



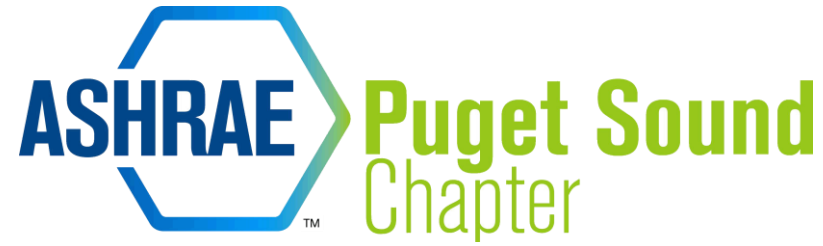
Code of Ethics Commitment

In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and we shall avoid all real or perceived conflicts of interests.

Diversity Commitment

ASHRAE is committed to providing a welcoming environment. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We proactively pursue and celebrate diverse and inclusive communities understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and for the communities our Society serves. We respect and welcome all people regardless of age, gender, ethnicity, physical appearance, thought styles, religion, nationality, socio-economic status, belief systems, sexual orientation or education.

ASHRAE Puget Sound Chapter does not endorse any of the products, services, or technologies demonstrated or presented in this meeting.



1.140.001 Code of Ethics

(74-06-23-28/86-06-22-23/07-01-31-16/13-01-30-61)

1.140.001.1 As members of ASHRAE or participants in ASHRAE committees, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

- A. Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety and welfare.
- B. Members and organized bodies of the Society shall be good stewards of the world's resources including energy, natural, human and financial resources
- C. Our products and services shall be offered only in areas where our competence and expertise can satisfy the public need.
- D. We shall act with care and competence in all activities, using and developing up to date knowledge and skills.
- E. We shall avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.
- F. The confidentiality of business affairs, proprietary information, intellectual property, procedures, and restricted Society discussions and materials shall be respected.
- G. Each member is expected and encouraged to be committed to the code of ethics of his or her own professional or trade association in their nation and area of work.
- H. Activities crossing national and cultural boundaries shall respect the ethical codes of the seat of the principal activity.



CPAs & BUSINESS ADVISORS

ENERGY INCENTIVES IN THE IRA

April 2024

DISCLAIMER

This presentation is presented with the understanding that the information contained does not constitute legal, accounting or other professional advice. It is not intended to be responsive to any individual situation or concerns, as the contents of this presentation are intended for general information purposes only. Viewers are urged not to act upon the information contained in this presentation without first consulting competent legal, accounting or other professional advice regarding implications of a particular factual situation. Questions and additional information can be submitted to your Eide Bailly representative, or to the presenter of this session.



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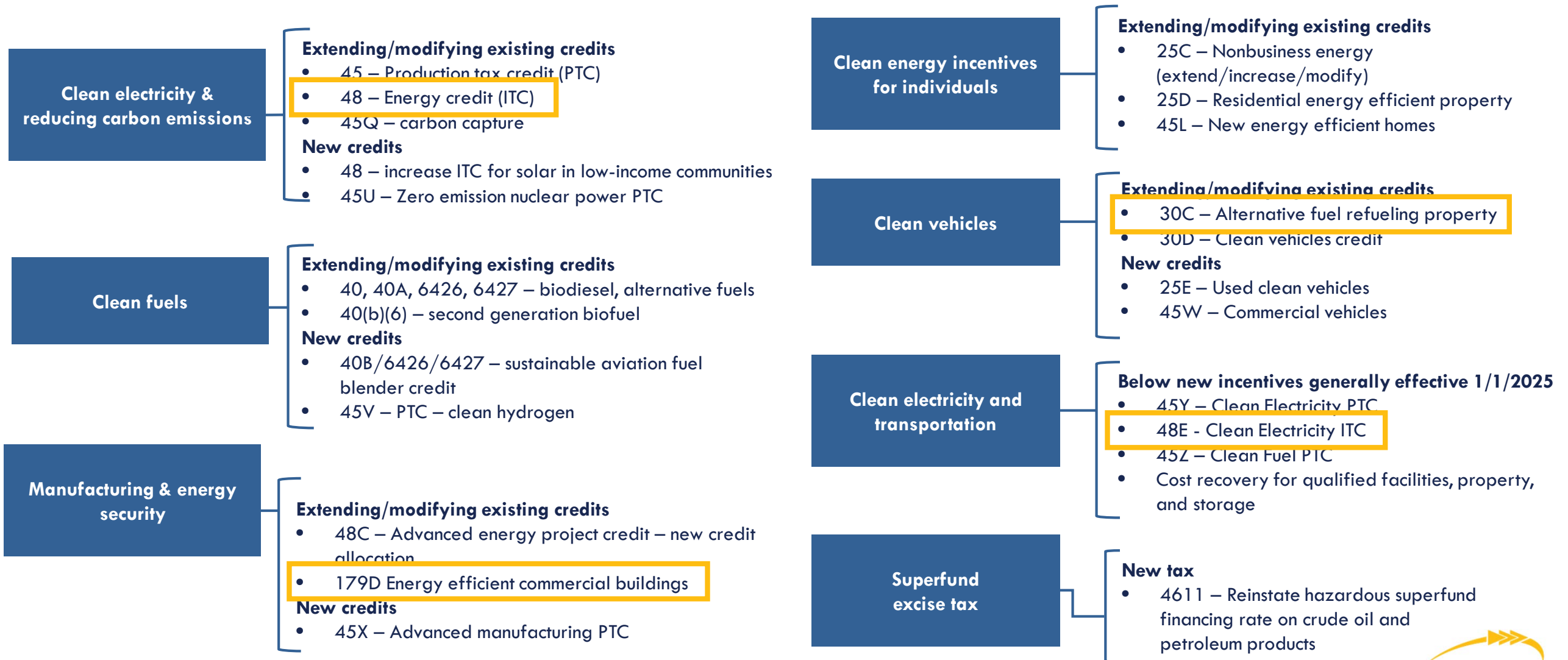
THE CLIMATE ECONOMY

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

\$1.7 trillion of energy incentives according to private reports



INFLATION REDUCTION ACT OF 2022 – CLEAN ENERGY ROADMAP



WHAT DOES THE IRA INCENTIVIZE?

ENERGY EFFICIENCY



RENEWABLES



DECARBONIZATION





ENERGY EFFICIENCY

New Energy Efficient Home Credit (§45L)

Energy Efficiency Commercial Buildings (§179D)

SECTION 179D ENERGY EFFICIENT DEDUCTION

Section 179D is available for HVAC, building envelope and lighting projects, up to \$5.00 deduction per square foot.
(indexed to inflation)



179D ENERGY EFFICIENT DEDUCTION – TWO WAYS



Private

- Extended permanently
- Building owners or tenants
- Form 3115 back to January 1, 2006
- Eligible every 3 years

Designers - Tax Exempt Entities

- Extended permanently
- Designers of government, Indian tribal government and certain tax-exempt entities
- Architects, Engineers and Contractors
- Amended returns in open tax year
- Eligible every 4 years

ENERGY EFFICIENT COMMERCIAL BUILDINGS DEDUCTION – PRIOR VS. TODAY

SECTION 179D PRIOR

- \$1.80-\$1.88 deduction per square foot
- Lighting, HVAC and Envelope
- Life-time cap
- Started in 2006 and has since been made permanent
- Applies to private owners, and designers of government buildings

SECTION 179D IN THE IRA

- Status quo for 2022
- *Starting in 2023 through 2032:*
- Base Deduction: \$0.50 to \$1.00 per SF
- Bonus Deduction: \$2.50 to \$5.00 per SF
- Whole building model incorporating Lighting, HVAC and/or Envelope
- **Four-year cap for tax exempts / 3-year cap for privately owned**
- Enhancement for REITs
- Applies to private owners, and designers of government, Indian tribal government and certain tax-exempt entities buildings

179D ENERGY EFFICIENT BUILDINGS DEDUCTION – AFTER 1/1/23

Improvement Over ASHRAE 90.1 Baseline	Deduction Available per SF	
	Base	Bonus ¹
25%	\$0.50	\$2.50
26%	\$0.52	\$2.60
27%	\$0.54	\$2.70
...
48%	\$0.96	\$4.80
49%	\$0.98	\$4.90
50%	\$1.00	\$5.00

¹Bonus credit if prevailing wage and apprenticeship requirements are met.

HOW THE 179D DEDUCTION IS CALCULATED

- ASHRAE 90.1-2001: Projects first occupied 1/1/2006 – 12/31/2015.
- **ASHRAE 90.1-2007: 1/1/2016 – 12/31/2026.**
- ASHRAE 90.1-2019: 1/1/2027 – 12/31/2028
- ASHRAE 90.1-2022 – 1/1/2029 and beyond



HOW THE 179D DEDUCTION IS CALCULATED

Part III. Administrative, Procedural, and Miscellaneous

Deduction for Energy Efficient Commercial Buildings

Notice 2006-52

SECTION 1. PURPOSE

This notice sets forth interim guidance, pending the issuance of regulations, relating to the deduction for energy efficient commercial buildings under § 179D of the Internal Revenue Code. Specifically, this notice sets forth a process that allows a taxpayer who owns, or is a lessee of, a commercial building and installs property as part of the commercial building's interior lighting systems, heating, cooling, ventilation, and hot water systems, or building envelope to obtain a certification that the property satisfies the energy efficiency requirements of § 179D(c)(1) and (d). This notice also provides for a public list of software programs that must be used in calculating energy and power consumption for purposes of § 179D. The Internal Revenue Service and the Treasury Department expect that the rules set forth in this notice will be incorporated in regulations.

SECTION 2. BACKGROUND

.01 In General. Section 1331 of the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005), enacted § 179D of the Code, which provides a deduction with respect to energy efficient commercial buildings. Section 179D(a) allows a deduction to a taxpayer for part or all of the cost of energy efficient commercial building property that the taxpayer places in service after December 31, 2005, and before January 1, 2008. (See section 2.02 of this notice.) Sections 179D(d)(1) and 179D(f) allow a deduction to a taxpayer for part or all of the cost of certain partially qualifying commercial building property that the taxpayer places in service after December 31, 2005, and before January 1, 2008. (See sections 2.03, 2.04, and 2.05 of this notice.) For purposes of this notice partially qualifying commercial building property is property that would be energy efficient commercial building property but for the failure to achieve the 50-percent reduction in energy and power

costs required under section 2.02(1)(c) of this notice.

.02 Energy Efficient Commercial Building Property.

(1) *In General.* Energy efficient commercial building property is depreciable property that satisfies each of the following conditions:

(a) The property is installed on or in any building that is located in the United States and is within the scope of Standard 90.1-2001. (See section 5.02 of this notice for the description of buildings within the scope of Standard 90.1-2001 and section 5.06 of this notice for the complete description of Standard 90.1-2001.)

(b) The property is installed as part of—
(i) the interior lighting systems,
(ii) the heating, cooling, ventilation, and hot water systems, or
(iii) the building envelope.

(c) It is certified that the interior lighting systems, heating, cooling, ventilation, and hot water systems, and building envelope that have been incorporated into the building, or that the taxpayer plans to incorporate into the building subsequent to the installation of such property, will reduce the total annual energy and power costs with respect to combined usage of the building's heating, cooling, ventilation, hot water, and interior lighting systems by 50 percent or more as compared to a Reference Building that meets the minimum requirements of Standard 90.1-2001. The required 50-percent reduction must be accomplished solely through energy and power cost reductions for the heating, cooling, ventilation, hot water, and interior lighting systems. Reductions in any other energy uses, such as receptacles, process loads, refrigeration, cooking, and elevators, are not taken into account in determining whether the 50-percent reduction is achieved.

(2) Maximum Amount of Deduction.

(a) *In General.* The deduction for the cost of energy efficient commercial building property installed on or in a building shall not exceed the excess (if any) of—

(i) the product of \$1.80 and the square footage of the building, over

(ii) the aggregate amount of the § 179D deductions allowed with respect to the building for all prior taxable years.

(b) *Application to Multiple Taxpayers.*

If two or more taxpayers install energy efficient commercial building property on or in the same building, the aggregate amount of the § 179D deductions allowed to all such taxpayers shall not exceed the amount under section 2.02(1)(c) of this notice.

.03 Partially Qualifying Property.

(1) *In General.* Property that is partially qualifying property, within the scope of this notice, shall be treated as energy efficient commercial building property for purposes of this notice if it meets the requirements of section 2.03(1)(b) of this notice.

(a) *Permanent Property.* Property that is permanently installed in a building, or that has been installed in a building and is to be installed in the building, shall be treated as energy efficient commercial building property if it meets the requirements of section 2.03(1)(b) of this notice.

(b) *Temporary Property.* Property that is temporarily installed in a building, or that has been installed in a building and is to be installed in the building, shall be treated as energy efficient commercial building property if it meets the requirements of section 2.03(1)(b) of this notice.

SECTION 3. METHOD OF COMPUTATION

.01 In General. The Performance Rating Method (PRM) must be used to compute the percentage reduction in the total annual energy and power costs with respect to combined usage of a building's heating, cooling, ventilation, hot water, and interior lighting systems as compared to a Reference Building that meets the minimum requirements of Standard 90.1-2001.

.02 Performance Rating Method (PRM). For purposes of this notice, the PRM includes the following computations:

(1) **Reference Building Energy and Power Costs** equal the sum of the energy and power costs for the following components of the Reference Building:

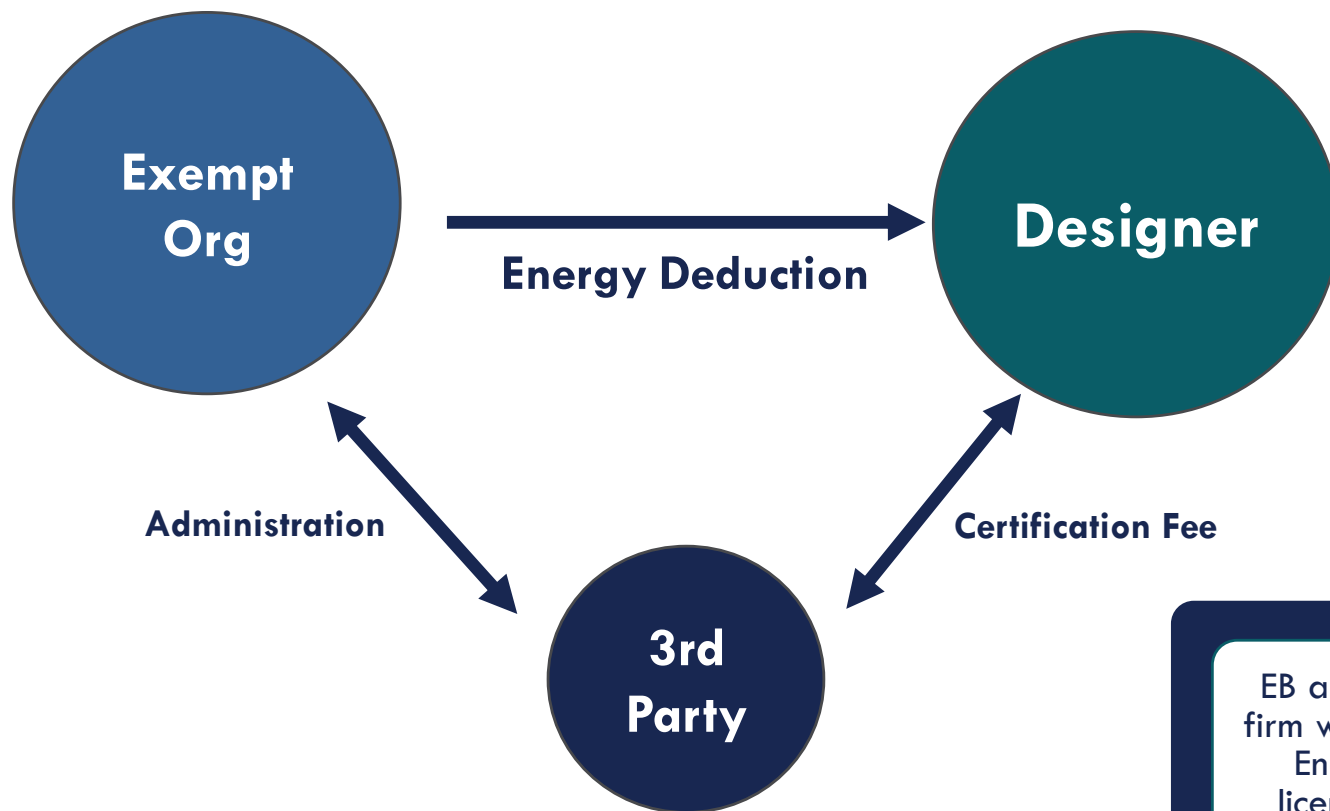
- (a) Interior Lighting,
- (b) Heating,
- (c) Cooling,
- (d) Ventilation, and
- (e) Hot Water.

(2) **Proposed Building Energy and Power Costs** equal the sum of the energy and power costs for the same components of the Proposed Building.

- From Notice 2006-52.
- Performance Rating method using the energy and power costs for the following end uses only:
 - Interior Lighting
 - Heating
 - Cooling
 - Ventilation
 - Hot Water
- All exterior and process loads, including refrigeration, cooking, and receptacles (Misc. Equip), are **not** included in the savings calculations.

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

179D – ALLOCATION LETTER

Allocation Letter

Government-Owned Building Information				
Property Address	City, State Zip	Placed in Service	Cost of Property	Amount Allocated

Governmental Building Owner Authorized Representative Information	
Agency:	
Representative Name:	
Mailing Address:	
City, State Zip:	
Telephone:	

[FIRM] Representative Information	
Company:	
Representative Name:	
Mailing Address:	
City, State Zip:	
Telephone:	

Under penalties of perjury, I declare that I have examined this allocation, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this allocation are true, correct, and complete.

Agreed to and Accepted:

Governmental Representative

Date

[FIRM] Representative

Date



Designers of Governmental Buildings:

- Current year:
 - Other Deductions with attachment.
- Prior year:
 - Amended returns for open tax years.
- An allocation letter is always required.



An overhead photograph of two business women shaking hands over a wooden desk. The woman on the left is wearing a grey blazer and a white shirt. The woman on the right is wearing a light blue blazer. On the desk, there are two laptops, a spiral notebook, and a small potted plant. The background is a dark, textured wall.

BEST PRACTICE TIP

Work with your client to put language in the Agreement to allocate the deduction to you.

WHO IS A DESIGNER?

Designer of Government-Owned Buildings.

“...A designer is a person that creates the technical specifications for installation of energy efficient commercial building property....”

“...A designer may include, for example, an architect, engineer, contractor, environmental consultant or energy services provider who creates the technical specifications....”

“...A person that merely installs, repairs, or maintains the property is not a designer.”

179D – CASE STUDY – PRIVATELY OWNED (IRA)



Mixed Use Facility – New Construction:

Building Highlights:

- Heating: Gas Fired 95.5 AFUE
- Cooling: 16 SEER
- Lighting: LED fixtures and occupancy sensors

Results: The entire 175,000 SF building will qualify for a \$5.36/SF deduction.
\$938,000 deduction for the owner.

179D – CASE STUDY – TAX EXEMPT (IRA)



Non-Profit Hospital– Renovation:

- Building Highlights:
 - Lighting: combination of LED & high efficiency fluorescent fixtures
 - Heating: 90 AFUE Boiler
 - Cooling: 0.5 kW/ton IPLV Chiller

Results: The entire 250,000 SF building qualified for \$5.65/SF deduction.
~\$1.4M deduction for the designer.



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

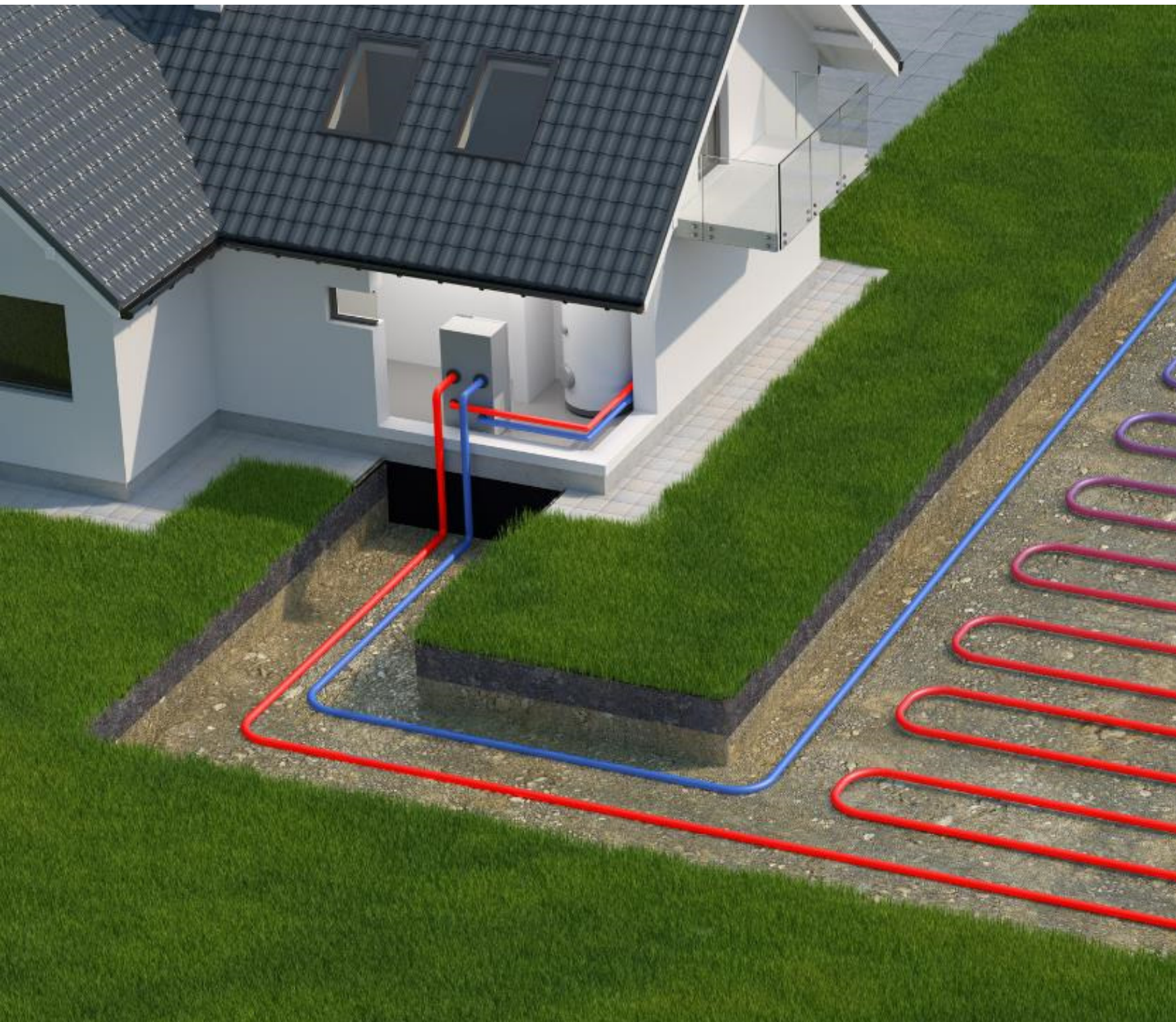
- Solar Eligibility:
 - Electrical Production
 - Water Heating (active):
 - (EXCEPT for swimming pools)
 - Illumination



The image shows two small-scale wind turbines mounted on the roof of a brick building. The turbines have three blades each and are positioned against a clear blue sky. The building is made of red brick and has several windows visible. A dark blue rounded rectangle with white text is overlaid on the right side of the image.

SMALL SCALE WIND ENERGY

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



GEOTHERMAL

- 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

PREVAILING WAGE

PREVAILING WAGE

- Defined by Davis Bacon
- Continuity Requirement
- Maintained by Taxpayer
- Risk maintained by Taxpayer
- One Megawatt Exception
- Beginning of Construction Exception



DOCUMENTATION

- Name & ID Number
- WH Exemptions
- Work Classification
- Hours worked
- Rate of Pay, including Fringe Benefits
- Gross Amounts Earned
- Deductions
- Net Wages Paid

APPRENTICESHIP

REGISTERED APPRENTICESHIP PROGRAM



COMPLIANCE:

- Participation Requirement
 - 1 in 4 laborers
- Labor Hours Requirement
 - 10%-15%
- Good Faith Effort
 - Failed to respond within 5 days
 - Denied Requests
- Apprenticeship Cure Provision
 - \$50 x labor hours needed
 - \$500 if intentional disregard

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.
 - Potential safe harbors, subject to Federal Transit Authority’s analysis.
- Guidance mirrors Buy American Act, suggests similar documentation



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.

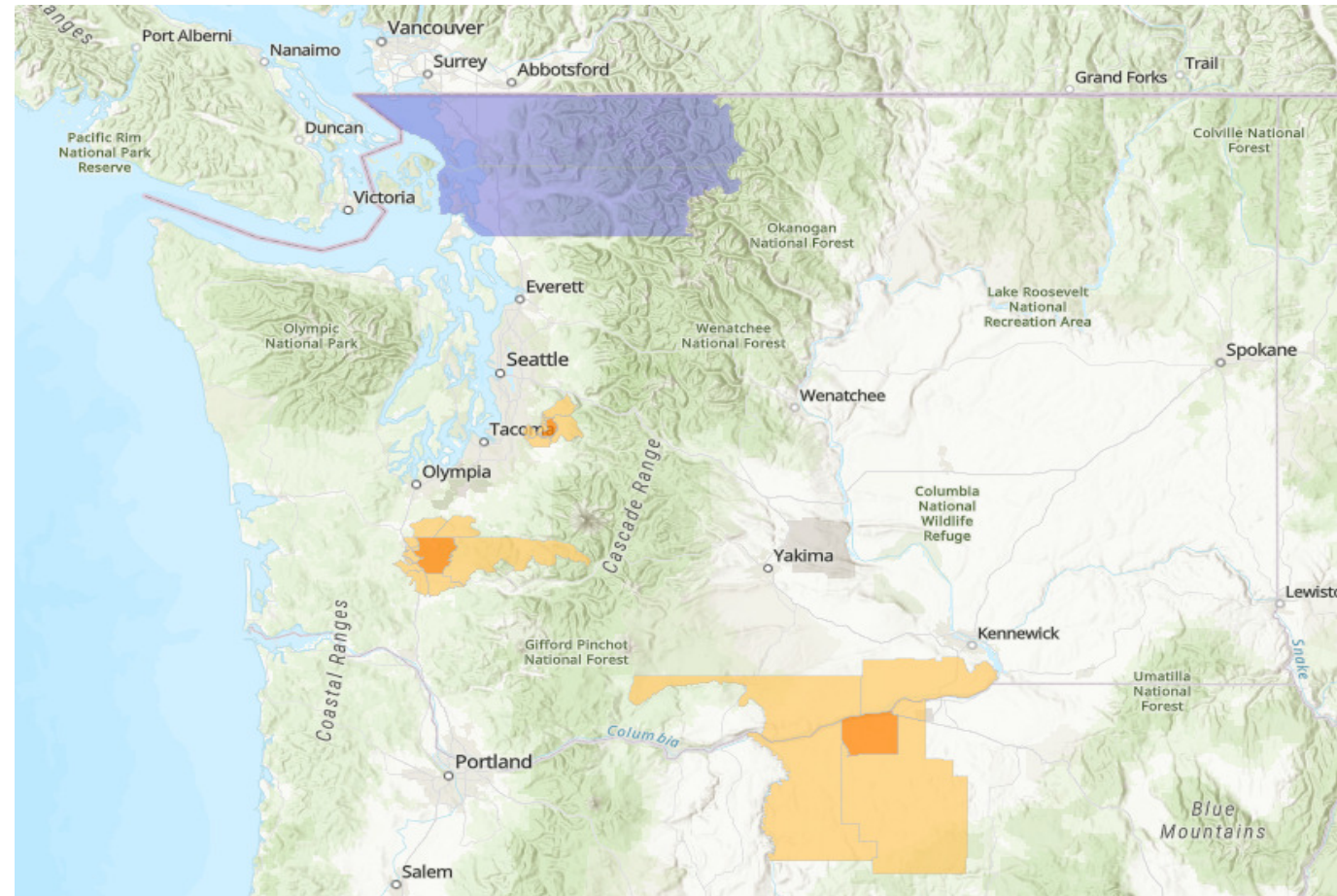


ENERGY COMMUNITY

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

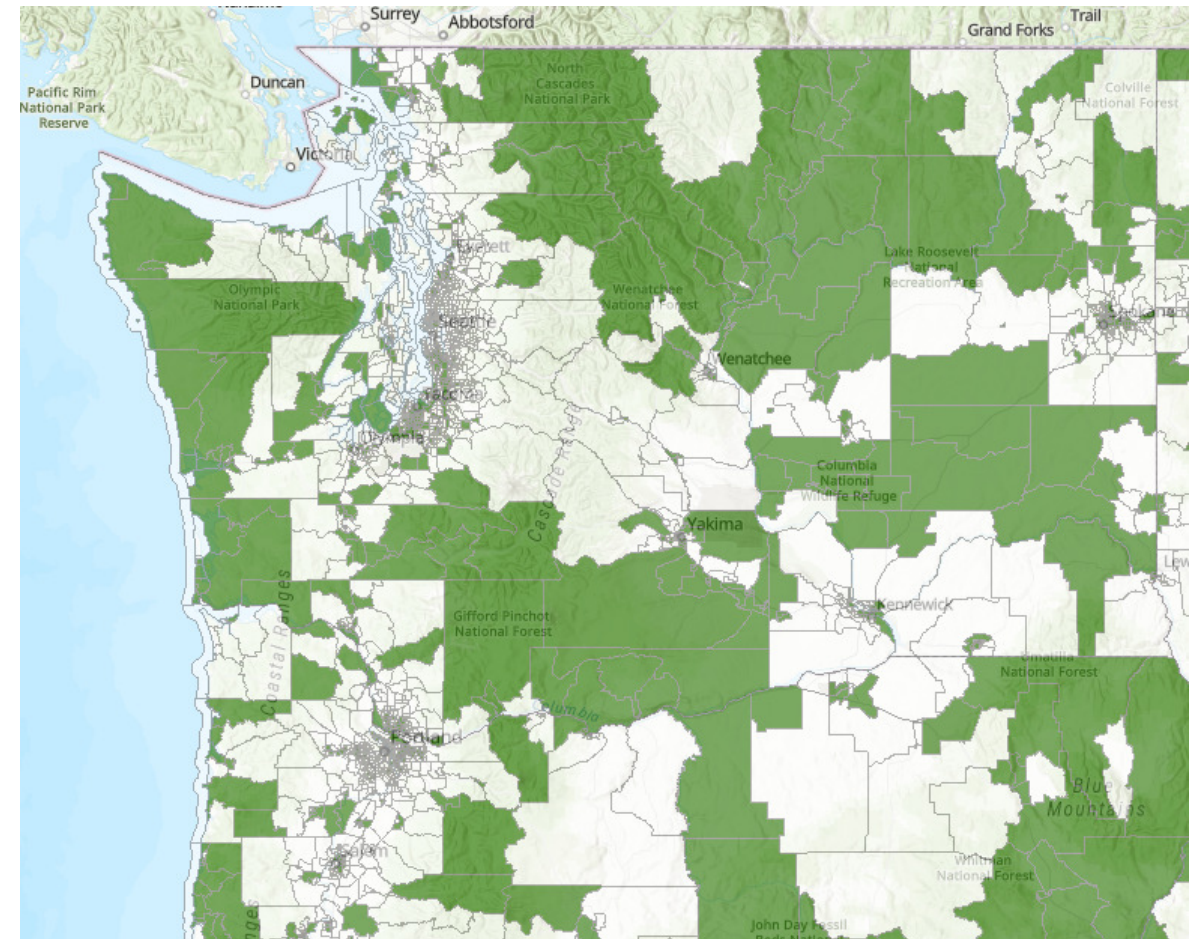
IRA ENERGY COMMUNITY TAX CREDIT BONUS (DOE.GOV)



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%

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



ENERGY CREDITS & INCENTIVES

Clean Energy Investment Tax Credit (Section 48)

