

Where's the Money? Funding Sources in K-12

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June 15, 2024

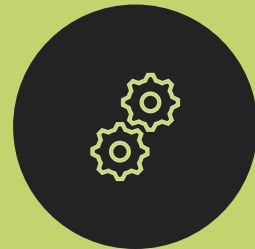


GLUMAC
A TETRA TECH COMPANY

Glumac Services

A FULLY INTEGRATED BUILDING DESIGN CONSULTANCY

ENGINEERING SERVICES



Mechanical

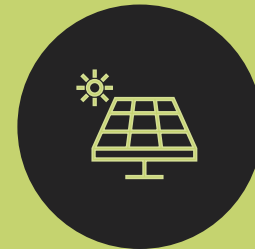


Electrical



Plumbing

BUILDING SCIENCES



Energy

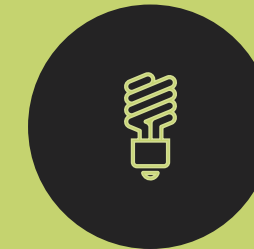


Sustainability



Commissioning

ENHANCED SERVICES



Lighting Design



Technology Integration



Construction Administration

About Eide Bailly



TOP 25 CPA FIRM



40+ OFFICES IN U.S. & INDIA



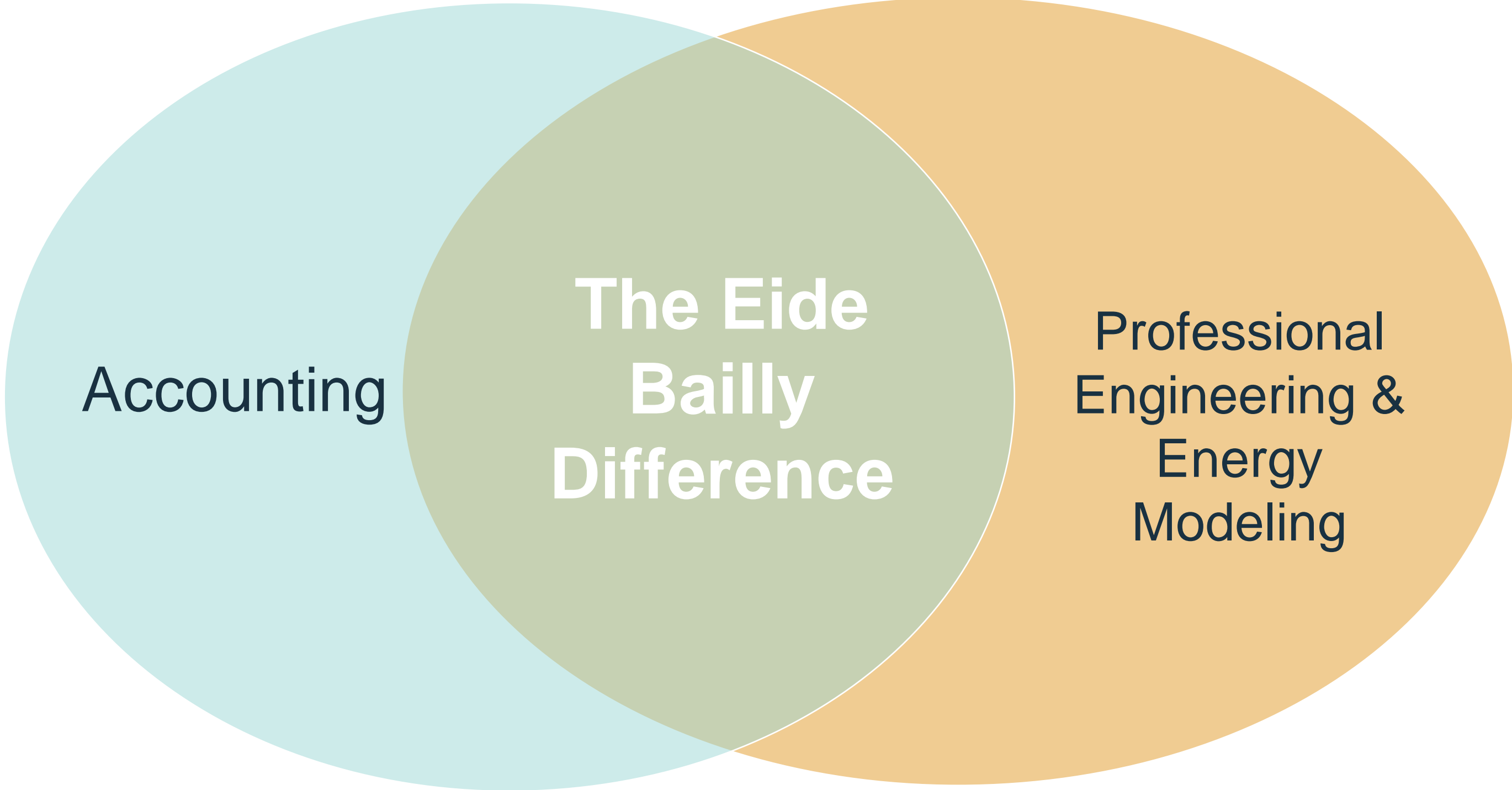
375+ PARTNERS



3,000+ STAFF MEMBERS



FOUNDED IN 1917



AIA Continuing Education

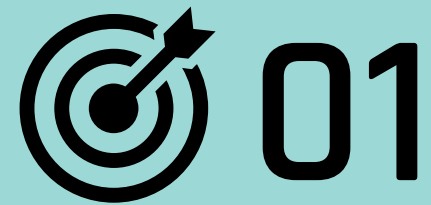
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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

Learning Objectives

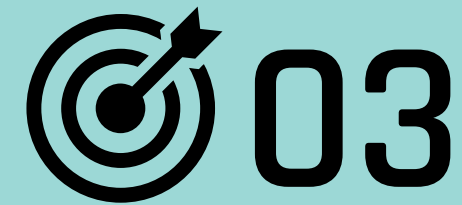
AT THE END OF THIS COURSE, PARTICIPANTS WILL BE ABLE TO:



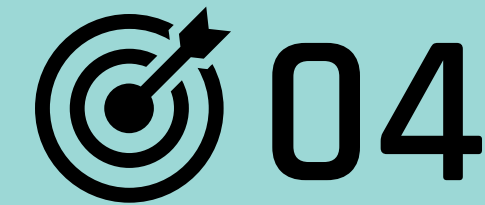
Learn about the state funding landscape



Learn about the many utility funding resources available



Learn about federal funding sources, including the Inflation Reduction Act



Review case studies about how the IRA has been used successfully

What are we talking about today?

- 1 State Funding Opportunities
- 2 Utility Funding Opportunities
- 3 Federal Funding Opportunities
- 4 Summary, Takeaways, and Resources

State Level

1

School Construction Assistance Program (SCAP) Enhancement

Changes

- Currently at \$375/sf with the goal to increase to \$928.39/sf by 2033
- Also increasing space allocation



Washington Office of Superintendent of
PUBLIC INSTRUCTION

State Level

1

Beyond School Construction Assistance Program (SCAP)

Types of Grants and Programs

- Small Rural District Modernization Grant Program*
- Small District Energy Assessment Grant
- School Seismic Safety Program
 - Geological School Site Assessment
 - Engineering Assessments
- Physical Health & Nutritional Grants
- Lead Contaminated Water Remediation
- Clean Air for Washington's Students



Washington Office of Superintendent of
PUBLIC INSTRUCTION

State Level

1

Other OSPI Grant Programs

- ADA Equal Access Grant
- Career Preparation & Launch Grant
- Emergency Repair Pool Grants
- Urgent Repair Grants
- T-12 Lighting Grants
- Skills Center Capital Funding

*Contact – Randy Newman, Director, OSPI, 360-725-6267,
Randy.Newman@k12.wa.us*



Washington Office of Superintendent of
PUBLIC INSTRUCTION

State Level

1

Washington Clean Building Performance Standard (CBPS)

Early Adopter Incentive

- One-time base incentive payment
- \$0.85/sf (excludes unconditioned spaces)
- Translates to \$85K for a 100,000 sf building
- Limited to \$75 million



KEY TAKEAWAY

A lot of this money has not been used



State Level

1

Energy Efficiency Grant Program

Serves communities throughout Washington by funding projects that improve existing, public-owned facilities and related projects that result in energy and operational cost savings

Examples



Federal Way Public Schools in King County – \$350,000 for heating and cooling controls and lighting retrofits at 18 schools. With better indoor air quality, thermal lighting and comfort, the district hopes to remove physical barriers that may inhibit learning.



Goldendale School District in Klickitat County – \$350,000 for heat recovery and LED lighting updates to a high school and an elementary school. The improvements will modernize heating and cooling systems and automate facility controls, some of which did not meet health ventilation standards in a district with constrained resources.



KEY TAKEAWAY

This program received funding for the 2023-25 biennium, with the next solicitation expected to open in spring 2024 (any day now!!)



State Level Tally

Hypothetical Case Study



- Parochial School
- 400,000 square feet
- HVAC Retrofit

Credit or Rebate	Amount	Notes
CBPS Early Adopter	\$340,000	
Energy Efficiency Grant Program	\$350,000	
	\$690,000	

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Utility

2




PSE - New Construction

EUI performance method

 \$0.45 per annual kWh
  \$7 per annual therm
  No maximum



Grant applies to whole-building performance savings beyond a baseline energy use intensity (EUI) as measured by 12 months of metered consumption.



Energy modeled whole building

 \$0.45 per annual kWh
  \$7 per annual therm
  No maximum

Grant applies to equipment and installation. Proposed design is compared to code baseline or standard practice system.

Lighting power density reduction

 \$0.25 per annual kWh, plus an additional bonus for installing controls in spaces not required by code. Lighting must be 5% more efficient than the current WSEC.*
  No maximum

 Controls bonus in addition to the \$0.25 per kWh of projected fixture annual energy savings.**
  No maximum



Utility

2

PSE - Retrofits

- Commercial Strategic Energy Management (CSEM)
\$0.04/kWh (translates to \$4K for a 100,000 sf)
- Lighting
- HVAC Controls
- Commissioning
- Custom Retrofits



Utility

2

PSE - New Demand Incentive

Launched in the Fall of 2023

When the demand for electricity approaches critical peak levels, utilities and grid operators dispatch our demand response network, which is made up of local organizations and residents that have agreed to reduce energy use during times of high demand.

Contact – Taylor Pitts, Senior Energy Management Engineer, Puget Sound Energy, 206-474-0017, taylor.pitts@pse.com



KEY TAKEAWAY

Program participants earn payments for agreeing to be on standby and for curtailing electricity consumption in response to high electricity demand



Utility

2

SCL Programs

Typical Incentives

- Lighting & Lighting Controls - \$0.17-\$0.25/kWh
- Non-Lighting Incentives to replace old inefficient equipment - \$0.10-\$0.27/kWh
- Instant Discounts from participating distributors

Additional Programs

- Pay for Performance (P4P) - \$0.08-\$0.34/kWh
- Existing building commissioning (EBCx)
- Free Building Management System (BMS) Review

Utility

2

SCL Programs

Incentives for Developing and Managing Energy Efficiency Projects

- Project Development Incentive (PDI) \$0.025/kWh
- Energy Project Manager (EPM)\$0.025/kWh
- Strategic Energy Management (SEM)

Contact – Energy Advisor, 206-684-3800, SCLEnergyAdvisor@seattle.gov

Coming in 2025, Seattle City Light will revamp their program to work with an implementer (Willdan), which should make the programs easier and more lucrative.

Utility

2

Avista Programs

Custom Rebates

- Commercial Lighting
- HVAC and Water Heating

Pay for Performance Program

An incentive program that pays customers for actual energy savings at the meter from building retrofits and equipment upgrades as well as from behavioral, operations and maintenance, and retro-commissioning activities. Incentives paid at \$0.08 per kWh and 1.25 per therm.



Utility

2

Avista Programs

Contractor Incentive Program

Pays \$0.05 per kilowatt saved for each Site-Specific (custom) commercial electric energy-saving project you help a Washington customer complete.



State Level + Utilities Tally

Hypothetical Case Study



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- HVAC Retrofit

Credit or Rebate	Amount	Notes
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Energy Efficiency Grant Program	\$ 350,000	
PSE Utility Rebate	\$ 30,000	Custom
	<hr/>	
	\$ 720,000	

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Federal

3

DOE Renew America's Schools

Renew America's Schools

- Promotes the implementation of clean energy improvements at K-12 public schools across the country
- The **second round of applications was due June 13.** (Required groups of 10 schools)
- There will be an **additional (third) round in FY26.** More information will be provided in August



Federal

3

EPA Clean Heavy-Duty Vehicles

Clean Heavy-Duty Vehicles Grant Program

To replace existing non-zero-emission heavy-duty vehicles with zero-emission vehicles, support zero-emission vehicle infrastructure, and to train and develop workers.

Funding may also be used for:

- Zero-emission vehicle refueling infrastructure
- Workforce development and training
- Project implementation costs

Close date of July 25, 2024



THE CLIMATE ECONOMY

\$374 billion of energy incentives according to the Congressional Budget Office

\$1.7 trillion of energy incentives according to private reports



What does the IRA Incentivize?

ENERGY EFFICIENCY



RENEWABLES



DECARBONIZATION



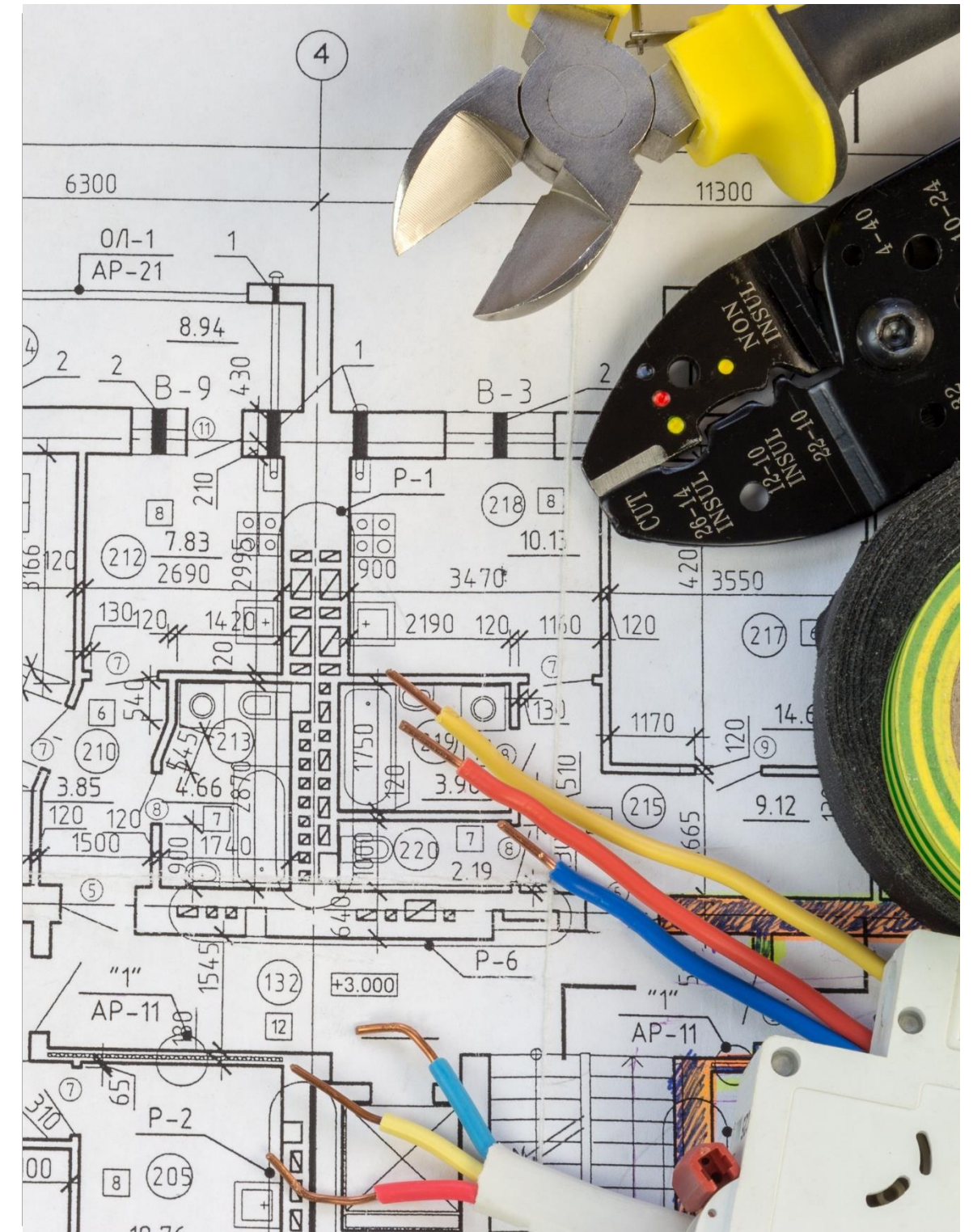
179D ENERGY EFFICIENCY DEDUCTION

ENERGY EFFICIENCY ELIGIBILITY

- New Construction / Renovation projects
- Considers energy efficiency in lighting, envelope, HVAC
- ASHRAE 90.1- 2007 energy modeling baseline

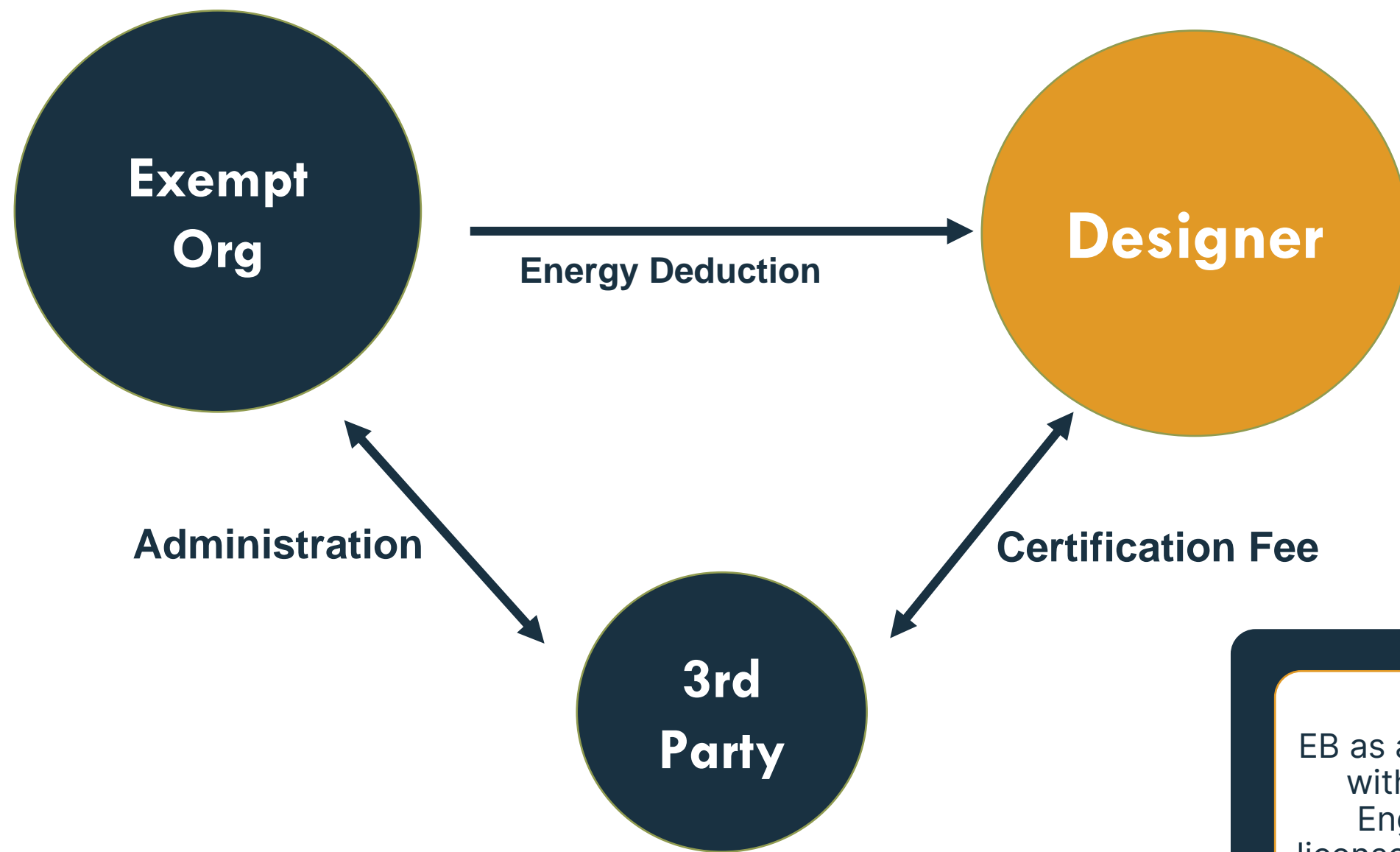
DEDUCTION AMOUNT

- Previously, up to \$1.80/square foot
- IRA, up to \$5.00/square foot (indexed to inflation)
- 3rd party engineer to certify the amount
- Tax exempts can allocate to Designers



Energy Incentive Program

Energy Efficient Commercial Buildings (Section 179D)



The Exempt Organization assigns an Allocation Letter to the designer(s) at their “sole discretion” under penalties of perjury.

EB as a third-party firm with Professional Engineers (P.E.) licensed in all 50 states

“Designer(s)” such as the Architect, Engineer, General Contractor, Subcontractors (HVAC, Electrical, Structural)

Exempt Organization such as Healthcare, K-12, Higher Education, Government, Senior Living



CLEAN ENERGY

Investment Tax Credit (§48)

Production Tax Credit (§45)

Energy credits

Clean Energy Investment Tax Credit (Section 48)



Investment in equipment that produces energy from alternative sources:

- Solar
- Wind
- Geothermal+
- Fuel Cells
- Microturbines
- Combined heat and power systems*
- Equipment that recovers waste energy
- Energy storage
- Biogas
- Microgrid controllers*
- Electrochromic Glass*

SOLAR

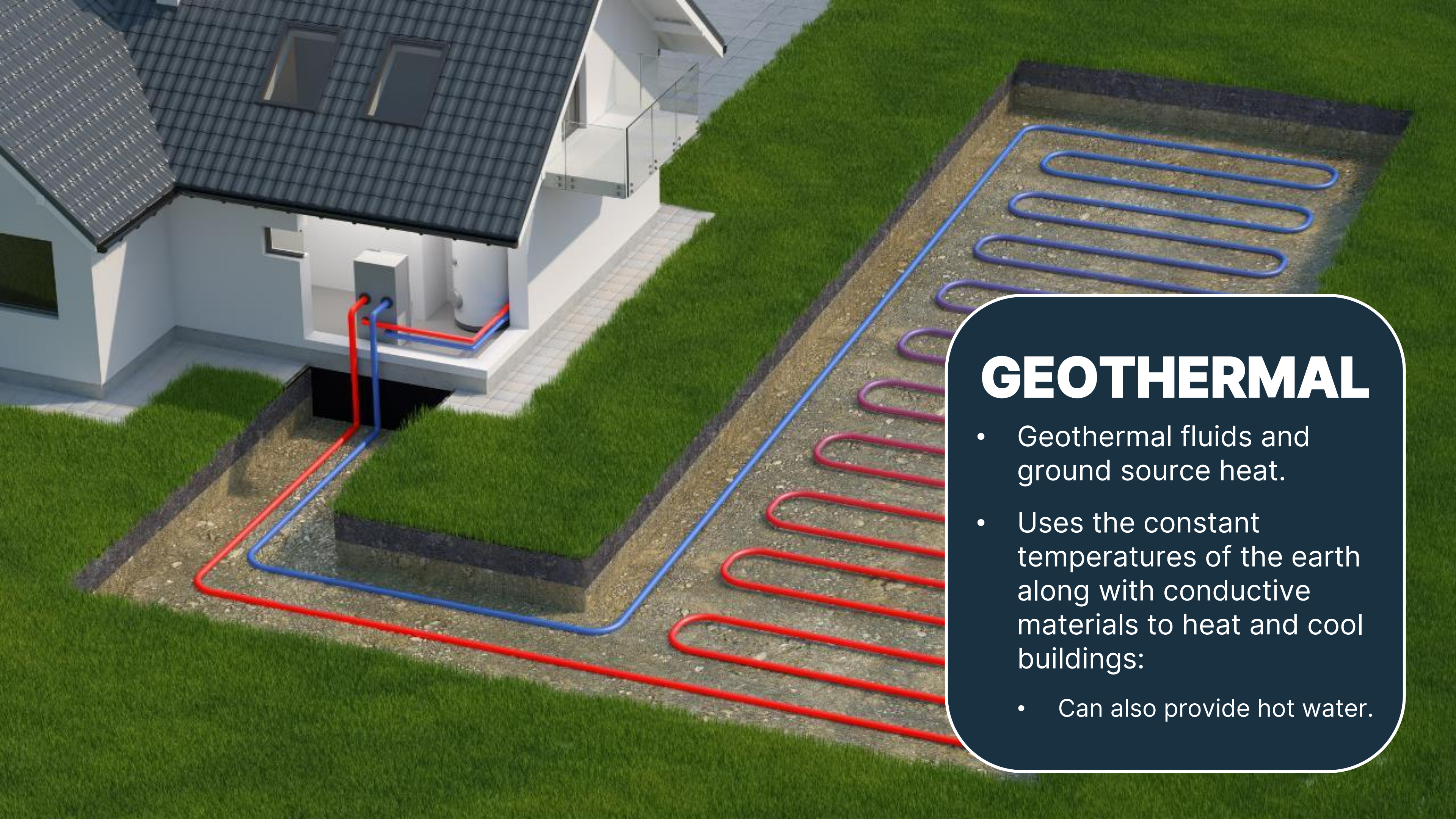
- Solar Eligibility:
 - Electrical Production
 - Water Heating (active):
 - (EXCEPT for swimming pools)
- Illumination



SMALL SCALE WIND ENERGY

- Eligibility:
 - Turbines with nameplate capacity of no more than 100 kW.





GEO THERMAL

- Geothermal fluids and ground source heat.
- Uses the constant temperatures of the earth along with conductive materials to heat and cool buildings:
 - Can also provide hot water.



Energy Storage

Batteries

Thermal

Hydrogen

Mechanical

Energy credits & incentives

Clean Energy Investment Tax Credit (Section 48)

Credit Percentage

- Basic credit = 6%
- If wage rules met = 30%
- If domestic content = + 10%
- In energy community = + 10%
- Additional bonuses for solar and wind with an environmental justice allocation.

Basis Considerations

- Cost Segregation Needed
- Section 263A (UNICAP)
- Interconnected property
- Dual use property
- Basis reduction 50% of credit
- Tax-exempt bonds reductions
- Federal grant funding

Domestic content

- §45(b)(9), Notice 2023-38
- Timely certify to Treasury any “steel, iron, or manufactured product of a component...was produced in the U.S.”
- Manufactured Product of a Component
 - Must be a component of an applicable project
 - At least 40% of the total of manufactured products are produced, mined, or manufactured in the U.S.
- Guidance mirrors Buy American Act, suggests similar documentation
- Safe harbors for solar, land-based wind, and battery storage



Domestic Content – phase out IRC §45(b)(10)

