern energy conservation, efficiency, storage,
16 and solar and wind technologies meet the needs of the
17 electricity sector and can be made as firm as needed through
18 decentralization and adequate storage capacity; and

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20 WHEREAS, residential and commercial cooking, space, and
21 water heating needs are easily electrified with existing
22 technology, including ground- and air-source heat pumps and
23 hybrid electric water heaters; and

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25 WHEREAS, industrial heating needs are increasingly
26 attainable using a combination of concentrated solar,
27 electricity, and, if necessary, green hydrogen sources from wind
28 and solar; and

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30 WHEREAS, land-based transportation, including heavy haul
31 trucking, is now possible to fully electrify so that it can be
32 powered on clean, non-burn, electricity sources; and
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1 WHEREAS, ocean-based transportation is now possible to
2 fully electrify, as international cargo ships may use batteries,
3 stationary wind masts, or a combination thereof; and
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5 WHEREAS, inter-island air-travel may be accomplished with
6 electric sea gliders, a possibility which Hawaiian Airlines is
7 already exploring; and
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9 WHEREAS, inter-continental air travel remains the sector
10 that is hardest to convert to clean energy, although Airbus aims
11 to bring to market the world's first hydrogen-powered commercial
12 aircraft by 2035; and
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14 WHEREAS, combustible carbon-based fuels release greenhouse
15 gasses and other harmful air pollutants; and
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17 WHEREAS, the production of burnable fuels has many other
18 environmental consequences, including water and soil depletion,
19 the spread of genetically modified organisms, reduction of land
20 used for food production, and, if using waste streams to make
21 fuel, the release of toxic chemicals and solid waste byproducts;
22 and
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24 WHEREAS, hydrogen production and use carries many of the
25 same production problems as burnable fuels unless it is achieved
26 by the electrolysis of water using wind and solar power,
27 resulting in green hydrogen; and
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29 WHEREAS, the energy lost in the conversion of water to
30 hydrogen is so significant that it would be wasteful to use
31 clean energy for the production of hydrogen until the electrical
32 grid is running almost entirely on clean energy and there is an
33 excess of wind and solar energy, which may be stored as hydrogen
34 when not immediately needed; and
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36 WHEREAS, Hawaii's Renewable Portfolio Standard law requires
37 electric utilities in the State to provide one hundred percent
38 renewable energy by 2045, and the State was close to thirty-five
39 percent in 2023; and
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41 WHEREAS, technologies converting waste into fuel are highly
42 speculative, controversial, and polluting, and often fail to



1 operate at a commercial scale, regularly falling apart
2 technically, economically, or both; and

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4 WHEREAS, when all carbon releases are properly accounted
5 for, the climate impacts of biomass and waste-based biofuels are
6 close to, or greater than the climate impacts of the petroleum
7 products they would replace; and

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9 WHEREAS, investing in infrastructure intended to transition
10 to cleaner options in later years is an investment dead end that
11 makes it harder, politically and economically, to take the next
12 step of replacing combustion-based fuels that are currently
13 being marketed as clean or sustainable fuels; and

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15 WHEREAS, it is wise to spend public funding first on clean,
16 combustion-free solutions that already exist, focusing on energy
17 sectors where those solutions are not yet fully implemented;
18 now, therefore,

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20 BE IT RESOLVED by the Senate of the Thirty-second
21 Legislature of the State of Hawaii, Regular Session of 2024,
22 that the Hawaii State Energy Office is requested to conduct a
23 study of the different energy consumption sectors to determine
24 which may be most quickly and cost-effectively decarbonized
25 through additional public investments in combustion-free
26 alternatives; and

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28 BE IT FURTHER RESOLVED that the Hawaii State Energy Office
29 is requested to submit a report of its findings and
30 recommendations, including any proposed legislation, to the
31 Legislature no later than twenty days prior to the convening of
32 the Regular Session of 2025; and

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34 BE IT FURTHER RESOLVED that certified copies of this
35 Resolution be transmitted to the Governor and Chief Energy
36 Officer.

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OFFERED BY:



