



AUGUST 17, 2023

PROJECT NO. 2024-025:

**CAPITOL CAMPUS
DECARBONIZATION PLAN**

**WASHINGTON STATE, CAPITOL
CAMPUS**

Millig Design Build

541.390.2467

Idonley@milligdb.com

10260 SW Greenburg Rd, Ste. 400

Portland, OR 97223

www.milligdb.com

State of Washington

360.407.2210

angeline.butros@des.wa.gov

1500 Jefferson Street SE

Olympia, WA 98501

www.des.wa.gov



STATE OF WASHINGTON
DEPARTMENT OF ENTERPRISE SERVICES

1500 Jefferson St. SE, Olympia, WA 98501
PO Box 41476, Olympia, WA 98504-1476

Consultant Selection Contact Form

Designated Point of Contact for Statement of Qualifications
For Design Bid Build, Design Build, Progressive Design Build, GC/CM & Job Order Contracting
(JOC) Selections

Firm Name: Millig Design Build		
Point of Contact Name & Title: Scott McVey, Principal-In-Charge		
Email: smcvey@milligdb.com	Telephone: 785.760.5510	
Address: 10260 SW Greenburg Rd, Ste. 400		
City: Portland	State: OR	Zip: 97223

STATE OF WASHINGTON DEPARTMENT OF ENTERPRISE SERVICES

1500 Jefferson Street SE
Olympia, WA 98501

SUBJECT: PROPOSAL FOR PROJECT NO. 2024-025: CAPITOL CAMPUS DECARBONIZATION PLAN

Dear Members of The Selection Committee,

I am pleased to present the following proposal in response to your Request for Qualifications No. 2024-025 for Design Services for the Capitol Campus Decarbonization Plan. Above all, I want to state my personal commitment to this project and my confidence in our team's ability to deliver results beyond the expectations of the Department of Enterprise Services (DES). I will not only serve as the Point of Contact and Project Manager with direct daily oversight of Decarbonization Planning effort, but as the VP and leader of Millig Design Build, I have the authority and experience to ensure that only the highest quality results are delivered to the State of Washington.

Our team understands the scope of work ahead of you. DES needs a partner with the hard and soft skills to develop a practical action plan to achieve a zero-carbon future while creating consensus among a broad array of stakeholders and ensuring the plan can be understood by people with little technical background.

This consensus can only be achieved if the Decarbonization Plan is well-communicated to all parties, clearly laying out a pragmatic approach that is understood and supported by administration, community, and lawmakers. Millig focuses on developing succinct presentations and reports, rich with maps and visuals to illustrate concepts, building an understanding of each part of the project and, eventually, the whole.

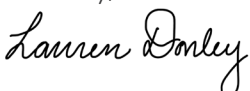
As you will see in this response, our approach is unique; we have honed this successful approach through the creation of dozens of comprehensive decarbonization master plans for some of the most critical and complex multi-building campuses in the world. Our current clients include: two of the world's top 15 pharmaceutical manufacturers; biotech research facilities; hospitals; universities; cities; counties; school districts; and **the State of Washington**.

However, Millig isn't just a consultant who puts good ideas on paper. **As a design-build contractor, we design our projects to be constructed.** Our team members have executed hundreds of millions of dollars of groundbreaking turnkey construction projects across the country, including:

- Multiple phases of central plant and heat pump decarbonization projects at a 2.5 million square foot pharmaceutical manufacturing campus outside of Boston.
- Electrification and decarbonization projects, including multi-building ambient temperature loop projects in 100+-year-old historic registry buildings in Colorado and Kansas.
- Multi-building central plant upgrades at Chicago Public Schools' headquarters which included design and installation of an entirely new central heating and cooling plant, removing this 25-story high-rise from city-wide district steam and chilled water.
- The first Samsung ground-coupled, variable refrigerant flow geothermal heat pump system in the United States.

With Millig, you're in good hands. Millig's team consists of the most experienced design and construction professionals in the industry; in fact, **Millig's team has an average of 15 years of experience per person, and all of our engineers are licensed PEs.** Together with our consulting team, our umbrella of services brings planning, facilitation, engineering, architectural planning, risk assessment, financial modeling, and construction under one roof to ensure your decarbonization plan is practical and achievable.

Sincerely,



Lauren Donley, Vice President of Business Development, Millig Design Build

EXECUTIVE SUMMARY

Washington State's commitment to energy efficiency and decarbonization through House Bills 1257 and 1390 presents unprecedented challenges and opportunities for the Washington Capitol Campus. Along with reducing energy consumption, DES is tasked with transitioning over 3 million square feet of buildings and the campus district energy system from traditional fossil-fuel-based heating systems to clean renewable electricity. Although seemingly a daunting task, this effort provides an opportunity for DES to systematically address aging and end-of-life infrastructure throughout campus in an efficient, environmentally-friendly manner. While our competitors built their businesses on a long history of designing and implementing the traditional fossil-fuel-based solutions from which we are now transitioning, we at Millig built our business with a completely fresh perspective and approach to specifically address deep decarbonization of existing buildings and central plant systems, making us the perfect partner for DES. As is outlined in this proposal, Millig will enable DES's success by providing a long-term plan that:

- Will be an invaluable tool for marketing, support capital planning and improved funding opportunities, facilitate enhanced partnerships with the utility and local community, increase operating efficiencies, reduce operating costs, and attain state approval.

- Will be the basis of an ongoing process that will be easily adaptable to changing circumstances, available technologies, and unanticipated situations.
- Focuses on implementation plans that are achievable, supported by our integrated approach, bringing all of the knowledge to the table early in the planning process to ensure reliable budgetary estimates and constructability for future implementation.
- Kills three birds with one stone by addressing energy efficiency, decarbonization, and aging mechanical and electrical infrastructure with each recommendation.
- Clearly lays out the physical development and associated economics needed to support WA State's goals; it will be rich with illustrative maps, plans, and explanatory diagrams.

With Millig, DES can rest assured that your decarbonization plan will be based on the optimal, cost-effective technologies and solutions, but will also be the communication tool, accompanied by the human resources, to engage and motivate decision makers to approve funding that will transform the campus over the next decade.

QUALIFICATIONS OF KEY PERSONNEL



MILLIG DESIGN BUILD

Role: Prime Consultant, Project Manager

As a design-builder, we engineer and construct comprehensive facility and campus improvements that increase resiliency, reliability, and comfort; reduce energy use; and help organizations meet their sustainability commitments.

Our engineers are the most experienced in the industry, with an average of 15 years each doing this work. The State of Washington will get the best of the best, with Millig's co-founders leading this effort with daily direct involvement in every project phase. Moreover, all of the team leads that Millig has assigned to this project are also owner-operators of Millig. As owners of Millig, each leader with a key responsibility has the deepest commitment and motivation to achieve successful project outcomes for DES. And DES will not need to worry about the turnover of key staff during the nearly 2-year duration of the planning effort and the following decade of construction project execution on the Capitol Campus, as our ownership group will be here for the long term.



POWERFUL COMPACT TEAM

"If the big firms are like the US Army, then Millig Design Build is like the Navy SEALs. We're a highly potent tactical strike force. At 28 people, we aren't the biggest team, but we only take on the most complex, difficult, highly technical projects for clients that operate some of the most critical facilities in the world."

— Scott McVey, President of Millig



ESPOUSAL STRATEGIES
Subconsultant Role: Equity Framework & Community Engagement



MWA ARCHITECTS
Subconsultant Role: Facilitator & Architect

Espousal Strategies is focused on collaborative problem solving, equity & inclusion, community engagement, issue lobbying, and coalition building. With a staff of 12 (and growing) our firm is at the forefront of local/state/national government affairs, public engagement, and is a public agency equity leader. Espousal Strategies provides clients with strategic counsel and creative, winning solutions for:

- Diversity, Equity & Inclusion
- Strategic Planning
- Government Affairs and Legislative Advocacy
- Community Engagement

Our portfolio includes a diverse array of clients and project types. Regardless of the context, we employ an equity-focused community engagement framework, wherein we develop an understanding of existing conditions to inform the planning process, which feeds into the decisions and/or actions that need to be taken.

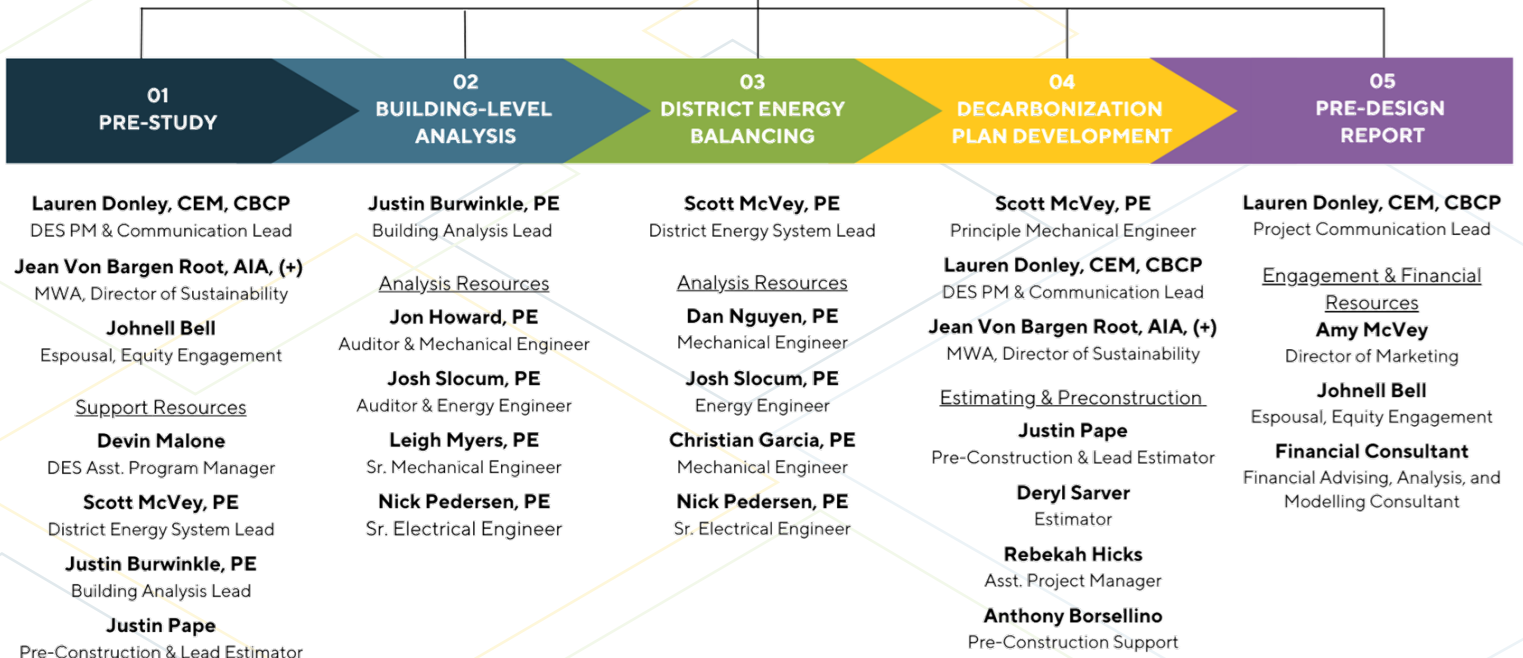
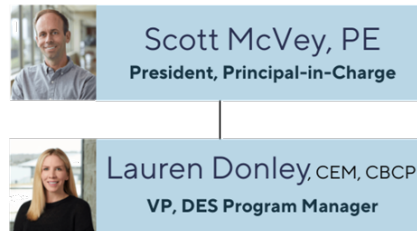
Since our founding 35 years ago, MWA Architects, Inc. (MWA) has developed a core practice of providing design services for public and civic clients. MWA's primary markets focus on humanity's essential needs in support of well-being and access to healthy infrastructure, and they pursue various project types, all integral to a thriving community. MWA's team brings strong asset management operations and maintenance inclusion in alternatives assessment, project management, and innovative design expertise.



MWA believes that the most effective designs work with our environment to promote human health and preserve our planet's well-being. Each of MWA's projects thoughtfully responds to site context and serves as a foundation for community growth; MWA advocates for racial and socio-economic equity by designing spaces where all people can live happier and healthier lives. MWA has achieved a Just Label through the International Living Future Institute.




TEAM CAPACITY, ORGANIZATIONAL CHART, AND KEY STAFF SUMMARY

Millig has the availability and capacity to devote our top resources to this project. If selected, DES would be our firm's number one priority and would receive the full attention of our best and most highly experienced professionals. In fact, the President and Vice-President of Millig will personally lead each phase of this effort. Below is an organizational chart showing how our integrated, in-house team and subconsultants will serve DES during the development of the decarbonization plan.

ORGANIZATIONAL CHART



KEY STAFF/ROLE	INTRODUCTION	UNIQUE QUALIFICATIONS	RELEVANT PROJECTS
 <p>Scott McVey, PE Role: Principal-in-Charge Availability: 30% across entire project duration</p>	<p>As President and Co-Founder of Millig Design Build, Scott McVey will lead this team as the Principal-in-Charge. Over his 24-year career, Scott has implemented multi-million dollar infrastructure renewal and decarbonization projects in every building type, from commercial high-rises to historic courthouses to industrial pharmaceutical manufacturing plants. Scott is based in Vancouver, British Columbia, and has demonstrated success in developing and implementing decarbonization strategies across North America. Scott McVey will serve as the lead mechanical engineer and oversee all aspects of Millig's project team. Additionally, Scott will lead the analysis and development of the district energy system.</p>	<ul style="list-style-type: none"> » WA PE License: 20120985 » Brings particular expertise to campuses. » Led Millig's engineering efforts to decarbonize over 12,000,000 ft² of complex campuses with central utility systems in just the last three years. » Served as the Energy Manager for the University of Kansas (KU). » Implemented over \$45M of energy efficiency projects at KU, as well as designing and executing a submetering project across two KU campuses which allowed for the tracking and management of over 1,000 metered utilities. 	<ul style="list-style-type: none"> » DES Capitol Campus - Since the end of 2022, Scott has been heavily involved in work at the DES Capitol Campus, project managing and engineering the comprehensive campuswide Submetering Project, which is currently in construction. » Thermo Fisher - Led development of Decarbonization Master Plans at 6 campuses » Sanofi Phase 1 & 2 - Project Managed & lead engineer on two phases of central plant decarbonization projects. » Chicago Public Schools - Led design and implementation of multi-building central plant upgrades at the district's high-rise headquarters in downtown Chicago
 <p>Lauren Donley, CEM, CBCP Role: Program Manager/Point of Contact Availability: 30% across entire project duration</p>	<p>Lauren Donley is the Vice-President and Co-Founder of Millig Design Build. Lauren has more than 13 years of experience developing multi-million dollar commercial energy efficiency and decarbonization projects. Based in Portland, Oregon, Lauren will serve as the project quarterback, leading communications, creating census and support for the project, coordinating resources, and managing relationships with third-party entities, like PSE. As an experienced project leader, Lauren will ensure the highest level of quality is maintained by all parties involved and that schedules and budgets are met.</p>	<ul style="list-style-type: none"> » Particular strength and expertise in communicating complex engineering concepts to audiences with all levels of technical expertise. » Written and delivered presentations to the highest levels of organizations, including the corporate leadership of two of the world's largest pharmaceutical manufacturers, the largest healthcare provider in the PNW, County Commissioners, School Boards, and the State of Washington. » Utilizes visuals and a technique called scaffolding, where big, complex ideas are broken up into smaller, manageable parts so that stakeholders build an understanding of each project element or concept before moving on. 	<ul style="list-style-type: none"> » DES Capitol Campus - Has been working closely with DES and Buildings and Grounds leadership for the last 9 months as the project developer and point-of-contact on a Capitol Campus Submetering Project. » Thermo Fisher - Point-of-contact and co-author of Decarbonization Master Plans on multiple campuses » Sanofi Phase 1 & 2 - Project developer and client manager of two phases of central plant decarbonization projects. » Lewis County, WA - Project developer and client manager of a \$4.5M Jail electrification and decarbonization project.
 <p>Justin Burwinkle, PE Role: Senior Project Engineer Availability: 60% during building-level analysis; 10% remaining project duration</p>	<p>As a Senior Project Development Engineer and the head of Millig's project development team, Justin Burwinkle has assessed and identified solutions for over 600 facilities across the country. With 11 years of experience producing detailed computer models of facilities and simulations of energy upgrade projects, Justin will lead Millig's team in producing the building-level energy efficiency, load reduction, and heat recovery scopes for individual buildings on the Capitol Campus from our engineering hub of Kansas City.</p>	<ul style="list-style-type: none"> » WA PE License: 21009981 » An elite energy modeler capable of rapidly producing accurate computer simulations of buildings, with accurate physical characteristics, systems & operational data, and calibration to utility bills. » Has already created models of all of the Capitol Campus buildings that are currently connected to the central utility systems. » Expert at utilizing the resulting hourly heating and cooling load data for district energy balancing and parametric simulations of energy efficiency, load reduction, and heat recovery measures. 	<ul style="list-style-type: none"> » DES Capitol Campus - Justin is highly familiar with DES's buildings, as he primarily developed the comprehensive campus energy model for Millig's Central Plant Upgrade Feasibility Study. » Kearny County, KS - developed and designed the multi-building ambient temperature loop system serving a historic courthouse and nearby buildings. » Logan County, CO - developed and designed the multi-building ambient temperature loop system.

KEY STAFF/ROLE	INTRODUCTION	UNIQUE QUALIFICATIONS	RELEVANT PROJECTS
 <p>Justin Pape, PE Role: Preconstruction Manager Availability: 60% during Decarb Plan development; 10% across remaining project duration</p>	<p>Justin Pape is Millig’s Preconstruction Manager and lead estimator. Justin works directly with Millig’s engineering and construction departments, as well as the subcontractor and supplier community, to develop the construction scope of work, perform estimating and constructability reviews, develop bid packages, execute bid reviews, plan and develop project logistics, award contracts, and other related work. For the Capitol Campus Decarbonization Plan, Justin will lead the process of converting engineering designs into an executable project ready for funding and implementation.</p>	<ul style="list-style-type: none"> » Through his 13 years of experience in the construction industry, Justin has converted designs into successful construction projects in 10 states, on projects ranging from \$500K to \$75M. » Knowledge of the construction market in Washington and his relationships with quality subcontractors make him the ideal person to produce accurate, comprehensive project pricing for DES’s Decarbonization Plan. 	<ul style="list-style-type: none"> » DES Capitol Campus - Justin assisted in the development of cost estimates for Millig’s Central Plant Upgrade Feasibility Study and Campus Submetering projects. » Kearny County, KS - Preconstruction manager on the multi-building ambient temperature loop system serving a historic courthouse and nearby buildings. » Logan County, CO - Preconstruction manager on the multi-building ambient temperature loop system serving a historic courthouse and nearby annex building. » Island County, WA - Precon Manager for the phased electrification and decarbonization projects at this County’s multi-building campus in Coupeville, WA.
 <p>Johnell Bell (Espousal) Role: Equity Engagement Availability: 30%</p>	<p>Johnell Bell is a veteran government, public, and community affairs professional having served in various public policy, community engagement, and senior level capacities over the last 16 years. More recently, Mr. Bell served as State Field Director for U.S. Senator Jeff Merkley where he led the senator’s forward-facing outreach and state field operations.</p>	<ul style="list-style-type: none"> » While working for U.S. Senator Jeff Merkley, he helped to implement implicit bias training across the Oregon and DC offices and helped spearhead a paid internship program to increase internship opportunities for underrepresented populations. » Served as Director of Diversity and Transit Equity for TriMet overseeing Title VI, D/MWESB, transit DEI strategies. » Received national recognition and helped to set Oregon’s record of \$170M awarded to DBE firms during the Orange Line construction. 	<ul style="list-style-type: none"> » ODOT’s Community Oversight Advisory Committee (COAC) » Washington County Recruitment for Chief Equity and Inclusion Officer » Washington County Equity Leadership Council (ELC) » Interstate Bridge Replacement Program Community and Equity Advisory Group
 <p>Jean Von Bargaen Root, AIA, LEED AP BD+C, NOMA, PMP, ASSOC. DBIA (MWA) Role: Director of Sustainability Availability: 40%</p>	<p>Jean has been practicing architecture in the Pacific Northwest for over 25 years. As Principal and Director of Sustainability at MWA, she leads with a focus on materials, energy, water, carbon, and social justice. She has successfully designed projects within our social and environmental infrastructure, including mixed-use housing, water treatment, transit, and seven LEED or Living Building-certified projects and campuses. Understanding sustainable design as an integrated process.</p>	<ul style="list-style-type: none"> » Net Zero Energy Fellow (Energy Trust of Oregon 2022) » Consensus facilitator for projects. Her experience includes over 15 public projects with 10+ stakeholder groups that are engaged, bringing varied and conflicting needs. » Proponent of early integration of systems in design within new, existing, and historic campuses. » Energy modeling and operational carbon planning level building assessment. 	<ul style="list-style-type: none"> » King County West Section (Jameson/ ArcWeld) Operations and Maintenance Living Building (Net Positive) » Interstate Campus (LEED Gold Campus) » Spokane International Airport Net Zero Headquarters (Administration) Campus (LEED Gold and WELL Certification)

RELEVANT EXPERIENCE

MILLIG'S DECARBONIZATION EXPERIENCE

Millig has created comprehensive decarbonization master plans for over **12 million square feet** of complex campus facilities throughout North America. We are currently implementing electrification and decarbonization solutions for dozens of clients in Washington and across the country. As a turnkey provider, Millig is accustomed to completing all work within the original budget with no change orders. On each of the projects listed in this response, we have delivered the entirety of the scope of work of consulting and/or construction services at or below the original budget. (Additional project references and cost details can be provided as needed.) Select relevant projects are included below and on the following pages.

WASHINGTON STATE CAPITOL CAMPUS

Olympia, WA

DES manages energy use and capital investments for the majority of the 3 million square feet of facilities on the State Capitol Campus. Over the last few years, the State of Washington has passed targets for energy use reductions and decarbonization, including the Clean Buildings Performance Standard and House Bill 1390. To that end, DES competitively selected Millig Design Build at the end of 2022 to engage in two distinct efforts to assess and improve energy efficiency on the Capitol Campus: 1. The turnkey design and implementation of a comprehensive submetering project, to wirelessly collect and manage interval data for each central utility, including steam, chilled water, and electricity; and 2. develop a Central Plant Upgrade Feasibility Study to examine options for eliminating fossil-fuel-fired boilers and relocate the Powerhouse.

This work for the State of Washington has enabled us to access and evaluate the mechanical systems in every facility on the Capital Campus, build trust and experience working directly with Buildings and Grounds and other leadership at DES, and navigate construction implementation (like scheduling and building access) in every building on campus.

Through the development of our Central Plant Upgrade Feasibility study, we gained a deep understanding of the central plant, amassed and reviewed building plans and other documentation, and created a complete campus-wide computer energy model of all the facilities served by the central systems. Using this campus computer energy simulation, we identified significant opportunities for heat recovery and energy balancing across the district. This level of rigorous and deep analysis has well-prepared us to hit the ground running on the development of a detailed Decarbonization Plan.

ORIGINAL DESIGN BUDGET
\$50,000

COMPLETED DESIGN BUDGET
\$50,000

ORIGINAL CONST. BUDGET
\$764,026

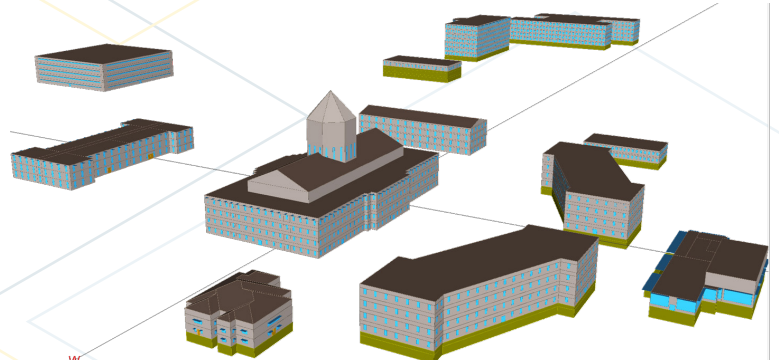
COMPLETED CONST. COSTS
In progress and expected to be completed \$40,000 under budget.

REFERENCE

John Lyons, *Assistant Program Manager – Planning*
Washington State DES
360.628.2139
john.lyons@des.wa.gov



Aerial View of Actual Campus



Millig's Campus Energy Simulation



Sanofi is the 9th largest pharmaceutical manufacturer in the world. Headquartered in France, Sanofi has committed to meeting the carbon emission targets set in the Paris Climate Accord. To work toward these requirements at one of their critical sites, Sanofi selected Millig Design Build to develop and execute major electrification and decarbonization projects at their industrial pharmaceutical manufacturing campus in Framingham, Massachusetts. The Framingham campus is over 2.5M ft² and includes dozens of buildings on central steam, chilled water, and hot water.

Millig's Phase 1 turnkey project consisted of redesigning and optimizing a 3,000-ton chilled water plant, including implementing a new 750-ton high-efficiency chiller with an integral water-side economizer for baseload operation. Phase 1 also included the analysis, design, and installation of water-to-water heat pumps to recover heat from the chilled water loop and move that heat to the heating loop, simultaneously reducing the load on the natural-gas fired boilers and the chilled water plant.

Millig worked closely with Sanofi to produce a financial model and pro forma to account for utility cost savings with future utility cost projections; depreciation of equipment; federal and state tax implications and tax deductions; utility incentives; Sanofi's corporate cost of carbon; multi-year draw schedule of project payments over time; future maintenance and operations costs and savings; and life cycle cost analysis.

With Phase 1 exceeding all of Sanofi's expectations for project financials, carbon reductions, and schedule, Sanofi engaged Millig to develop and design a Phase 2 project at Framingham. Millig's Phase 2 turnkey project will consist of additional water-to-water heat pumps for heat recovery and electrification, chiller plant upgrades, and fossil-fuel reduction measures at the boiler plants in Buildings 8 and 70.



Thermo Fisher Scientific is a \$200 billion biotechnology, pharmaceutical manufacturing, and technical equipment manufacturing company. In July 2021, Thermo Fisher (TF) announced its commitment to achieving net-zero carbon emissions by 2050 and competitively selected Millig Design Build as its partner to realize those savings at 6 of its 10 highest-emitting campuses in North America. In this first phase, Millig produced comprehensive, campus-wide, net-zero Decarbonization Master Plans for sites in Ohio, Missouri, Puerto Rico, and North Carolina, totaling over 2.5 million ft².

One of Thermo Fisher's most critical and complex sites is the 600,000 ft² campus in St. Louis, where biologics are utilized to produce intravenous cancer drugs. This site consists of seven buildings served by central utility systems, including steam, hot water, and chilled water. It has nearly 150,000 ft² of ISO 8 and ISO 7 laboratory and production area served by air systems that replace the entire building's air volume with fresh outside air once every minute (24/7/365). As a result of production requirements and its location within one of America's dirtiest utility grids, the carbon use intensity of this site is off the charts, with this 600k ft² campus emitting nearly 20 times the carbon per square foot than the Washington State Capitol Campus. **Millig produced a practical road map for the phased elimination of fossil fuels at TF's St. Louis campus with an investment of less than \$60 million over several years.**

After the completion of the first phase of Decarbonization Master Plans, Thermo Fisher subsequently engaged Millig to produce additional Decarbonization Master Plans for other high-emitting sites. As of the date of writing, Millig is beginning our fourth phase of work for TF, bringing our total ft² assessed to ~4.5 million ft². On average, Millig's rigorous, detailed analysis and design-build approach led to the identification of pragmatic carbon emissions reductions estimated to cost an average of \$2,250 per tonne of CO₂e.

ORIGINAL DESIGN BUDGET
\$53,000

COMPLETED DESIGN BUDGET
\$53,000

ORIGINAL CONST. BUDGET
\$2.81 million

COMPLETED CONST. COSTS
\$2.60 million

REFERENCE

Jarek Lewkowski, *Senior HVAC and Utilities Engineer*
Sanofi S.A.
508.397.5552
Jaroslaw.Lewkowski@sanofi.com



ORIGINAL DESIGN BUDGET
\$576,873

COMPLETED DESIGN COSTS
\$576,873

REFERENCE

Steve Verderame, *Sr. Global Energy Manager*
Thermo Fisher Scientific
760.476.7766, Mobile: 858.337.8973
steve.verderame@thermofisher.com





PROVIDENCE HEALTH SERVICES

Various Locations

Providence Health Services is the largest healthcare provider in the Pacific Northwest and the 9th largest hospital group in the country. On Earth Day in 2020, Providence Hospitals announced its commitment to become a carbon-negative organization by 2030. To that end, Providence competitively selected Millig Design Build in the spring of 2021 to develop Decarbonization Master Plans for two critical care facilities, Centralia Hospital, and Seaside Hospital. Providence had multiple layers of goals for this effort; in the short term, Providence needed a plan to reduce the energy usage at these facilities to meet the WA State Clean Buildings Performance Standards, and in the medium term, Providence needed a plan to eliminate fossil fuel usage by 2030.

At the Centralia Hospital, Millig's approach included addressing low-hanging fruit, like LED lighting and water efficiency measures, but the vast majority of the effort was centered around creating a detailed and thoughtful plan to upgrade systems for decarbonization over time while addressing significant immediate, deferred maintenance issues. In other words, the challenge was how to keep the hospital's aging HVAC and control systems operating in the short term, without dumping too much money into the existing fossil fuel-based systems before the transition to full decarbonization.

Millig created an incremental, phased approach to replace and upgrade individual HVAC and controls systems in a way that would support and align with the future implementation of electrified (heat pump-based) central heating hot water systems in each facility. Decision-makers for Centralia Hospital received more than 20 detailed recommendations from Millig, thoughtfully designed and ordered within a three-tiered program, to be installed over time to achieve Providence's decarbonization commitment.

ORIGINAL DESIGN BUDGET

\$54,320

COMPLETED DESIGN COSTS

\$54,320

REFERENCE

Willy Heston, Building Systems Engineer
OR/WA Region Providence Health & Services
503.927.4491
William.Heston@providence.org



ENERGY TRUST FELLOWSHIP (MWA)

Various Locations, OR

As an industry expert, MWA's Director of Sustainability Jean Von Bargen Root received grant funding from the Energy Trust of Oregon to support net-zero research in Oregon. With a focus on the Willamette Valley, Rogue Valley, and High Desert, Jean evaluated current and future climate conditions and assessed how local development codes, standards and policies help or hinder net-zero performance in this building type.

An accompanying design guide provides detailed design solutions for mixed-use office/industrial campuses, offices, warehouses, pre-engineering metal buildings, and unoccupied service buildings. Jean partnered with Convergence Architecture, a woman owned COBID (Certification Office for Business Inclusion and Diversity) certified firm, to conduct and disseminate the recommendations.

ORIGINAL PROJECT BUDGET

\$50,000

COMPLETED COSTS

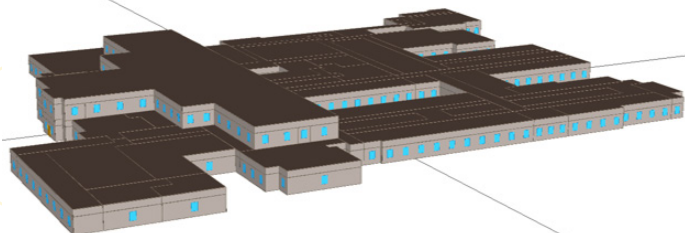
\$50,000

REFERENCE

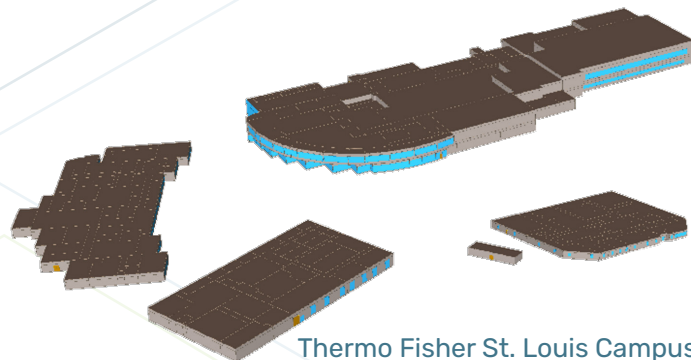
Naomi Cole
Net Zero Grants
503.956.0244
naomi@konstrukt.com



ENERGY MODEL EXAMPLES



Providence Centralia Hospital



Thermo Fisher St. Louis Campus

DECARBONIZATION AND ELECTRIFICATION MASTER PLANS

The following table documents highlights of Millig's Decarbonization and Electrification Master Planning contracts.

PROJECT NAME	FACILITY	LOCATION	TYPE OF ENGAGEMENT	SIZE (SF)	SAVINGS (TONNES CO ₂)	COST TO ACHIEVE SAVINGS
Washington State Capitol Campus	State Capitol Campus	Olympia, WA	Campus Central Plant Upgrade Feasibility Study & Submeter Project - See Project Highlight on page 5.	3M	4,347	\$38.5M
Thermo Fisher - Cincinnati	Biotech & Industrial Pharmaceutical Manufacturing (Biotech & Pharma)	Cincinnati, OH	Campus Decarbonization Master Plan - The Cincinnati site consists of laboratories and GMP certified manufacturing space for the production of solid oral doses. With over 64 built-up air handling units and 11 eras of construction since 1937, the decarbonization master plan for this facility included recommendations for cogeneration, fan walls, electrification of heating systems, solar PV, and improvements to overall system control and ventilation. A second phase of upgrades over time would convert the central steam system to a heat pump low-temperature hot water system and AHU modifications to accommodate those changes.	980k	27,279	\$40.1M
Thermo Fisher - Manati	Biotech & Pharma	Manati, Puerto Rico	Campus Decarbonization Master Plan - Unique approaches had to be considered for decarbonization at the Manati manufacturing campus of 7 buildings, as electrical production on the island is primarily provided by diesel power plants. As a result, decarbonization recommendations included cogeneration, a large solar PV installation, fan walls, variable speed exhaust control for laboratory spaces, and improvements to site electrical infrastructure.	600k	12,634	\$20.6M
Thermo Fisher - STL	Biotech & Pharma	St. Louis, MO	Campus Decarbonization Master Plan - See Project Highlight on page 6.	600k	20,202	\$41.2M
Sanofi Ph 1	Biotech & Pharma	Framingham, MA	Decarbonization & Electrification Project - See Project Highlight on page 6.	1.2M	730	\$4.7M
Sanofi Ph 2	Biotech & Pharma	Framingham, MA	Decarbonization & Electrification Project - Phase 2 of Millig's efforts at Sanofi's 1.2M ft ² campus is to upgrade central plant equipment in Building 8 and Building 70, including new chillers, water-to-water heat pumps, and boiler plant redesign.	1.2M	TBD	TBD
Museum of Pop Culture	Museum & Arts Venue	Seattle, WA	Decarbonization & Electrification Plan of Heating Plant - Millig was engaged by the Museum to document existing system operations, determine its current Energy Use Intensity, and evaluate the cost and feasibility of converting the natural gas boiler system to an electric heat pump system as part of compliance with the Seattle energy code that prohibits new natural gas appliances.	141K	-	-
Thermo Fisher - Lenexa	Biotech & Pharma	Lenexa, KS	Decarbonization Master Plan - Lenexa's operations are split between six different facilities outside of Kansas City, including a sheep ranch and an underground warehouse facility. Tailored solutions were made for all facilities, including the complete conversion of a natural gas steam boiler system to electric generation, saving both energy and utility costs, electrification of all HVAC systems, controls optimization for new and old central plants, solar PV, and considerations for the carbon impact of livestock.	550k	1,179	\$17.1M
Thermo Fisher - Mississauga	Biotech & Pharma	Mississauga, ON, Canada	Decarbonization Master Plan - This facility in Mississauga consists of solid oral dose manufacturing and laboratory space. Given the site's northern location, special consideration was given to the difficulty in providing affordable heating in extreme winter conditions. Decarbonization strategies identified included right-sized ventilation systems, coil replacements to accommodate low hot water supply temperatures, electrification of hot water generation, exhaust energy recovery, and renewable energy through solar PV.	370k	5,856	\$44M

PROJECT NAME	FACILITY	LOCATION	TYPE OF ENGAGEMENT	SIZE (SF)	SAVINGS (TONNES CO ₂)	COST TO ACHIEVE SAVINGS
Thermo Fisher - Whitby	Biotech & Pharma	Whitby, ON, Canada	Decarbonization Master Plan - Whitby's manufacturing plant is dedicated to the production of solid oral dosage capsules. The master plan for this facility included the elimination of wasted energy through carefully monitoring make-up and exhaust air systems and incorporating energy recovery, demand control ventilation, replacing gas-fired boilers with heat pump hot water generation, and solar PV.	325k	2,810	\$54.7M
Thermo Fisher - High Point	Biotech & Pharma	High Point, NC	Campus Decarbonization Master Plan - High Point's manufacturing facility produces soluble gel tablets, which require large areas to be maintained at specific temperatures and humidity. Millig developed solutions to dramatically reduce carbon emissions by implementing liquid desiccant dehumidification, modification of hydronic systems to utilize lower temperature water, electrification of HVAC, solar PV, and improved control strategies.	350k	8,370	\$20.9M
Thermo Fisher - San Jose	Instrument Manufacturing	San Jose, CA	Campus Decarbonization Master Plan - San Jose's facility assembles chromatography and other laboratory specialty measurement equipment. The site was constructed in the 1980s; most mechanical systems are original. Millig recommended converting dual duct systems to more efficient, fully-electric alternatives, electrification of all hot water generation, chilled water plant optimization, lighting control upgrades, and BAS improvements.	650k	548	\$9.8M
Providence Hospitals - Chehalis	Acute Care Hospital	Chehalis, WA	Decarbonization Master Plan - See Project Highlight on page 7.	160K	325	\$4M
Providence Hospitals - Seaside	Acute Care Hospital	Seaside, OR	Decarbonization Master Plan - See Project Highlight on page 7.	115K	400	\$2.3M
Las Animas County	Historic Courthouse	Trinidad, CO	Historic Building Electrification Project - The Las Animas County Courthouse was in need of new HVAC equipment to replace its original 108-year-old steam system. Millig performed a Life Cycle Cost Analysis that yielded a Water-Source VRF system as the most cost-effective new system option to eliminate natural gas heating. To reduce the utility impact of electrifying heat generation, LED lighting, and a solar PV system were included in the project, which will maintain annual electricity expenses despite the addition of cooling and ventilation to the facility.	60k	111	\$5.7M
Kearny County	County Administrative Campus	Kearny, KS	Campus Ambient Temperature Loop & Historic Building Electrification Project - This campus of 4 facilities included an 80-year-old historic courthouse and relied on 4 independent failing HVAC systems with a shortage of maintenance staff to operate them. Millig developed a phased implementation approach to align with the County's budget constraints to update and consolidate the campus HVAC on a central heat pump loop with Water-Source VRF systems in each building connected to the loop. Construction is complete, and the systems are operational at two facilities. The loop is sized to accommodate adding the remaining buildings in the future.	32k	50	\$3.0M
Logan County	Historic Courthouse & Administrative Offices	Sterling, CO	Campus Ambient Temperature Loop & Historic Building Electrification Project - Logan County Courthouse is over 100 years old but has maintained its original, beautiful aesthetic. Millig designed an ambient temperature loop between the courthouse and an adjacent office building connected to new water-source heat pump systems utilizing variable refrigerant flow technology that fits seamlessly into each building's historical aesthetic. This solution is a major step in decarbonizing the county campus by efficiently electrifying the heating systems.	37k	67	\$3.4M

PAST PERFORMANCE

A successful long-term plan to decarbonize the Washington Capitol Campus requires an approach that varies from traditional campus development planning efforts. Traditional master planning almost exclusively emphasizes the physical development and illustration of a single static solution, based on current technologies. These efforts lack the foundational modeling and analysis needed to make informed decisions during the development of the plan and support real-time decisions in future years during the plan’s implementation.