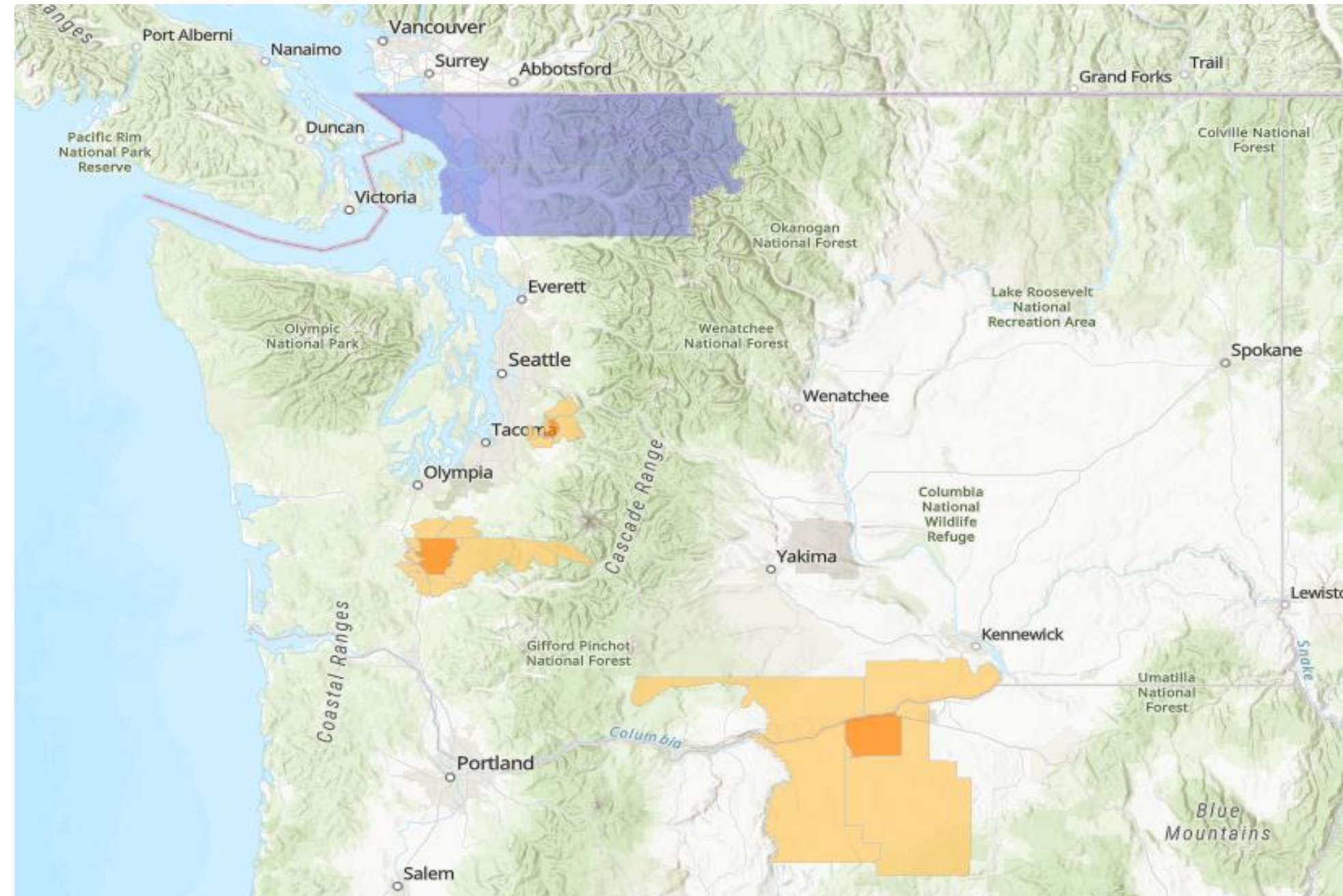
- If taxpayer is making a direct pay election, the amount of the credit is 100% of the value of the credit, if the facility:
 - Construction begins prior to January 1, 2024, and
 - Meets the domestic content requirements under §45(b)(9), or
 - Has a maximum net output less than 1 megawatt
- The amount of the credit is 90% of the value of the credit, if the facility:
 - Construction begins in calendar year 2024 or later
 - Does not meet the domestic content requirements under §45(b)(9), or
 - Has a maximum net output greater than 1 megawatt, or
 - Meets an exception under 45(b)(10)(D).
- Exceptions under 45(b)(10)(D)
 - Increased Costs Exception - 25%
 - Non-Availability Exception.

ENERGY COMMUNITY

QUALIFIED AREAS

- Brownfield sites
- Census tract directly adjoining a census tract with a coal closure
- Census tract with a coal closure
- MSAs/non-MSAs that meet both the Fossil Fuel Employment (FEE) threshold and the unemployment rate requirement

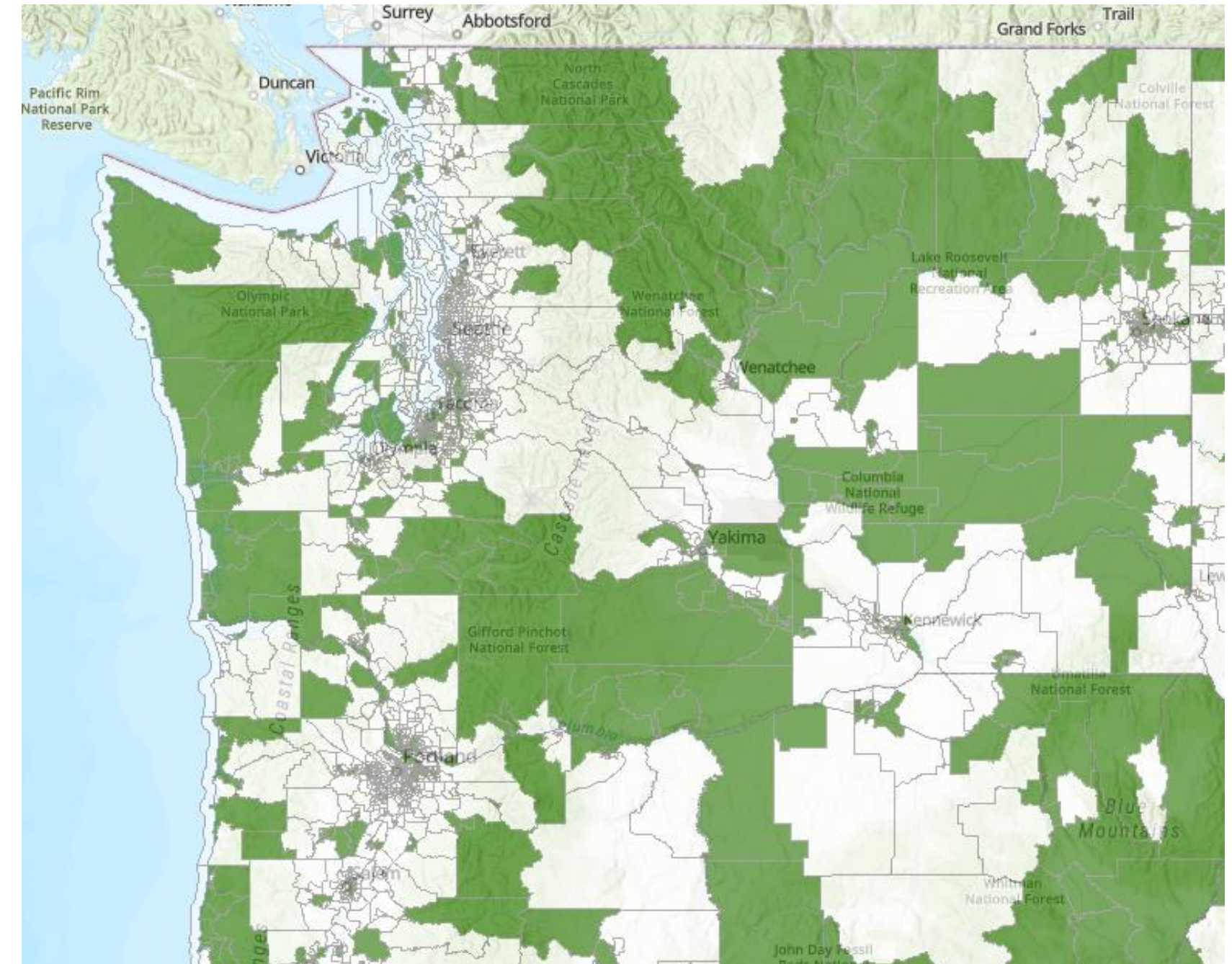
IRA ENERGY COMMUNITY TAX CREDIT BONUS (DOE.GOV)



