

I-1639 back on the ballot **EVEN THOUGH THE** PETITIONS DON'T COMPLY



Initiative 1639-Gun Violence Prevention, filed by Michael Bloomberg's front group, the Alliance for Gun Responsibility, is an egregious attack on Second Amendment defense rights in the Evergreen State!

The proposed initiative, if passed, would do the following:

- be subjected to a waiting period of 10 business days.
- states the Washington Department of Licensing (DOL) "may" keep copies of pistol purchase applications. The proposed order. initiative would instead require the DOL to keep copies of these
- This initiative would also require all purchasers of semiautomatic rifles to show they have completed a firearm safety (Most businesses and agencies call this "sensitivity training".)
- Automatic Rifles. The Washington Department of Licensing automatic rifle purchase.
- their firearms or potentially face a criminal charge of victims. "Community Endangerment Due to Unsafe Storage of a Firearm" if the firearm is accessed by a prohibited person or situation by locking them up.
- rights.
- · Require "Warnings" for Firearm Purchases. risks" of firearm ownership as an attempt to further stigmatize From the NRA

Initiative 1639, was rejected by a resolution from Benton County Republican Party. The Resolution was aimed at the 章本章本章本章本章本章本章本章本章本章本章本章本章本章 contents of the initiative while it was still written in the form of The Constitution only gives people the right to pursue happiness. You bills before the legislature.

Handouff the POLIC Washington Initiative 940,

the Police Training and Criminal Liability in Cases of Deadly Force

Measure WILL appear on the ballot on November 6, 2018.

Progressives are all for tying the hands of freedoms and comes just months after failing to enact their gun the police and blaming them (usually along with Trump) for the ban agenda in Olympia. Please spread the word to your family, growing violence our culture is witnessing. At the same time friends, and fellow gun owners about this latest attack on self-Progressives attempt to paint all police white and claim they are involved in a race war. There is little evidence of police brutality in this state, even in the face of increased violence. The measure • Require a 10 Day Waiting Period for Commonly Owned appears to be no more than a "legal" way to blame police for the Rifles. All semi-automatic rifle purchases and transfers would craziness of trying to maintain peace and protect citizens from escalating random madness. It threatens the lives and • Establish a Government Registry of Firearms. Current law livelihoods of the police by redefining their jobs and refusing to acknowledge the difficulties they face in maintaining law and

X It requires all law enforcement officers in the state to purchase applications, and would expand this government receive violence de-escalation and mental health training, as • Require Completion of a Training Course to Purchase Rifles.

(https://fortress.wa.gov/cjtc/www/)

training course within the last five years in order to proceed with For the police it would be required every year. This would be unnecessary overkill, wasting money and time. As well as giving • Impose up to a \$25 Purchase Fee (GUN TAX) for Semi- one more commission power to enforce new illogical rules.

It requires police to administer first-aide. This would be a would be required to charge up to a \$25 fee for each semi-deadly trap in many situations where the police should be called upon to establish a safe environment before any first-aide could • Require Gun Owners to Lock Up their Firearms or Face be administered. It is only sensible that police are on the scene Criminal Charges. Individuals would be required to lock up for a much bigger picture than administering first-aide to

X It amends the standard for justifiable use of deadly force minor. This intrusive proposal invades people's homes and requires "independent investigations carried out completely forces them to render their firearms useless in a self-defense independent of the agency whose officer was involved in the use of deadly force; and, when the deadly force is used on a tribal • Restricts Adults Aged 18-20 from Acquiring Modern Rifles. member, such procedures must include consultation with the Adults aged 18-20 would be prohibited from purchasing semi- member's tribe . . . Where this act requires involvement of automatic rifles and would not be allowed to receive them community stakeholders, input must be sought from through a transfer or loan. Thereby this segment of law-abiding organizations advocating for: Persons with disabilities; members adults are denied access to the most modern and effective of the lesbian, gay, bisexual, transgender, and queer community; firearms for self-defense, and deprived of their constitutional persons of color; immigrants; non-citizens; native Americans; youth; and formerly incarcerated persons." - italics-Karen B.

**DQ** When the righteous increase, the people NDD rejoice, But when a wicked man rules,

... for our troubled times people groan (Proverbs 29:2).

have to catch it yourself. - Benjamin Franklin

#### Initiative 1631 – Clean Air Clean Energy

(commonly referred to as the "Carbon Tax")

Wow! So this is how the Paris Treaty redefines life.

I-1631 creates a tax that will be directly applied to ALL who use fossil fuels and all electricity that is generated, including electricity generated from hydro-power.

I-1631 creates an untouchable bureaucratic morass governing at least 6 state departments:

1) The Public Oversite Board,

'Consults with," but not be answerable to the approval of, the Governor, other Executive departments, nor the Legislature before acting unilaterally to "implement taxes and allocate expenditures of the funds being collected."

Consists of 15 un-elected, governor appointees housed in the office of the Governor "chosen by him from labor unions. tribal governments, social iustice environmentalist groups and one from business."

2) Three advisory Panels

Clean Air and Clean Energy Panel (nine member panel) Spending 70% of funds

Clean Water and Healthy Forests (nine member panel) Spending 25 % of funds

Environmental and Economic Justice Panel (11 members) Spending 5% of funds

The measure would charge \$15 for each metric ton of carbon dioxide emitted in the state starting in 2020 and increase by \$2 plus inflation every year until the state meets its climate goals, which include reducing its carbon footprint 36 percent below 2005 levels by 2035. The State's investment technology, sequestration and emission reduction MEANS the state intends to own all of the energy sector of our economy.

#### **Turn Private Property into State Chattels**

-17 of the goals listed in I -1631 which either: give the "Carbon Tax Bureau" power to carry out their goals irrespective of personal property rights\* or create an economic deficit for the state or business\*\*

1\*\*) "Increase public transportation" pg5

2\*\*) "Reduce vehicle miles traveled pg5

3\*\*) "High-speed rural broadband to facilitate telecommuting" pg5

4\*\*) Put millions more people on bill assistance programs pg9

5\*\*) "Provide sustainable jobs in rural communities" pg8

6\*\*) "Support mass timber technologies" pg18

7\*) "Reduce household energy consumption" pg10

8\*\*) "Require collective bargaining to support high quality labor standards and prioritize hiring women, veterans and minority owned businesses" pg20

9\*\*) "Fully fund every unemployed fossil-fuel worker" pg10

10\*\*) Even after all businesses have left the state, taxpayers will be "obligated to give, at a minimum, two hundred thousand dollars a year to any Indian tribe" (there are 36) who applies with a plan for developing a "community capacity' to participate in the implementation of this chapter." Plus "fifty million dollars per year compensation to union organizations." pgs20&10

11\*) "Increase the sustainable supply of water" pg17

12\*) "Prepare for sea level rise" pg17

13\*) "Restore, protect estuaries, fisheries and shoreline" pg17

14\*) "Restore natural floodplain ecological function" pg17

15\*) "Convert grassland and cropland soils to urban development in hopes of reducing carbon emissions" pg8

16\*) "Improve landscape functions" pg8

17\*\*) "Allow the program to be funded by Washington State's purchase of bonds." pg22

#### Batimated Cost of the Washington Policy Center's Blog by TODD MYERS Jan 30, 2017

Businesses will also see a significant tax increase if any of these proposals are adopted. Using the most recent carbon emissions data from the Department of Ecology, here are some estimated costs for

selected businesses in Washington http://tinyurl.com/y99mrmlt Company Name 2014 CO2 Emissions \$15/Ton

Company Name 2014 COZ Emis	510115	\$23/1011	\$19/10II
ConAgra Foods Lamb Weston, Connell	38,810	\$970,250	\$582,150
ConAgra Foods Lamb Weston, Pasco	47,241	\$1,181,025	\$708,615
ConAgra Foods Lamb Weston, Quincy	38,324	\$958,100	\$574,860
ConAgra Foods Lamb Weston, Richland	34,551	\$863,775	\$518,265
JR Simplot, Moses Lake	31,404	\$785,100	\$471,060
JR Simplot, Othello	87,301	\$2,182,525	\$1,309,515
McCain Foods, Othello	95,228	\$2,380,700	\$1,428,420
Basic American Foods, Moses Lake	28,982	\$724,550	\$434,730
Tyson Fresh Meats, Inc., Wallula	77,161	\$1,929,025	\$1,157,415
<b>Agrium Kennewick Fertilizer Operations</b>	132,249	\$3,306,225	\$1,983,735
Alcoa Inc., Wenatchee Works, Malaga	354,692	\$8,867,300	\$5,320,380
Kaiser Aluminum Washington, LLC,	114,924	\$2,873,100	\$1,723,860
Spokane Valley	e LT		Processor Commission (Commission Commission

I - 1631 was considered by the Benton County Republican Party and rejected in a resolution agreed upon by the Central Committee.

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A thief stuck a pistol in a man's ribs and said, "Give me your money." The gentleman, shocked by the sudden attack, said "You cannot do this, I'm a United States congressman!" The thief said, "In that case, give me my money!"

Previously, we calculated the cost of the Governor's proposal for average families Washington – about \$400 per household.

The most ironic of the companies that would be hit by the taxes is REC Silicon in Moses Lake which manufactures parts for solar panels. Their 2014 emissions were 144,678 MT of CO2. That would add \$2.17 million in annual taxes with a \$15/MT tax and \$3.62 million tax under the Governor's \$25/MT proposal. [Also note, Representative Newhouse' recent comment on the dire effects of Chinese tariffs polysilicon materials-China's unfair trade practices in this long-running dispute have led to job losses in Moses Lake, hitting families and the entire community hard.]

Manufacturing would also be hit. At the left are a few numbers for manufacturers across the state.

Food production is another area that would see a significant cost. The jobs associated with these industries are welcome and having these companies here supports farmers, ranchers and fruit growers by creating an infrastructure to support them.

At a time when there is concern about worldwide competition for manufacturing, this tax would make it more difficult to keep these jobs here.

#### Five Good Reasons to Vote NO on Initiative 1631

- Initiative 1631 is a special interest attempt to create a multi-billion-dollar tax program against the citizens of Washington State that provides no assurance that revenues collected will reduce carbon pollution.
- The initiative guarantees the transfer of hundreds of millions of dollars of taxpayer's hard-earned money to tribal, union, and environmental activist groups rather than investing in carbon reducing technologies
  - Up to \$300 million dollars (~\$43 per Washington resident per year) is earmarked for social programs for tribal residents
  - Up to \$50 million dollars (~\$7 per Washington resident per year) is earmarked for labor union coffers
  - Millions more will be used to support environmental activist groups
- · The initiative creates an Environmental and Economic Justice Panel, to determine how to spend collected funds
  - The majority of the Environmental and Economic Justice Panel will be Tribal and Union representatives that will decide how to spend your hard-earned money
  - Tribal residents will be exempted from the taxes being raised by this initiative but will receive hundreds of millions of dollars in social program funding.
- The Initiative exploits citizens' concerns about carbon pollution by misleading them with words and phrases that are not defined until after page 32 of the document. Here are just a few examples:
  - "Fees" are "Taxes"
  - "Large Emitters" include every person in Washington State except for Indian reservation residents
  - "Vulnerable populations in pollution and health action areas" are residents living on or adjacent to tribal reservations

#### For a better approach see below.

# We Believe that... Conservatives, Liberals, Moderates... Can Come Together on Matters Related to Energy Security, Climate Change and the Economy

#### Did you know that:

- Washington's electricity produced mostly from nuclear,
   hydro, wind and low-carbon natural gas is amongst the cheapest in the nation and lowest in carbon emissions?
- Our forests and agricultural regions are major carbon sinks?
- There are cost-effective ways to reduce carbon emissions while improving our region's economy?
- Transportation accounts for 56% of the total energyrelated carbon emissions from our state?
- The Centralia coal-fired power plant will shut down its 2 units in 2020 and 2025, reducing Washington State carbon emissions by 10%?

Energy Security

Economy Climate

Areas of common interest... where actions that improve the economy and/or increase energy security also reduce carbon emissions

Won't you please join us...
For a public discussion on Initiative 1631,
Energy Security and Climate Change at
www.facebook.com/groups/1862999387111558/

Republican Pals

People of any, or no, political affiliation are invited!

1741	n Dioxide Emissions	1980	1985	1990	1995	2004	2009	2010	2012	2014	2015
Residential Sector											
	Coal	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Petroleum Products	1.6	1.4	1.3	1.2	1.0	1.0	1.0	0.7	0.7	0.6
	Natural Gas	1.7	1.8	2.2	2.9	3.9	4.6	4.1	4.4	4.4	4.1
	Total	3.4	3.4	3.5	4.1	4.9	5.6	5.1	5.1	5.0	4.7
Commercial Sector											
	Coal	0.3	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Petroleum Products	0.9	2.4	1.0	0.7	0.4	0.6	0.9	0.8	0.8	1.3
The State Control of the Control of	Natural Gas	1.7	2.0	2.1	2.4	2.6	3.0	2.8	2.9	3.0	2.8
	Total	2.9	4.7	3.2	3.2	3.1	3.7	3.7	3.7	3.8	4.1
Industrial Sector					- 1000						# 150.00
	Coal	0.7	0.4	0.5	0.4	0.2	0.3	0.3	0.2	0.3	0.2
	Petroleum Products	9.1	9.5	10.8	10.2	8.1	9.0	8.6	8.6	7.6	8.6
	Natural Gas	3.6	3.5	4.3	6.1	3.7	3.9	3.9	4.3	4.4	4.3
	Total	13.3	13.4	15.6	16.7	12.0	13.3	12.7	13.1	12.2	13.1
Transportation Sector		(Income to the				Ne la écrita	C Equito				
	Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Petroleum Products	29.8	29.5	40.9	45.1	42.5	41.0	40.6	42.0	40.1	42.3
	Natural Gas	0.2	0.2	0.3	0.5	0.5	0.4	0.4	0.5	0.5	0.7
	Total	30.0	29.7	41.1	45.5	43.0	41.5	41.1	42.5	40.6	43.0
Electric Power Sector				(C. )	**-						
	Coal	7.5	7.9	7.4	6.0	10.4	7.6	8.7	3.8	7.0	5.3
	Petroleum Products	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Natural Gas	0.1	0.0	0.0	2.2	3.6	5.0	4.3	2.3	4.7	5.5
	Total	7.7	7.9	7.5	8.3	14.0	12.6	13.1	6.2	11.7	10.8
	Grand Total	57.3	59.1	70.9	77.8	77.1	76.7	75.6	70.6	73.3	75.7
Fuel Totals											
Coal		8.5	8.8	8.1	6.6	10.6	7.9	9.0	4.0	7.2	5.5
Petroleum Products		41.6	42.8	53.9	57.2	52.1	51.8	51.0	52.1	49.1	52.8
Natural Gas		7.2	7.4	8.9	14.0	14.3	17.0	15.6	14.4	17.0	17.4
Total		57.3	59.1	70.9	77.8	77.1	76.7	75.6	70.6	73.3	75.7



Note:
 \*1) An
increase in the
use of Natural
Gas was
planned and
happened in
all sectors
considered.

2) Coal use has decreased in all Sectors.
3) Petroleum Products have increased a little in the Commercial Sector, but mostly in the Transportation sector.

\*"Natural gas is a fossil fuel, although the global warming emissions from its combustion are much lower than those from coal or oil. Natural gas emits 50 to 60 percent less carbon dioxide (CO2) when combusted in a new, efficient natural gas power plant compared with emissions from a typical new coal plant." according to the U.S.EIA who compiled this chart.

The Population of Washington State was just at 7 million in 2015 when WA used 75.7 metric tons of CO2. That is up from a population of 4 million in 1980 when WA used 57.3 metric tons of CO2. That means the <u>per capita</u> carbon footprint in 2015 was only 3/4 the 1980 amount. Plainly, we don't need another expensive, tyrannical bureaucracy in Washington state, to claim they can make happen, what is already happening – reducing our carbon footprint!



### Vote "NO" on Initiative 1631-Clean Air, Clean Energy!

### ggest Contributors

Giving \$\$ to Vote "YES" on I-1631

Biggest givers Includes-

4 "philanthropic" foundations & people associated with them

1 government appointed council and their associates

1 Labor Council

The Audubon Society

6 Individual activists-some obtain large income for their activism

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#### From the Capital Research Center - summary of policy expert Rupert Darwall's new book,

#### Green Tyranny: Exposing the Totalitarian Roots of the Climate Industrial Complex

"Many liberals in California like to boast about their state's conservationist movement and 'environmentally friendly' policies. But pretending that there aren't negative trade offs to California's supposedly 'green' policies does more to hurt Californians than help them.

"The progressives' goal was to create a narrative of the People vs. Polluting corporations. Murray Edelman explained the progressives' logic in 1988. "To define the people one hurts as evil is to define oneself as virtuous."

"Green billionaire philanthropy upends traditional notions of charitable giving [which is] to help those most in need... One can be pretty sure that if supporting renewable energy harmed their interests, they would drop it in a nanosecond. The acquisition of green virtue does harm everyone else, especially the least welloff, and represents an existential threat to the energy-intensive economies of the Midwest from the Great Lakes down to Texas. This is a conflict between an economy that makes tangible things and one that deals in the intangible world of media, software, and entertainment—you can add finance—thereby squandering America's unique advantage in being a powerhouse in both the Total Biggest givers for "Yes on 1631" material and non-material worlds. This economic civil war fought Total giving for "Yes on 1631 by the two coasts against the American heartland is also a civil war within American capitalism, waged part environmentalism's war on hydrocarbon energy."

2,400,679.56 2,767,879.52

>THE NATURE CONSERVANCY

"the country's most visible climate warrior"

\*WA. ST. ENVIRONMENTAL COUNCIL

co-producer "Chasing Ice" film

President, The Kongsgaard-Goldman Foundation

Board of The Nature Conservancy

+WA CONSERVATION VOTERS

Board of The Nature Conservancy

+WA CONSERVATION VOTERS

WA STATE LABOR COUNCIL

CEO - WA Environmental Council

**^WASHIENKO KATHLEEN** 

Board - Climate Solutions

CROOKS JOAN

WESLEY RICHARD

\*WA. ST. ENVIRONMENTAL COUNCIL

>THE NATURE CONSERVANCY

WA STATE LABOR COUNCIL

"aims to tackle the climate crisis and preserve our natural world"

Board Wa Conservation Voters; co-producer "Chasing Ice" film

nonprofit environmental-law; a top Democratic donor in WA

STOLTE CHRIS

MERNER SARAH

MOGA GREGORY

+CORNFIELD LINDA

>THACHER NANCY

+CORNFIELD DAVID

>CHABOT CHRISTIAN

\*KONGSGAARD MARTHA

AUDUBON WASHINGTON

^CLIMATE SOLUTIONS

BARDACKE FRANKLIN

>CHABOT ANGELA

\*GOLDMAN PETER

>THACHER DAVID

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of-from Washington's Public Disclosure Commission

From Capital Research Center's Green Tyranny by Darwall 本部本的本作主席主席主席主席主席主席主席主席主席主席主席主席主席

This series of articles is a Republican reminder, to know the Platform you stand behind and to encourage your legislators to honor the Republican vote you gave them,

This article is the twentieth in the series of articles focusing on specific planks in the national, state and county GOP platforms. It looks at the 2016 National Republican Platform, America's Natural Resources - A New Era in

We encourage the cost-effective development of renewable energy sources — wind, solar, biomass, biofuel, geothermal, and tidal energy — by private capital. The United States is overwhelmingly dependent on China and other nations for rare earth and other hardrock minerals. These minerals are critical to advanced technology, renewable energy, and defense manufacturing. We support expediting the permitting process for mineral production on public lands. We support lifting restrictions to allow responsible development of nuclear energy, including research into alternative processes like thorium nuclear energy. We oppose any carbon tax. It would increase energy prices across the board, hitting hardest at the families who are already struggling to pay their bills in the Democrats' no-growth economy. We urge the private sector to focus its resources on the development of carbon capture and sequestration technology still in its early stages here and overseas...

Conservation is inherent in conservatism. As the pioneer of environmentalism a century ago, the Republican Party reaffirms the moral obligation to be good stewards of the God-given natural beauty and resources of our country. We believe that people are the most valuable resources and that human health and safety are the proper measurements of a policy's success

## JEINIER COY

RICHLAND, Wash. – Energy Northwest paid nearly \$4.8 million in privilege taxes to the state of Washington. The annual tax is levied on public power electricity producers for the privilege of generating electricity in the state. The amount of the annual privilege tax is directly tied to the amount of electricity generated. Columbia Generating Station, the third largest generator of electricity in the state, produced more than 8.1 million megawatt-hours of carbon-free electricity during 2017.

The public power agency owns electricity production at four generating facilities: Columbia Generating Station, Nine Canyon Wind Project, Packwood Lake Hydroelectric Project and White Bluffs Solar Station. Generation at these four facilities totaled more than 8.4 million megawatt-hours of electricity during calendar year 2017.

Columbia produced more than 96 percent of the total power generated by Energy Northwest, which is provided at the cost of production to the Bonneville Power Administration for resale to customers in six Western states.

The privilege tax is levied on organizations that enjoy the privilege of generating, distributing or selling electricity in Washington, and is authorized in the Revised Code of Washington (RCW) sections 54.28.020 and 54.28.025.

