



Seth McKinney, CEM

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Seth McKinney is the principal of Throughline Energy, an independent practice in building performance standards, energy efficiency and electrification programs, and decarbonization planning. He has more than 15 years of experience across public-sector energy management, utility program delivery and consulting, and joins engineering and energy firms' teams as a named lead or subject matter expert for the policy, program or compliance scope. Engineering partners keep the audits, calibrated energy models and design.

PROPOSED ROLES

Program design and delivery · Policy and code development · BPS analysis, risk assessment and compliance planning, with Threshold · Qualified Person (CBPS/BEPS) · Planning and facilitation · Training, coaching, and energy curriculum

EXPERIENCE

Throughline Energy (McKinney Advisory LLC) Principal 2026–present
Subconsultant and advisor to engineering and energy firms and public agencies; developer of Threshold.

Resource Innovations Senior Manager, Electrification Solution Delivery 2024–2026
Designed and directed a \$16M, three-program electrification portfolio for PG&E under CPUC oversight; wrote two programs' implementation plans.

Ecotope Manager, Decarbonization Advisory Services 2021–2024
Built and led the decarbonization advisory practice: plans, BPS compliance, program design, and policy and code work.

Stillwater Energy Strategic Energy Management Coach 2019–2021
Coached SEM for 20+ organizations served by Tacoma Power and Energy Trust of Oregon; early Clean Buildings program design.

Pierce County Resource Conservation Manager 2016–2019
Re-established and ran the resource conservation program across 2.5M sq ft and 50+ sites; weather-normalized EUI improved 27%.

EDUCATION AND CREDENTIALS

- M.P.A., Environmental Policy and Management, Evans School, University of Washington (2013)
- Graduate Certificate in Environmental Management, University of Washington
- B.A., History and English, Muskingum University (2004)
- Certified Energy Manager (CEM), Association of Energy Engineers (2023)

COMMITTEES AND WORKING GROUPS

- Shift Zero Energy Code & Standards Team (2021–2024)
- Housing Development Consortium task force on Seattle's BEPS (2022–2023)
- Co-founder and co-facilitator, Commercial HPWH Manufacturer's Action Council, supported by the Advanced Water Heating Initiative (2023–2024)
- Regional Technical Forum measure coordination with NEEA and BPA, commercial HPWH measure (2021–2023)

PROPOSAL RECORD AND STATUS

11 wins from 24 utility and municipal proposals led or co-led at earlier employers. Washington OMWBE Small Business Enterprise and Public Works SBE certification applications in progress.

SELECTED PUBLICATIONS

- [Spielman, McKinney & Frankel \(2024\). Roadmap for Overcoming Barriers to Using Natural Refrigerants in the United States. Ecotope for BPA.](#)
- [Seattle Public Schools \(2023\). Clean Energy Plan. Prepared by Ecotope \(McKinney, Frankel et al.\), Cascadia and DKS.](#)
- [McKinney & Frankel \(2023\). A Simplified Utility Program to Fight Climate Change. Ecotope for Tacoma Power \(APPA DEED grant\).](#)
- [McKinney, Heater, Davis, Frankel & Sweek \(2023\). King County Energize! Ductless Heat Pump Guidelines. Ecotope for King County.](#)
- [Frankel, McKinney, Stecher & Chatterjee \(2022\). Multifamily Load Shift Evaluation. Ecotope for Seattle City Light.](#)
- [Spielman & McKinney \(2022\). Plumbing Code Challenges and IAPMO Standards. Ecotope for BPA.](#)
- [Kintner, Green & McKinney \(2022\). Ecosim Sensitivity Analysis. Ecotope for BPA.](#)
- [McKinney, Green & Heller \(2022\). Code Enforcement for Commercial Heat Pump Water Heaters. Ecotope for BPA.](#)

PERFORMANCE · WASHINGTON CBPS

Seattle Convention Center Clean Buildings compliance

CLIENT	Washington State Convention Center (Seattle Convention Center)
LOCATION	Seattle, WA
YEARS	2022–2024
DELIVERED THROUGH	Ecotope, as subconsultant to Siemens
SETH'S ROLE	Project manager; Qualified Person with Ecotope engineer Morgan Heater for the energy management plan and O&M program
CONTRACT	\$132K fixed fee (\$138.5K with a Seattle Tune-Up change order)
REFERENCE	Available on request

SCOPE

Clean Buildings compliance planning for a Tier 1 campus of about 1.16M sq ft: roles and EUI targets, the energy management plan and O&M program, equipment and KPI inventory, and a capital plan sequenced with the ASHRAE Level 2 audit, plus a long-term electrification needs assessment and Seattle Tune-Up compliance.