LOW-INCOME COMMUNITIES

- Environmental Justice Allocation
- 10% or 20% Bonus
- Solar and wind projects
- Less than 5 megawatts
- Annual capacity limitation 1.8 gigawatts
- Located in:
 - Low-income community under 45D(e) – 10%
 - Tribal lands – 10%
 - Qualified low-income residential building project – 20%
 - Qualified low-income economic benefit project – 20%

[NMT Public Viewer - InVision \(cdfifund.gov\)](https://cdfifund.gov)



Monetizing the energy credit

- Registration Process
 - Placed in Service
 - 120 days before filing
- Annual Tax Filings
- Documenting timeline
 - Beginning of Construction
 - Placed in Service
- Recapture risk when energy credits are monetized:
 - Must hold the property for 5 years.



DECARBONIZATION

Alternative Refueling Infrastructure (§30C)
Qualified Clean Commercial Vehicles (§45W)



ENERGY CREDITS & INCENTIVES

ELECTRIC COMMERCIAL FLEET

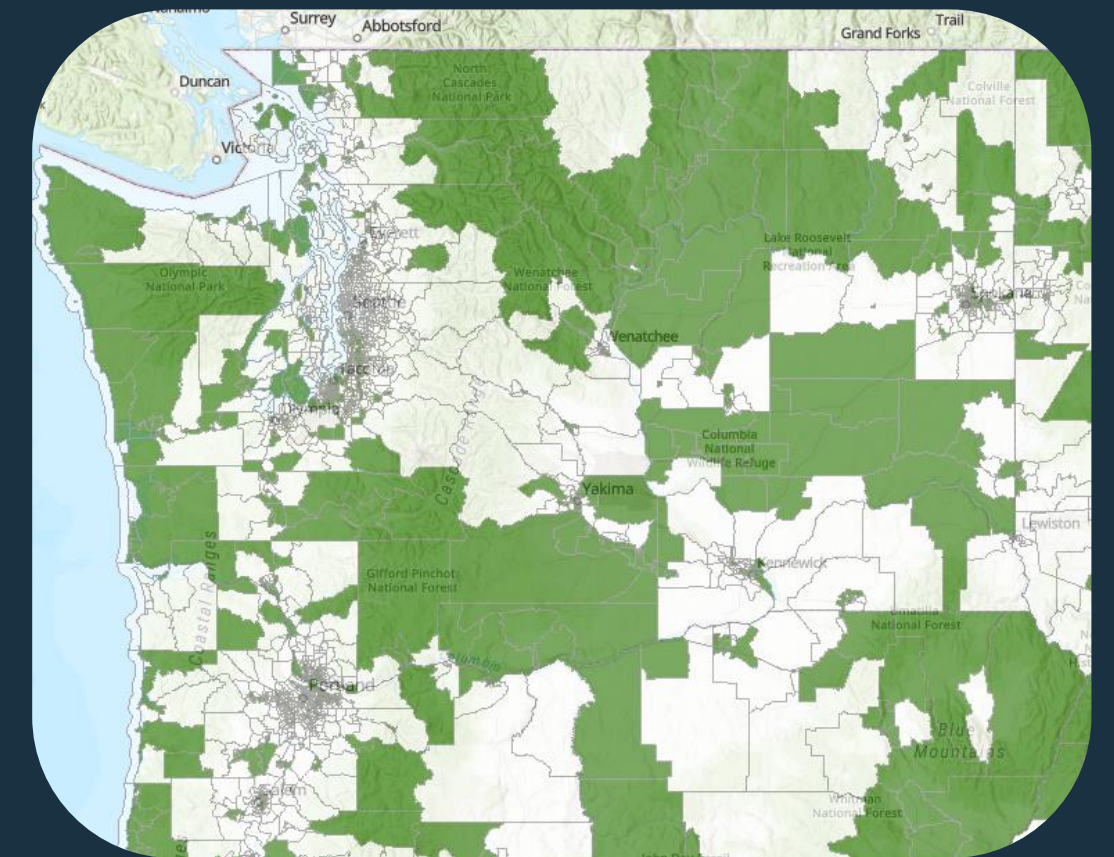
- Section 45W.
- 30% of the basis (if not powered by gas/diesel) OR
- Incremental cost of vehicle
- Under 14,000 lbs, up to \$7,500 per vehicle.
- Over 14,000 lbs, up to \$40,000 per vehicle.

EV INFRASTRUCTURE

- Section 30C.
- Alternative fuel vehicle refueling and charging property.
- Located in low-income and non-urban areas.
- 6% or 30%.
- Up to \$100,000 per charging unit.