As is the case with the *Next Century Capitol Campus Predesign Report* developed in 2020 for the Washington State Office of Financial Management, a static plan, based on current needs and technologies available today, quickly becomes obsolete, providing little value in guiding the state in decisions around future mechanical, electrical, and utility infrastructure projects. A plan’s value is more than a campus map illustrating a static set of recommendations to get to an endpoint; its value is in its ability to remain relevant within a rapidly changing environment. The State Capitol Campus finds itself in turbulent circumstances with unforeseen opportunities; rapid change - such as opportunities presented by new technology offerings - is inevitable. Thus, Millig’s development plan approach, outlined in this section, is designed to:

- Be the basis of an ongoing process that will be easily adaptable to changing circumstances and available technologies.
- Guide decisions, even in unanticipated situations.

- Be actionable and provide reliable budgetary estimates for future implementation.
- Integrate into future central utility, HVAC, and electrical system capital needs.
- Provide support in raising the necessary capital and providing improved funding opportunities.
- Create enhanced partnerships with the local community and Puget Sound Energy.
- Increase operational efficiency and capabilities.
- Ultimately attain state support and approval.

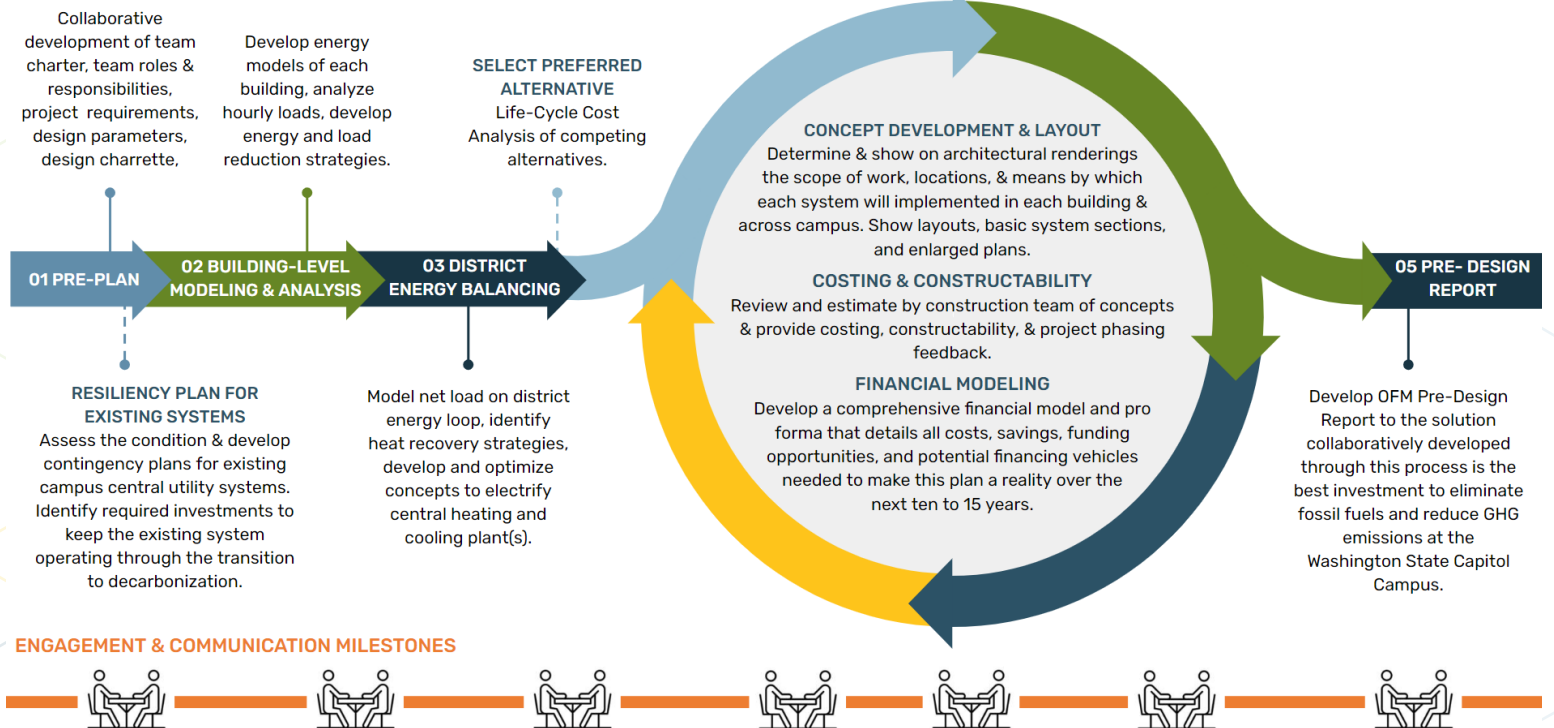
MILLIG’S UNIQUE APPROACH

Millig’s approach, outlined in this section, is built on the following foundational building blocks where each block builds on the previous step, resulting in the best-informed plan today while being adaptable and responsive to changes in program needs and technological improvements. Millig’s process includes the following major steps, with detailed descriptions of each on the following pages.

01 Pre-Study → 02 Building-Level Modeling & Analysis → 03 District Energy Balancing → 04 Decarbonization Plan Development → 05 Pre-Design Report

A unique aspect of Millig’s approach is the rigorous analysis performed during Building-Level Modeling & Analysis and District Energy Balancing, prior to the development of the decarbonization plan.

MILLIG’S PROCESS



Traditional master planning approaches omit these two foundational steps altogether, skipping straight to plan development while ignoring vital building-level-energy- and load-reduction strategies. This, unfortunately, requires using rule-of-thumb assumptions for building cooling and heating loads, leaving the plan inaccurate and limiting its usefulness in the future as it cannot easily be updated to evolve with inevitable changes in program needs or available technologies.

Millig’s decarbonization planning approach, however, is designed on the premise that things will change in the coming years during plan implementation. Being built on a foundation of rigorous and comprehensive building-level and district energy system energy models, Millig’s approach to decarbonization plan development will seamlessly accommodate future changes through routine updates to the building and district energy models with new scenarios. The updated results can then be incorporated into future master plan revisions and be used to drive future project and design decisions.

MAJOR STEPS AND MILESTONES

01 PRE-PLAN (WEEKS 1 - 6)

Before we begin any engineering, we must establish the project team, document the goals and vision for the project, and understand Building & Grounds staff’s capabilities and preferences for system types. This collaboration begins with establishing a Team Charter, where all stakeholder goals are documented, to be used as the foundational element in planning and decision-making throughout the master planning process.

Once the high-level goals are established and agreed on, the Millig team will then organize and facilitate several work sessions to collaborate with all project stakeholders to discuss possible concepts, review long-term campus development plans, identify critical operations and risks, and define project parameters. For this scale of planning, we recommend a multi-day session where stakeholders cohabitate at the campus to share ideas, build trust, and foster relationships that will support the overall planning effort.