SETH'S ROLE

Managed the engagement, authored the project plan and Portfolio Manager review, led the client workshop, and shared the Qualified Person role with Morgan Heater, supporting Siemens as the prime implementation partner. Ecotope's engineering and analyst team led the walk-throughs, audit support, billing analysis and controls review.

RESULTS

- Delivered the energy management plan and O&M program for the campus's CBPS compliance.
- Set the campus's CBPS energy use intensity target at 55.0 kBtu/sf/yr, about 5% below its recent weather-normalized average, and laid out two routes: meeting the target or the Investment Criteria pathway.
- The Portfolio Manager review reconciled about 4,900 bill entries on 35 meters, traced a 2018 anomaly to one entry of 164.9M kWh (about ten times annual use), and reconciled floor areas ranging from 1.16M to 1.63M sq ft.
- The electrification needs assessment found district steam drives 84% of campus emissions, put the campus 492 MTCO₂e a year over its 2031 Seattle BEPS target, and sized heat pump capacity for the main heating loop at about 1,700 tons.
- A change order folded Seattle Tune-Up compliance into the contract, reusing the Level 2 audit; the walk-through and controls review set 11 required corrective actions and 16 capital measures.
- The campus filed its Tier 1 compliance documentation.

STRATEGY · INSTITUTIONAL DECARBONIZATION

Seattle Public Schools Clean Energy Plan

CLIENT	Seattle Public Schools
LOCATION	Seattle, WA
YEARS	2021–2023
DELIVERED THROUGH	Ecotope
SETH'S ROLE	Project lead, task force co-facilitator, project manager and lead author
TEAM	Cascadia Consulting Group (lead facilitator); DKS (fleet planning)
BUDGET	\$229,000 consultant budget
PUBLIC RECORD	Clean Energy Plan (Ecotope publications, PDF)
REFERENCE	Available on request

SCOPE

A district-wide clean energy plan for 112 facilities and more than 10 million sq ft, toward fossil-free operations by 2040, developed with the Superintendent's 27-member task force in 13 meetings over 13 months (November 2021 to December 2022).

SETH'S ROLE

Led the engagement for Ecotope and was lead author of the plan. Directed the emissions baseline and wedge analysis for buildings and fleet that set the reductions the task force planned against, presented the technical content at task force meetings, co-facilitated sessions with Cascadia, and co-developed the action prioritization with Cascadia's multi-criteria analysis.

RESULTS

- Set the district's operational carbon baseline at about 27,500 MTCO₂e a year: 14,888 from buildings and 12,588 from mobility. Gas space heating (33%) and contracted yellow buses (21%) were the largest sources.
- Nearly 100 candidate strategies narrowed to 80 recommended actions across policy, buildings, mobility, and waste and materials.
- Published by Seattle Public Schools in January 2023 (prepared by Ecotope, Cascadia and DKS) and presented to the School Board on March 15, 2023.
- The Board's guiding principles for the BEX VI capital levy (October 2023) direct the district to leverage the task force recommendations; voters approved BEX VI in February 2025 with \$92.9M for CBPS compliance.
- SPS then procured building-level clean energy planning, with CBPS and BEPS audits, compliance pathways and cost estimates, to begin implementing the plan.

POLICY AND CODES

City of Redmond Green Building Incentive Program

CLIENT	City of Redmond
LOCATION	Redmond, WA
YEARS	2022–2024
DELIVERED THROUGH	Ecotope
SETH'S ROLE	Program and code designer
CONTRACT	\$45K (amended from \$25K)
PUBLIC RECORD	redmond.gov/1921 · redmond.municipal.codes/RZC/21.67
REFERENCE	Available on request

SCOPE

A tiered zoning incentive that trades floor area and height for all-electric, low-EUI buildings, built on Washington's Clean Buildings standard and prescriptive energy code compliance, with metered EUI verification.

SETH'S ROLE

Drafted the building-performance-based incentive provisions and worked with City sustainability staff, who led the code appendix and user guide, through review and adoption.