Credit Percentage

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Basis Considerations

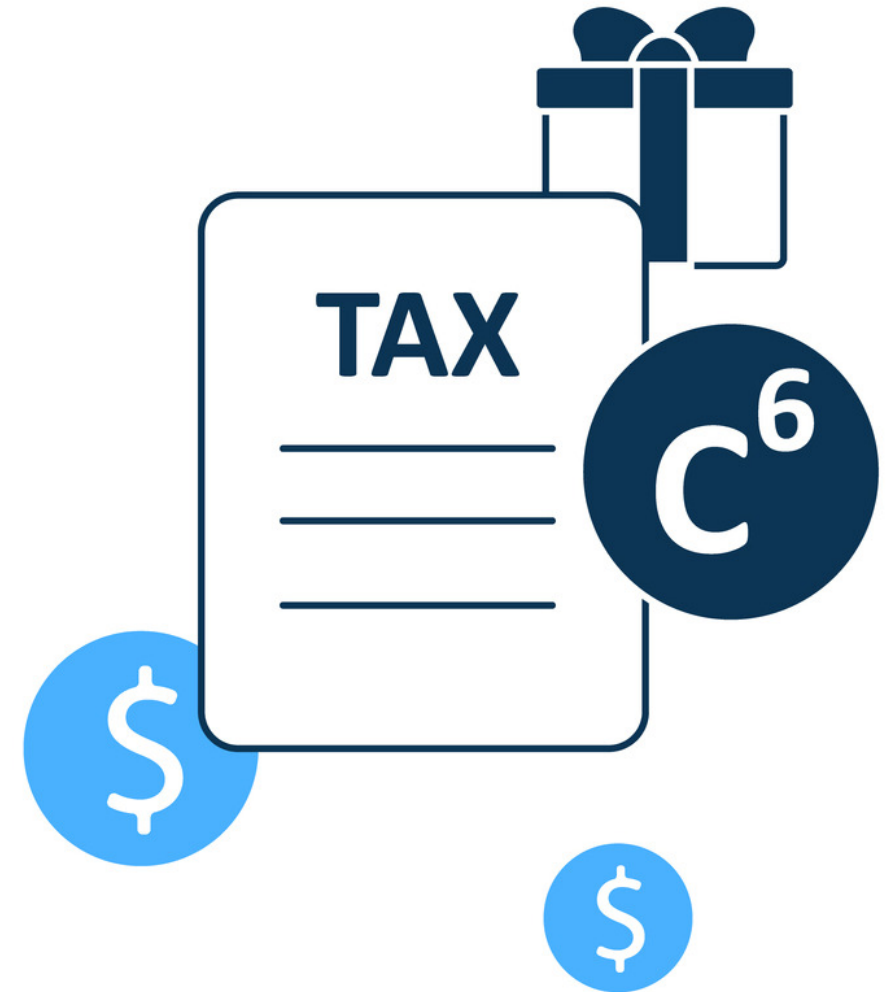
- Cost Segregation Needed
- Section 263A (UNICAP)
- Interconnected property
- Dual use property
- Basis reduction 50% of credit
- Tax-exempt bonds reductions
- Federal grant funding

ADDITIONAL CONSIDERATIONS

- **Beginning of Construction Date**
 - For certain properties, rules change after 12/31/2024
 - Phase out in starts in 2026 (i.e. 75% of credit amount available).
- **Placed in Service Date**
- **Monetizing the credits – Direct Pay & Transferability**
 - 6417: Direct Pay
 - 6418: Monetization
- **Tax Equity Financing Structures**
- **Financing Impacts**
 - Tax-exempt bonds - up to a 15% haircut of benefit
 - Federal grant impacts

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.



QUALIFIED ENERGY PROPERTY

SECTION 48		SECTION 48E
Solar	➔	Solar
Wind	➔	Wind
Equipment that recovers waste energy	➔	Equipment that recovers waste energy
Energy storage	➔	Energy storage
Biogas	➔	Biogas
Microturbines	➔	Microturbines
Fuel Cells	➔	Fuel Cells
Geothermal		Stays under 48 until 1/1/2035
Combined heat and power systems		Expiring
Microgrid controllers		Expiring
Electrochromic Glass		Expiring

QUALIFIED ENERGY PROPERTY

Clean Electricity Investment Tax Credit (Section 48E)



Investment in equipment that:

- Produces clean electricity
- Greenhouse Gas Emissions rate < 0
- Technology neutral

Investment in energy storage technology:

- Electrical
- Thermal
- Hydrogen

**Placed in service post 12/31/2024.*

ENERGY INCENTIVE CONSULTING

Accountant Value Add

400,000 square foot addition and renovation of a medical facility

Mech. Engineer (Ground Source Only)

First Cost	\$17,000,000
IRA Credit	\$5,100,000
Net First Cost	\$11,900,000

Accountant (Ground Source Only)

First Cost	\$17,000,000
IRA Credit	\$15,600,000
Net First Cost	\$1,400,000

AEC Benefit:

- Unfair competitive advantage
- \$2,144,000 179D Deduction ($\$5.36 \times 400,000$)



DECARBONIZATION

Alternative Refueling Infrastructure (§30C)

Qualified Clean Commercial Vehicles (§45W)



ENERGY CREDITS & INCENTIVES

ELECTRIC COMMERCIAL FLEET

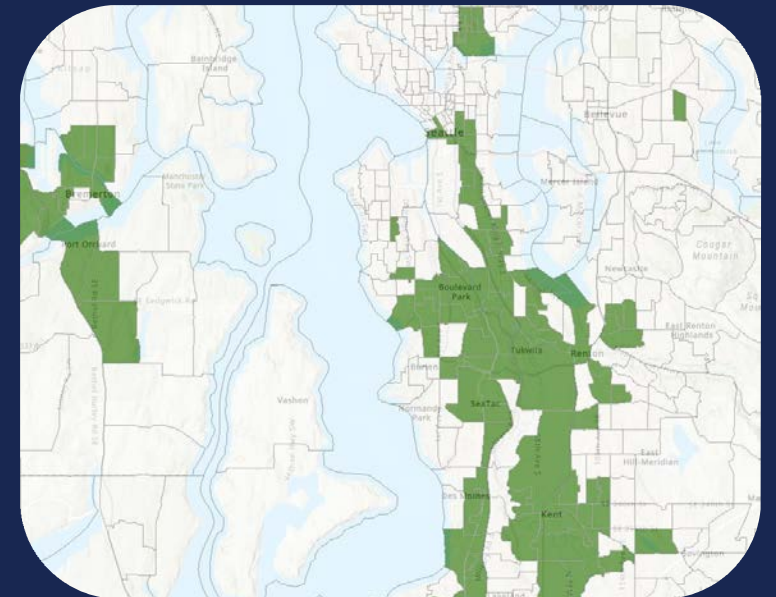
- Section 45W.
- Under 14,000 lbs, up to \$7,500 per vehicle.
- Over 14,000 lbs, up to \$40,000 per vehicle.