LOW INCOME COMMUNITIES

[NMTC Public Viewer - InVision \(cdfifund.gov\)](https://cdfifund.gov)



Energy efficiency incentives- summary

Non-Taxpaying Entities

After 1/1/2023

Section 179D

- up to \$5.00/sf tax deduction can be allocated to a designer of the energy efficient property (Architect/Engineer)

Section 48/30C

- up to 30-50% of the direct and indirect costs as a rebate from the government



What will \$1.7 Trillion do?

REWARD BEHAVIOR

CHANGE BEHAVIOR



REWARD BEHAVIOR

- New Construction Elementary School Building
- Construction complete on 1/15/23
- Electrochromic Glass - \$400k
 - Safe Harbor - 30%
 - Domestic Content - +10%
 - Result: \$160k credit
- 179D Deduction - 50k SF: \$268k Deduction

CHANGE BEHAVIOR

- Parochial School
- 400,000 square feet
- Boiler/Chiller vs Geothermal HVAC systems
- \$3.6M Boiler/Chiller 1st cost
- \$4.8M Geothermal 1st cost (\$1.2M more)
 - Prevailing wage rules met - 30%
 - Domestic Content - +10%
 - Dual Use Property (maximize basis)
 - Result: \$1.8M Credit
- \$2.26M 179D Deduction



Total Tally

Hypothetical Case Study

Credit or Rebate	Amount	Notes
CBPS Early Adopter	\$ 340,000	
Energy Efficiency Grant Program	\$ 350,000	
PSE Utility Rebate	\$ 30,000	Custom
ITC	<u>\$ 1,920,000</u>	Post funding
	\$ 2,640,000	

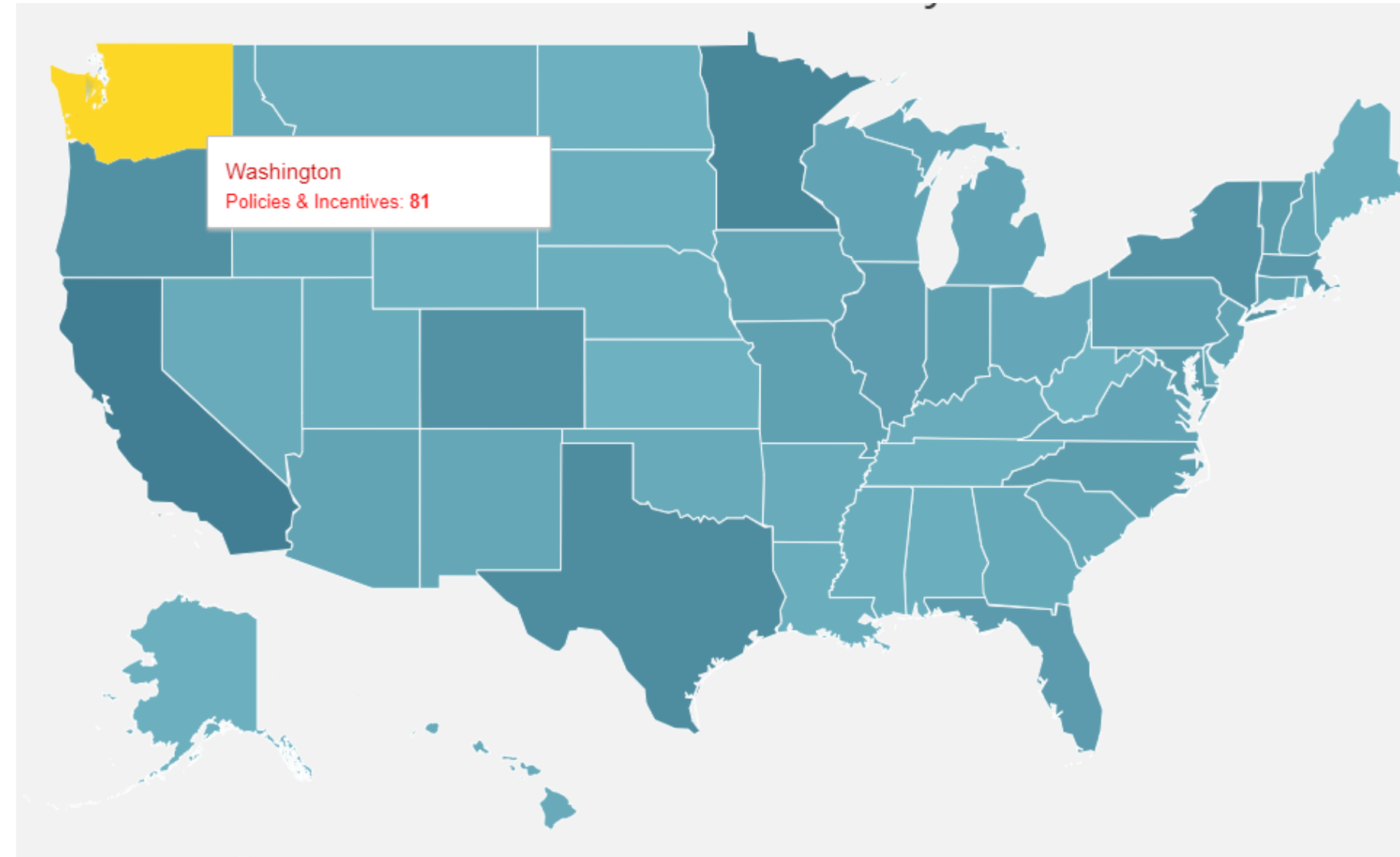
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Resources

4

Database of State Incentives for Renewables and Efficiency (DSIRE)



Key Takeaways

01

There are many state, utility, and federal incentives available

02

It's **a lot** to navigate and requires research, specialized assistance, time & money, but there's **HOPE**

03

Start by gathering diverse stakeholders and establishing goals

04

When one opportunity closes, another can open

Q&A



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