RESULTS

- Adopted into the City's zoning code as RZC 21.67 in 2024. The Redmond 2050 update (June 2025) made green building elements mandatory in RZC 21.67 and moved incentives to RZC 21.55, where a fully electric building earns 5 to 30 points across seven zone groups.
- As adopted, participating buildings must show metered EUI within 10% of target over 12 months, within two years of occupancy, with penalties up to 2% of construction value.
- Related Redmond work (2023–2024): the decarbonization and compliance scope of a portfolio-wide facility condition assessment as subconsultant to MENG Analysis, including the Public Safety building's Investment Criteria pathway, and scoping of a solar-plus-storage resilience feasibility study for five critical facilities, carried out after Seth left Ecotope.

STRATEGY · MUNICIPAL PORTFOLIO

City of Bellingham municipal building decarbonization plan

CLIENT	City of Bellingham
LOCATION	Bellingham, WA
YEARS	2022–2024
DELIVERED THROUGH	Ecotope
SETH'S ROLE	Consultant representative and planning lead
CONTRACT	\$76,500 maximum
REFERENCE	Available on request

SCOPE

Decarbonization planning for about 766,000 sq ft across 41 municipal structures: electrification opportunities drawn from facility condition and benchmarking data, targeted walk-through audits where data was thin, guiding principles and multi-criteria prioritization, and a CBPS compliance strategy aligned to the City's climate goals.

SETH'S ROLE

Served as the City's designated consultant representative, led the planning and advised the City's facilities and climate team. Ecotope engineers performed targeted walk-through audits. The work included quality control of the City's Portfolio Manager data, reconciling bills, EnergyCAP and Portfolio Manager.

RESULTS

- The City accepted the decarbonization plan in 2024, along with the walk-through audits, which fed the City's capital improvement plans.
- Benchmarking QA found 224 of the City's 242 Portfolio Manager records were non-building accounts at a default 1,000 sq ft, and four of 18 buildings, including both Tier 1 buildings, had no computable EUI. The City added a task order to clean up its Portfolio Manager and EnergyCAP data.
- Screened the portfolio against CBPS and found a covered building missing from the City's Tier 1 list; at the September 2023 workshop the City assigned its own Qualified Persons and moved that building's compliance to its operator.
- Compared EUIs with preliminary CBPS targets and national medians; one building ran at 3.2 times its national median.
- Inventoried 147 major building systems at 17 sites from condition-assessment data; 17 of the 37 gas-fired systems were at or past their scheduled replacement date.

PROGRAMS · UTILITY PROGRAM DESIGN

Tacoma Power central heat pump water heater incentive program

CLIENT	Tacoma Power, funded by an APPA DEED grant (CG-2575)
LOCATION	Tacoma, WA; designed for public power utilities nationally
YEARS	2022–2023
DELIVERED THROUGH	Ecotope, as Tacoma Power's consultant
SETH'S ROLE	Ecotope project lead from mid-2022 through completion; lead author of the utility program guidelines
GRANT	\$125,000 APPA DEED grant
PUBLIC RECORD	A Simplified Utility Program to Fight Climate Change (Ecotope publications, PDF)
REFERENCE	Available on request

SCOPE

A model central heat pump water heater incentive program for multifamily buildings that any public power utility can run. The program qualifies equipment by performance tier on NEEA's commercial HPWH qualified products list instead of custom modeling.

SETH'S ROLE

Led Ecotope's delivery from mid-2022, set program direction, and directed and reviewed the team's work on the Central HPWH Performance and Incentive Tool and the screening and selection guidelines for existing buildings. Lead author of the utility program guidelines. Ecotope engineers built the tool and its performance modeling.

RESULTS

- Published as A Simplified Utility Program to Fight Climate Change (Ecotope for Tacoma Power, March 2023) with the Central HPWH Utility Program Guidelines.
- Delivered a public, web-hosted Performance and Incentive Tool configured to Tacoma Power's policies: incentives of \$210 to \$930 per apartment on modeled savings of 909 to 4,057 kWh a year, 40% to 70% of baseline water-heating energy by tier.
- The \$125,000 grant was matched by \$126,400 in documented support from BPA, NEEA, Tacoma Power and the RTF.
- Brought four manufacturers through the new product data sheet process to seed NEEA's first commercial HPWH qualified products list (December 2022), and led to manufacturer-funded follow-on work to list another product.
- The program's tool became the starting data for the Regional Technical Forum measure; the RTF previewed the measure in December 2023 and in 2025 began redefining it as a commissioning protocol.