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

Privately Owned

Section 179D

- up to \$5.36/sf tax deduction

Section 45L

- \$500 to \$5,000/unit tax credit

Section 48/30C

- up to 50% of the direct and indirect costs as a tax credit

Non-Taxpaying Entities

After 1/1/2023

Section 179D

- up to \$5.36/sf tax deduction can be allocated to a designer of the energy efficient property (Architect/Engineer)

Section 48/30C

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



WHAT WILL \$1.7 TRILLION DO?

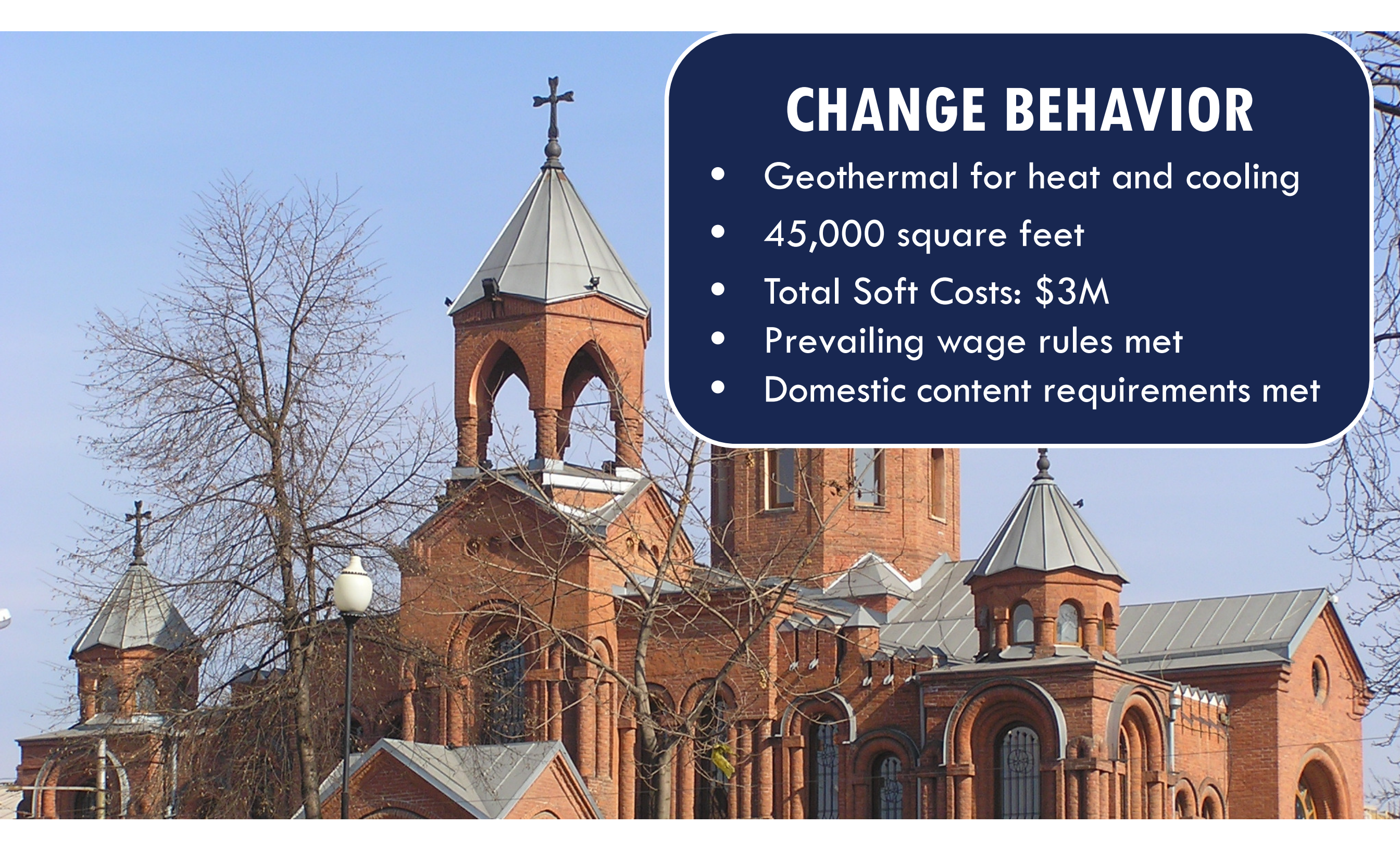
REWARD BEHAVIOR

CHANGE BEHAVIOR



REWARD BEHAVIOR

- Placed-into-service on 1/15/23
- EC Glass
- 179D Deduction – 50k SF



CHANGE BEHAVIOR

- Geothermal for heat and cooling
- 45,000 square feet
- Total Soft Costs: \$3M
- Prevailing wage rules met
- Domestic content requirements met

PRESENTERS



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THANK YOU!

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