Building and District Energy System Assessment

The initial technical effort will be for the Millig team to physically walk through all buildings and gather data at each facility. Our walkthrough process includes assessing the mechanical and

electrical infrastructure’s types, age, condition, and operating characteristics. We also review as-built plans to understand each system’s design intent and capacities, and we inspect the digital control systems as a source of information for current and historical operating conditions.

Resiliency Planning For Existing Systems

The implementation of a project to decarbonize over 20 buildings on the Washington State Capitol campus will occur in multiple phases over 10+ years. The transition period will rely on maintaining service from the chiller and boiler systems in the Powerhouse and much of the HVAC infrastructure within the buildings. Much of this equipment is at the end of its life; therefore, interim plans and contingency measures will need to be developed to ensure reliable service, preventing outages and disruptions to the critical activities on the Capitol Campus.

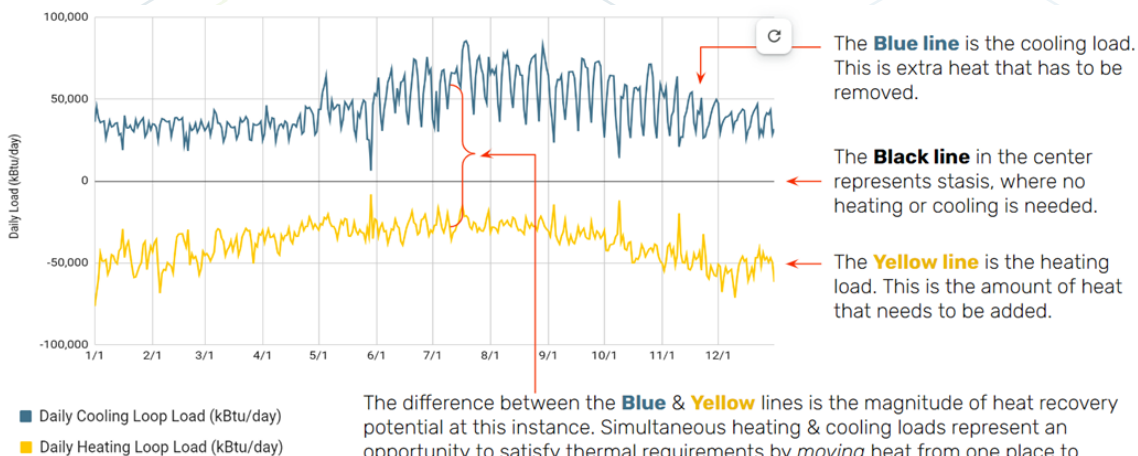
The Millig team will identify and evaluate all electrical, heating, cooling, and energy backup infrastructure needed during the transitional period. We will collaborate with DES and their tenants to identify critical buildings and loads as well as potential operational and failure risks. This information will be compiled in a Risk Register where a risk manager, probability, financial exposure, control plan, and response plans will be identified for each risk. This will be the guiding document to educate and engage shareholders so that everyone understands their actions and role when a risk is realized.

Interim project recommendations will be provided by the Millig team to address failure risks associated with critical heating and cooling infrastructure. Examples of recommendations could include options for the purchase, location, and housing for a temporary boiler and chiller equipment, or additional generator capacity at key locations.

02 BUILDING-LEVEL MODELING & ANALYSIS (WEEKS 6 - 13)

The Millig team will obtain and analyze submeter data in 15-minute intervals for electricity, natural gas, steam, and chilled water for each building and determine the hourly energy and thermal load profiles of each facility on campus. This data will allow the team to identify peak heating and cooling needs and the magnitude of the opportunity for heat recovery within each building. Further, layering - or aggregating - multiple building thermal load profiles on top of each other allows us to identify the degree of Energy Load Diversity across a district. It is the foundation for the best practice approach of District Energy Balancing.

THERMAL LOAD AND HEAT RECOVERY OPPORTUNITY ANALYSIS



An 8,760-hour computer simulation of each building will be constructed that incorporates each building's physical characteristics & construction type, building-level HVAC systems & operational data, current utility rates, and local annual weather data. Each model will be closely calibrated to the site's actual utility data to validate its accuracy. An accurate model for each building provides the basis for accurately quantifying the impact of energy conservation, load reduction, and heat recovery strategies. It also gives instant insight into what current building equipment is contributing to the baseline carbon emissions.

Building-Level Upgrade Analysis

With all baseline building-level assessments being complete, the team will brainstorm all potential energy conservation, load reduction, and heat recovery strategies for each building, with the goal being to minimize heating loads while maximizing heat recovery potential through simultaneous heating and cooling. Each strategy will be modeled to quantify energy-saving potential (both energy and cost) with the ultimate goal of deriving new optimized hourly load profiles for each building to be used in the District Energy Balancing effort. Building-level opportunities and energy and load reduction results will be presented to DES for feedback.

03 DISTRICT ENERGY BALANCING (WEEKS 17 - 25)

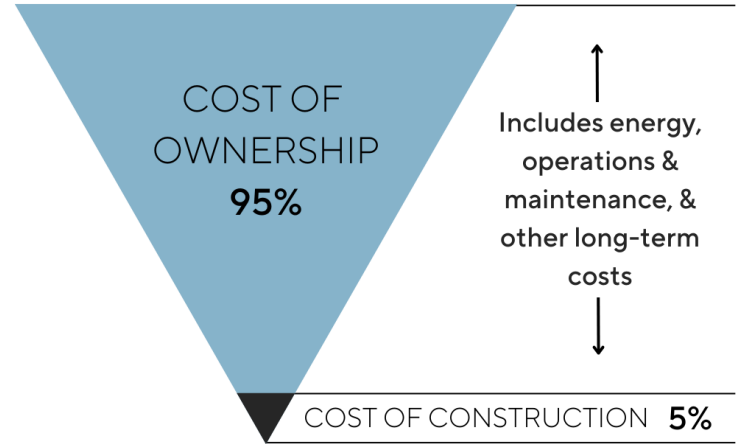
District Energy Balancing is the practice of using the diversity of energy load profiles and building types to cost-effectively optimize district energy use by balancing energy consumption and production, mainly through sharing heat between facilities. In this exercise, the Millig team will perform a careful and iterative analysis of the thermal needs of individual systems, buildings, and, ultimately, the entire district. Our computer model will be used to refine design concepts to determine the optimal approach to electrify and decarbonize the central heating system. We will also evaluate renewable energy and thermal storage strategies to enhance the performance of the proposed district heating system.

Milestone: Select the Preferred Alternative (Weeks 23 - 29)

At this point, all building- and district energy-level opportunities will have been identified and analyzed in terms of energy and carbon emissions performance. Next, capital costs, utility costs, maintenance costs, and utility and federal incentives will be analyzed so they can be presented to DES stakeholders for quantitative and qualitative evaluation. Ultimately, the outcome of this effort is informed decision-making on what solutions and preferred alternatives DES would like to see further developed in the decarbonization master plan.

When dealing with complex system renewals in existing facilities, there is often more than one way to solve any problem. For all competing solutions, Millig's team will evaluate several competing options by conducting a 50-year Life Cycle Cost Analysis (LCCA). A long-term LCCA provides the best way to make an informed decision about which system is best suited for a specific application. The LCCA takes into account all financial implications of the project, including all-in capital costs (first cost), ongoing energy costs, ongoing maintenance costs, and future capital costs/component replacements.

Life cycle cost analysis is critical for any major upgrade project, as the total cost of ownership far exceeds the first cost of construction.



Source: NREL, U.S. Federal Facilities Council Technical Report No. 142

04 DECARBONIZATION PLAN DEVELOPMENT (WEEKS 30 - 62)

Concept Development & Layout of Preferred Alternative

With the preferred conceptual solution in hand, the Millig team will next determine and demonstrate exactly how to implement the decarbonization solution in each building and at the district energy level. This will involve preliminary system sizing and selection, evaluating redundancy and resilience requirements, and coordinating with PSE on utility and interconnection requirements. Ultimately, the scope of work and means by which each system will be located and implemented in each building will be determined and shown with architectural renderings, layouts, basic sections, and/or enlarged plans.