MARKET TRANSFORMATION · CONVENING

Commercial HPWH Manufacturer's Action Council (CMAC)

SUPPORTED BY	Advanced Water Heating Initiative (AWHI)
CO-FACILITATORS	Ecotope, Bonneville Power Administration and New Buildings Institute
PARTICIPANTS	Competing commercial heat pump water heater manufacturers, with BPA, NBI and CEE
YEARS	2023–2024
DELIVERED THROUGH	Ecotope, within the BPA–NEEA qualified products list project
SETH'S ROLE	Co-founder and co-facilitator
PUBLIC RECORD	ORNL/TM-2024/3348: osti.gov/servlets/purl/2338263
REFERENCE	Available on request

SCOPE

An industry council of competing commercial heat pump water heater manufacturers, formed after a May 2023 manufacturer roundtable on central heat pump water heaters with more than 200 attendees, to reduce market uncertainty and accelerate the growth of the commercial HPWH market.

SETH'S ROLE

Co-founded the council and co-facilitated its launch meetings in October and December 2023 with colleagues from Ecotope, BPA and NBI, and coordinated next steps on the RTF measure with NEEA and BPA. Presented the tools, program and engagement landscape at the Consortium for Energy Efficiency's Industry Partners Meeting (September 2023).

RESULTS

- Launched the council with competing manufacturers and agreed a draft purpose and a primary objective: reducing market uncertainty through coordinated research, marketing, standards and protocols, and workforce training.
- At launch, manufacturers set shared priorities: reducing uncertainty such as refrigerant direction, harmonizing standards, clarifying utility demand-response signals, raising product quality and training designers and contractors.
- At its second meeting the council agreed to meet quarterly, with DOE, EPA, AHRI and CEE proposed as observers.
- Gave manufacturers a forum on Advanced Water Heating Specification updates, CEE's newly approved commercial water heating initiative and DOE BENEFIT funding opportunities.
- The council was written into the work plan of DOE's national Heat Pump and HPWH Field Validation Partnership (ORNL/TM-2024/3348), whose FY24 progress report notes continued council meetings gathering manufacturer feedback on the Advanced Water Heating Specification.

RESEARCH · LOAD FLEXIBILITY

Seattle City Light Multifamily Load Shift Evaluation

CLIENT	Seattle City Light
LOCATION	Seattle, WA
YEARS	2022
DELIVERED THROUGH	Ecotope
SETH'S ROLE	Project lead and co-author
BUDGET	\$50,000
PUBLIC RECORD	Multifamily Load Shift Evaluation (Ecotope publications, PDF)
REFERENCE	Available on request

SCOPE

Load scenarios for the White Center Hub, a four-story, 76-unit affordable multifamily building with on-site solar: central heat pump water heaters and controlled and uncontrolled EV charging under Seattle City Light's pilot time-of-day rates.

SETH'S ROLE

Led the evaluation and co-authored the report. Ecotope engineers did the building modeling.

RESULTS

- Standard 725-gallon storage covered half of annual afternoon peak hours; 1,050 gallons covered all of them for about \$18,000 more (\$230 per unit).
- On a modeled winter day, central heat pump water heaters cut the building's afternoon peak 24% against electric resistance; storage and controls raised the cut to 39% (119 to 73 kW).
- Storage and controls moved 96% of water-heating energy out of the weekday 5–9 p.m. peak window, about 520 kWh per apartment a year, while annual use rose only 2%.
- The rooftop solar array produced about 190,600 kWh a year, but only about 1% of it fell in the weekday evening peak window.
- Uncontrolled charging for 20 EVs added 25% to the afternoon peak; shifting 80% of charging past 9 p.m. held the increase to 5%.
- Under the pilot time-of-day rates, central heat pump water heaters cut annual water-heating costs by two-thirds, while load shift added only \$13 per unit; the report recommended pairing efficiency and load-shift incentives.
- Published as the Multifamily Load Shift Evaluation (Ecotope for Seattle City Light, 2022); BPA's 2023 Bayview Towers field study benchmarked its results against it.