Privilege taxes collected by the state on Columbia output will be distributed, as authorized by RCW 54.28.050, RCW 54.28.055 and RCW 54.28.040, with 44.9 percent of the payment – \$2.11 million – going to the state school fund and 10.2 percent of the payment – \$484,025– going to the state general fund. The remaining 44.9 percent of the total taxes – another \$2.11 million – will go to jurisdictions within a 35-mile radius of the Benton County intersection of Stevens Drive and Horn Rapids Road, with distribution based upon the population in each area.

The 35 separate jurisdictions receiving payments within the 35-mile radius of Columbia includes Benton, Franklin, Yakima, Walla Walla and Grant counties; the cities of Kennewick, Richland, Pasco, West Richland, Grandview, Sunnyside, Prosser, Connell, Benton City and Mesa; along with four library and 16 fire districts in the counties receiving payments. Nineteen-point-eight percent of the tax is distributed to counties (\$929,329), 20.6 percent to cities (\$971,572), 2.7 percent to fire districts (\$126,727) and 1.8 percent to library districts (\$84,484).

Energy Northwest has paid approximately \$97 million in privilege taxes on its electricity generation since Columbia Generating Station began operating in 1984, while generating no greenhouse gas emissions.

Other taxes paid by Energy Northwest in 2017 totaled more than \$17.1 million. They were:

- ✓ Sales Tax: \$16,886,299
- ✓ Leasehold Tax: \$212,094 (tax on the use of public property by private party. This tax is in lieu of the property tax.)
- B&O Tax: \$57,471 (State B&O tax is a gross receipts tax. It is measured on the value of products, gross proceeds of sale, or gross income of the business.)

Enough, Already – Vote "NO" on Initiative 1631. Clean Air, Clean Energy

Don't put a regressive state in charge of progressing science Keep Inslee's cronies out of the laboratory and off our backs

PACIFIC NORTHWEST NATIONAL LABORATORY—U.S. Dept of Energy - Despite global efforts to transition away from carbon-emitting energy sources like coal, oil, and natural gas, fossil fuels are projected to lead the global energy mix for the foreseeable future. Until the bridge to renewable energy is crossed, PNNL scientists and engineers are dedicated to reducing the environmental impacts of hydrocarbon production and use, especially emissions—including greenhouse gases produced by fossil fuels—on Earth's atmosphere

From fundamental process understanding to field-scale design and deployment, our researchers deliver advanced capabilities in subsurface science and simulation to enable safe and effective control of subsurface fluid injection and extraction. We also integrate chemistry, materials, and process engineering to develop technologies that more efficiently convert fossil hydrocarbons into power, fuels, and chemicals—all critical to environmentally and economically viable production and use of fossil energy.

At PNNL, our researchers are finding more efficient ways to use energy resources in transportation, buildings, and industry, and in advancing renewable energy technologies. Enabling the efficient use of energy resources, increasing productivity, and accelerating the use of renewable sources of electricity covers a broad spectrum of research—all backed by a diverse set of capabilities and experience.

We are working to drive down the costs of energy technologies, overcome challenges to large-scale renewable energy deployment, and revolutionize buildings as energy assets. Science, engineering, and supporting analysis at PNNL enables the efficient and sustainable use of energy resources.

- Energy Efficiency: We are committed to dramatically improving the energy efficiency of homes and buildings and to reducing their environmental footprint. PNNL's foundation of research and analysis for new lighting designs and performance, energy codes, and appliance standards well complements our work in early-stage technology development and evaluation. Multi-disciplinary teams at PNNL are leading the way in driving energy savings, enhancing whole-building performance, enabling grid-interactive buildings.
- > Transportation: Researchers at PNNL are developing the scientific and engineering foundations for converting biomass to biofuels that align with the current and future needs of a dynamic transportation energy sector. At the same time, we are making vehicles more efficient and cheaper to produce through lightweight materials while improving the design and energy storage capacity of next-generation batteries and lowering the cost of hydrogen fuel cells.
- ➤ Renewable Power: The Columbia River is the nation's most important hydropower resource, producing 40 percent of the nation's hydroelectric generation. At the same time, wind now produces enough electricity to power 24 million U.S. homes per year. From water and wind to solar and geothermal energy, we are drawing on our strong base of science, engineering, and computational modeling to advance the potential of these American-made renewable energy sources.

Go to the news Center of PNNL https://www.pnnl.gov/news/