Any additional facilities that may be needed to house new district energy systems will be sited and rendered to assist in realizing how the facility fits into the existing campus environment. Further, all new district energy piping and electrical distribution will be planned, including pathways and supporting infrastructure needed to ensure seamless integration on campus while providing the ability to service and maintain easily.

Master Plan development will end with finalizing the developed concepts' energy and carbon emissions performance. This involves updating previously constructed computer energy models with each system's final capacities and parameters outlined in the Master Plan. The results will inform DES of future operating costs and verify that the plan will achieve the energy reduction goals required by the Clean Buildings Performance Standard.

Construction Cost Estimating & Constructability of Preferred Alternative

Now that master plan concepts have been developed in sufficient detail to understand how they will be implemented in each building and the campus, Millig's lead estimator and the construction manager assigned to the project produce line-item cost estimates for each option in the UNIFORMAT II format. This provides DES with the granularity needed to understand the scope and costs involved in future budgeting.

Constructability feedback from Millig’s construction team is crucial at this stage. Since much of the work will involve retrofit and remodeling, architectural elements and construction approaches must be taken into account. For this reason, Millig’s construction and estimating team will thoroughly review and provide feedback on the scope and implementation requirements in each building to ensure we end on a constructible, cost-effective plan that is minimally disruptive to campus operations.

The Millig team, in collaboration with DES, will strategically develop a phasing plan for implementing the full campus decarbonization plan. Phasing plan development will involve the entire master planning team, including all DES stakeholders, the A/E team, and the construction/estimating team. This will be a strategy exercise where design phasing packages will be designed considering budget, service interruptions, technical challenges around transitioning away from the current utility infrastructure, and best value in terms of cost and carbon emissions reductions. Once the phasing plan is established and the work packages are understood, the Millig team will recommend the most successful contracting models given a particular package’s scale, complexity, and performance requirements.

Financial Modeling of Preferred Alternative

The final major step in the master plan’s development is developing a comprehensive financial and pro forma that details all costs, savings, funding opportunities, and potential financing vehicles needed to make this plan a reality over the next ten to 15 years. Detailed campus carbon emissions projections will be modeled that show progressive reductions over time as the different project phases are implemented.

All of this information will be distilled in an impactful and convincing executive summary presentation to ensure effective and inspiring communication to all decision-makers within the state.

05 OFM PRE-DESIGN REPORT (WEEKS 63 - 78)

Millig recognizes that the master plan is only as valuable as its ability to successfully entice decision-makers to allocate money to accomplish this ambitious goal and environmental obligation. As such, we will weave our powerful analysis and narrative into the OFM Pre-Design Report to make the case that there is no better investment than to demonstrate leadership across the state by achieving deep GHG reductions on their flagship campus in Olympia.

This effort will also include developing guidance on development and design standards for future construction projects and energy-metering design standards to ensure the continued optimal operation of building and district energy systems.

SUBCONSULTANT APPROACH

MWA

MWA has over 30 years of experience with public infrastructure projects on campuses. We will support the engagement process in the role of facilitator and architect for integrated design conversations and alternative evaluations.

MWA will facilitate the identification and documentation of risk. Identified risks will be tracked and rated then, followed by progressive mitigation and retirement of those communally identified risks.

As architects and data managers, we bring real-time documentation to live events, such as facility assessment, using cloud-based whiteboard platforms. This brings transparency to the process for the entire team so that no opportunity is missed and innovative, integrated solutions are brought forward for consideration.

ESPOUSAL

As a black-owned DBE business, Espousal Strategies prioritizes thoughtful, robust engagement with historically excluded communities when leading community engagement efforts. Our approach to culturally responsive engagement includes actions such as; surveying community members, ensuring inclusivity and accessibility features, hosting in-person and/or virtual affinity group listening sessions, interviewing other DBE and Minority-owned businesses, community members, hosting virtual community workshops/ symposiums, group facilitation and management, direct outreach to community partners, and inclusive digital storytelling. Espousal’s strategy for engaging equity priority communities includes considering all potential barriers to engagement and identifying solutions to overcome those barriers.

Equity Focused Community Engagement Framework

Understanding the socio-economic and history of the area is crucial to formulating and implementing an effective and equitable community engagement framework. The framework will identify ways to address the barriers that these communities and others often face to meaningfully participate in public decision making processes, such as lack of time, information, and/or access to technology.

The following analysis approaches could be applied to the Campus Decarbonization Planning process if desired:

1. An in-depth community and demographic analysis, with implications for engagement strategies.
2. An exploration of the WA Capitol Campus’ historical context and what it means to communities and constituents in Washington.
3. A review of methods, tools, and tactics that have been shown to result in inclusive, equitable engagement processes.

The following outreach tools could be applied to the Campus Decarbonization Planning process if desired:

Community Surveys

The project team can utilize online surveys that align with key milestones. Surveys will be accessible to all, in terms of time required to complete, language used, and compatibility with screen-reader software for those who are blind or visually impaired.

That said, while online surveys can be an efficient and effective tool to reach much of the community, we also understand that those who are most likely to participate in them are white, higher income, English-speaking, and in their 30's, 40's, and 50's. It will be important to gather input from these demographics, but our strategy will include a concerted effort to reach those who do not fall in these demographic groups.

Affinity Listening Sessions

To gain a more in-depth understanding of the wants and needs of historically marginalized communities, we can conduct a series of culturally-specific listening sessions that also align with key planning milestones.

Stakeholder Briefings

This effort will have a wide range of public, private, and nonprofit stakeholders who will want to stay informed of the plan development. We assist with the coordination and delivery of briefings to third-party stakeholders throughout the project to ensure that the community is engaged and feels included in the process.

PROJECT SCHEDULE

Our project schedule forecasts completion of the Decarbonization Plan two months earlier than the due date of June 2025. See **page 15** for more information.

DIVERSE BUSINESS INCLUSION STRATEGIES

Millig itself is a Small Business as defined by Washington RCW 19.85.020 and is registered as such with Washington's Electronic Business Solution (WEBS). RCW 19.85.020 states that "a vibrant and growing small business sector is critical to creating jobs in a dynamic economy." Millig is exactly the type of small business referred to by the legislature, and our experience as a Small Business makes us aware and sensitive to the needs of other Diverse Business Enterprises.

Millig seeks to put Diversity, Equity, and Inclusion (DEI) at the core of everything we do, from hiring to project design to the kinds of communities we work with. This includes being ambitious in our goals for Diverse Business participation on our projects. We aim to meet the Governor's Office's aspirational goals for diverse business inclusion of:

- 10% - Minority Owned Business certified by the Washington State Office of Minority and Women Business Enterprises
- 6% - Women Owned Business certified by the Washington State Office of Minority and Women Business Enterprises
- 5% - Veteran Owned Business certified by the Washington State Department of Veterans Affairs
- 5% - Washington Small Businesses self-identified in the Washington Electronic Business Solution (WEBS).

We integrate the following steps into our project development process in order to support our stated goals. When forming our project team we:

1. Start our subconsultant and subcontractor search by making every effort to include diverse businesses in early discussions and project walks to give them an opportunity to compete for a place on the project team, including providing accommodations to smaller firms or firms with limited resources.
2. Utilize the relevant state databases like the Washington State Office of Minority and Women Business Enterprises, the Washington State Department of Veterans Affairs, and WEBS, to find qualified diverse businesses to our team.

Internally, Millig promotes a culture of Diversity, Equity and Inclusion. We incorporate DEI principles into how we hire and work. We believe that it is incumbent upon us to set the standard for culture in our office and on our projects - we set the tone and the example as the trusted experts, and as the prime contract-holder and general contractor on the job site.

PROJECT SCHEDULE

Below is a truncated high level project schedule, for a more detailed project schedule Millig's Gantt Chart can be found at the following link:

[Link To Detailed Project Schedule \(Optional\)](#)



DES Decarbonization Planning

Read-only view, generated on 17 Aug 2023