PROGRAMS · EQUITABLE ELECTRIFICATION

PG&E residential electrification pilots

CLIENT	Pacific Gas & Electric, under CPUC oversight
LOCATION	PG&E service territory, California
YEARS	2024–2026
DELIVERED THROUGH	Resource Innovations
SETH'S ROLE	Designed and directed the three-program portfolio
PROGRAM BUDGET	\$16M across three programs
REFERENCE	Available on request

SCOPE

Three electrification programs: Powerful Neighborhoods, which electrifies entire gas-branch zones in disadvantaged communities; EmPower My Home, which electrifies income-qualified single-family homes at bill neutrality or better; and the Alternative Energy Program, which funds all-electric conversions when customers agree to decommission their gas service.

SETH'S ROLE

Wrote the Powerful Neighborhoods and EmPower My Home implementation plans, directed delivery, and coordinated with PG&E's evaluation teams (Evergreen Economics and DSA). Partnered with the cities of Oakland and San Francisco and engaged 11 community organizations.

RESULTS

- EmPower My Home's phased rollout covered seven disadvantaged areas with about 178,000 dual-fuel customers; Powerful Neighborhoods targeted gas-branch zones in nine counties.
- Ratepayer, local, state and federal funding, including ESA, TECH Clean California and Inflation Reduction Act sources, covered up to 100% of conversion costs for income-qualified households.
- In Q4 2025, concentrated outreach in San Francisco's Outer Sunset converted 19% of engaged customers to letters of intent, against 8% across all targeted zones (small sample).
- Lessons from 2025 drove a 2026 redesign: a six-step customer journey in place of ten, an Electric Coach as single point of contact, and contractor-led on-site assessments.

PROGRAMS · INCOME-QUALIFIED ELECTRIFICATION

King County Energize! ductless heat pump guidelines

CLIENT	King County Department of Local Services, Permitting Division
LOCATION	Skyway and White Center, unincorporated King County, WA
YEARS	2023
DELIVERED THROUGH	Ecotope
SETH'S ROLE	Lead author
PUBLIC RECORD	Energize! Ductless Heat Pump Guidelines (Ecotope publications, PDF)
REFERENCE	Available on request

SCOPE

Screening and selection criteria and ductless heat pump design guidelines for low-income oil-to-heat-pump conversions in two unincorporated communities.

SETH'S ROLE

Lead author of the screening and selection criteria and the ductless heat pump design guidelines, including eligibility and prioritization criteria; analyzed County Assessor data to identify and rank candidate homes.

RESULTS

- Screened County Assessor records for 2,548 oil-heated homes (30% of 8,395 single-family parcels) and narrowed them to 593 priority candidates: single-story, three to five rooms, heated by oil furnaces.
- Characterized the oil-heated stock: 88% forced-air furnaces, 84% built before 1960, 86% single-story.
- Found that a heat pump cuts heating cost 77% against heating oil per unit of delivered heat at 2023 rates, compared with 24% for electric resistance.
- The Energize! pilot the guidelines supported launched in White Center and Skyway in 2023, reached 100 heat pump installs by February 2025, and by 2026 had grown into a four-county program with about \$36M allocated for 2026–29.
- Published as the King County Energize! Program Ductless Heat Pump Guidelines (McKinney, Heater, Davis, Frankel & Sweek, Ecotope for King County, May 2023).

EDUCATION · MARKET-ACTOR TRAINING

Seattle City Light Lab transition (The Lab at City Light)

CLIENT	Seattle City Light
LOCATION	Seattle, WA
YEARS	2023–2024
DELIVERED THROUGH	Ecotope, on TRC's team
SETH'S ROLE	Strategy and curriculum subject matter expert; outreach and curriculum lead
CONTRACT	\$110,460 Ecotope task order
PUBLIC RECORD	lightingdesignlab.com
REFERENCE	Available on request

SCOPE

Transition of Seattle City Light's Lighting Design Lab, which spent more than three decades on lighting education and product demonstrations, into a training resource for efficient building electrification. TRC led the work; Ecotope provided strategy and curriculum expertise.

SETH'S ROLE

Worked on both halves of Ecotope's scope: contributed strategy expertise to the transition roadmap and draft charter, led curriculum and outreach, and coordinated presenters.

RESULTS

- The Lighting Design Lab is now The Lab at City Light, renamed in March 2026, with classes for building professionals on heat pumps, heat pump water heaters, high-efficiency ventilation, boiler decarbonization retrofits, envelope, and energy codes.
- The draft charter (January 2024) set the Lab's mission, three delivery areas (knowledge transfer, unbiased project support, and strategy and partnerships) and priority workforce audiences, and called for rebranding as "the Lab."
- The transition drew on input from 19 stakeholder organizations, through 10 interviews and a nine-organization industry workshop, and a prioritized outreach list of 134 trade allies.
- Scheduled seven sessions of the new curriculum and secured their speakers, and hosted four in fall 2023: Design for Off, IRA tax incentives, energy management systems, and C-PACER financing with King County.

PERFORMANCE · COMPLIANCE ASSISTANCE

Clean Buildings Accelerator

CLIENT	Puget Sound Energy (first Accelerator) and City of Seattle Office of Sustainability & Environment (Seattle program); both delivered by Stillwater Energy
LOCATION	Puget Sound Energy service area and Seattle, WA
YEARS	2020–2021 (at Stillwater); 2022–2023 (Seattle program, at Ecotope)
DELIVERED THROUGH	Stillwater Energy, then Ecotope as technical partner to Stillwater
SETH'S ROLE	Key program designer for PSE's first Accelerator at Stillwater; Ecotope's program lead on Seattle's version
REFERENCE	Available on request

SCOPE

Small-group coaching and compliance planning for owners facing Washington's Clean Buildings standard, first for Puget Sound Energy customers. Seattle's version serves under-resourced commercial and multifamily buildings serving frontline communities.

SETH'S ROLE

At Stillwater, was a key program designer for Puget Sound Energy's first Clean Buildings Accelerator, adapting strategic energy management to CBPS compliance. At Ecotope, led Ecotope's technical partnership on Seattle's version: co-facilitated design feedback sessions with community organizations, led outreach to large commercial buildings, managed and reviewed Ecotope's emissions-reduction audits, and led the deep energy retrofit coaching phase.

RESULTS

- Puget Sound Energy's Accelerator launched in June 2021 and had run 12 cohorts with more than 90 participants by February 2024; about half went on to other incentive programs. Stillwater extended the model to Snohomish PUD and Avista.
- In Seattle, 30 organizations took part across four cohorts through 2023: 57% serving frontline communities, 53% nonprofits and 67% in Class B or C buildings.
- Half of the first two cohorts' participants with EUI data entered above their CBPS target.
- Ecotope's emissions-reduction audits gave participants sequenced efficiency and electrification roadmaps toward CBPS and Seattle BEPS; Ecotope's subcontract was renewed for a second phase.
- Seattle City Light joined as a funder, opening recruiting to more building types, and Stillwater's September 2023 expansion report recommended making the program a hub for commercial and multifamily owners.

OWNER-SIDE · PORTFOLIO ENERGY MANAGEMENT

Pierce County Resource Conservation Management Program

CLIENT	Pierce County (employer)
LOCATION	Pierce County, WA
YEARS	2016–2019
SETH'S ROLE	Resource Conservation Manager
PORTFOLIO	2.5M sq ft and 50+ sites served by seven energy and eight water utilities and three waste haulers
REFERENCE	Available on request

SCOPE

Owner-side management of energy, water and waste across the County's building portfolio, including retrofits, retro-commissioning, emerging-technology pilots and utility incentive capture.

SETH'S ROLE

Re-established and ran the program, led the selection and rollout of utility consumption and billing software tied to ENERGY STAR Portfolio Manager, and produced the utility analyses for the Facilities Management annual report and the County's 2016 Sustainability Report.

RESULTS

- Weather-normalized EUI improved 27% portfolio-wide over three years, despite 4% staff growth and about 20% higher jail occupancy.
- Secured more than \$465,000 in utility rebates and grants over the tenure, including \$280K+ in the first 12 months, which avoided about \$50K a year in utility costs.
- Scoped the jail's hot and cold water pump replacement and managed its energy and incentive work: variable-speed booster pumps saving about 16,200 kWh a year, funded by BPA through Tacoma Power (2017).
- Won two Washington Commerce grants totaling more than \$315,000, covering a quarter to a third of two end-of-life HVAC replacements estimated to save about 402,000 kWh a year: the Medical Examiner Building, the County's first VRF system with dedicated outdoor air (estimated 37% EUI reduction), and 950 Fawcett (estimated 38%).
- With the maintenance team, retrofitted the Soundview Building's hot water system with one of Washington's first CO₂ heat pump water heaters, plus pipe insulation, a high-efficiency circulator and low-flow aerators: 64% less water, about 10% less whole-building energy in initial analysis, payback under two years.