



ENTITY / BUSINESS NAME AND SUMMARY OF SERVICES



1300+

Employee-Owners

DLR Group is an integrated design firm. Our promise is to elevate the human experience through design. This inspires a culture of design and fuels the work we do around the world. We are 100 percent employee-owned: every employee is literally invested in our clients' success. At the core of our firm are interdisciplinary employee-owner teams, engaged with all project life-cycle stakeholders. These teams champion true collaboration, open information sharing, shared risk and reward, value-based decision making, and proficient use of technology to elevate design.



56

Years of Experience

Summary of Services



30

Offices Worldwide

Architecture	Planning	Landscape
Engineering	Acoustical Design	Architecture
Civil	Energy+Smart	Lighting Design
Electrical	Buildings	Preservation
Mechanical	Experiential	Reality Capture
Structural	Graphic Design	Science+Technology
Interiors	High Performance	Sustainability
	Design	

Energy and Infrastructure Master Planning

Our engineers work as an integrated team with sustainability planning, high performance, and smart building professionals. This allows an unparalleled level of collaboration, coordination and integration of all disciplines, bringing value to every phase of the energy planning process.

Energy Consulting Expertise + Qualified Engineers

We are fully staffed with employee-owners in all engineering disciplines: mechanical, electrical, plumbing, fire protection, structural and civil. With our experience and a holistic approach we design and optimize high performance systems.

Value-Based Design

We use performance modeling and life-cycle costing to make informed decisions early in the design process. Our proactive culture holistically balances project goals and budgets to achieve optimal results for you.

RELEVANT EXPERIENCE

Engineering, Renewables, Microgrid Planning, and Sustainability Consulting

DLR Group’s Energy team focuses on engineering, renewables, microgrid planning, and sustainability consulting. Our commitment to utility and microgrid planning supports the unique energy goals of Cuyahoga County. Our goal as an energy consultant is to support the county in it’s plans to attract commercial activity and improve the quality of life for it’s residents. Foundational to this is reducing energy use, improving building performance, meeting sustainability goals, and designing on-site renewable energy microgrid systems which we do to fulfill our brand promise – Elevate the human experience through design.

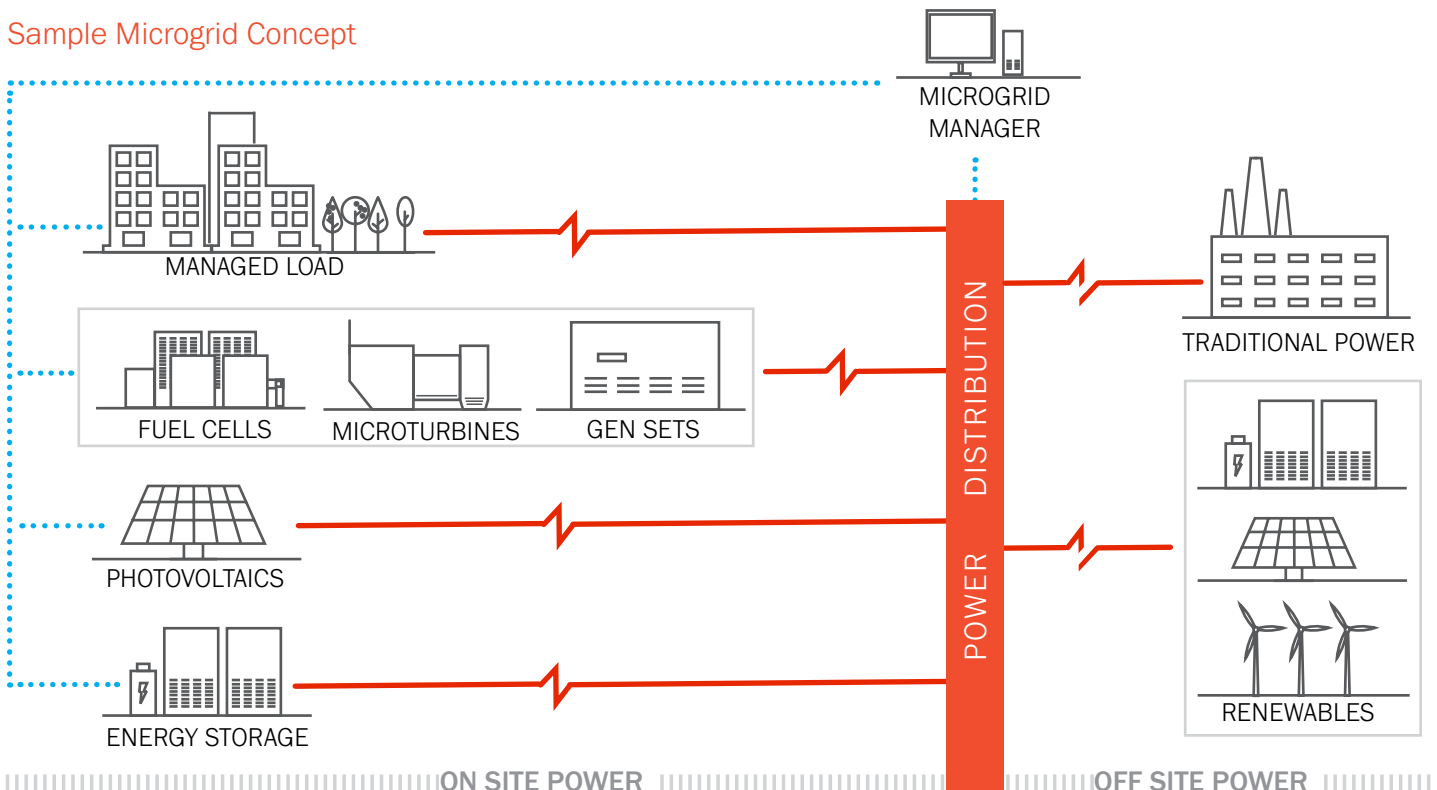
Energy Solutions

- + ENERGY AND INFRASTRUCTURE MASTER PLANS
- + RENEWABLE ENERGY SYSTEM DESIGN
- + BUILDING OPTIMIZATION, AUDITS & BENCHMARKING
- + COMMISSIONING AND FUNCTIONAL TESTING
- + ENERGY MODELING
- + LIFE-CYCLE COST ANALYSIS
- + MONITORING BASED COMMISSIONING
- + SMART ENERGY MANAGEMENT
- + UNDER-PERFORMING ASSET ASSESSMENTS

Tangible Results

- + IMPROVED BUILDING PERFORMANCE
- + LOWER ENERGY USAGE
- + REDUCE OPERATING COSTS
- + OPTIMIZE SYSTEM MAINTENANCE
- + CREATE HEALTHIER SPACES
- + ENHANCE OCCUPANT EXPERIENCE
- + REACH YOUR SUSTAINABILITY GOALS
- + ACHIEVE ENERGY INDEPENDENCE

Sample Microgrid Concept

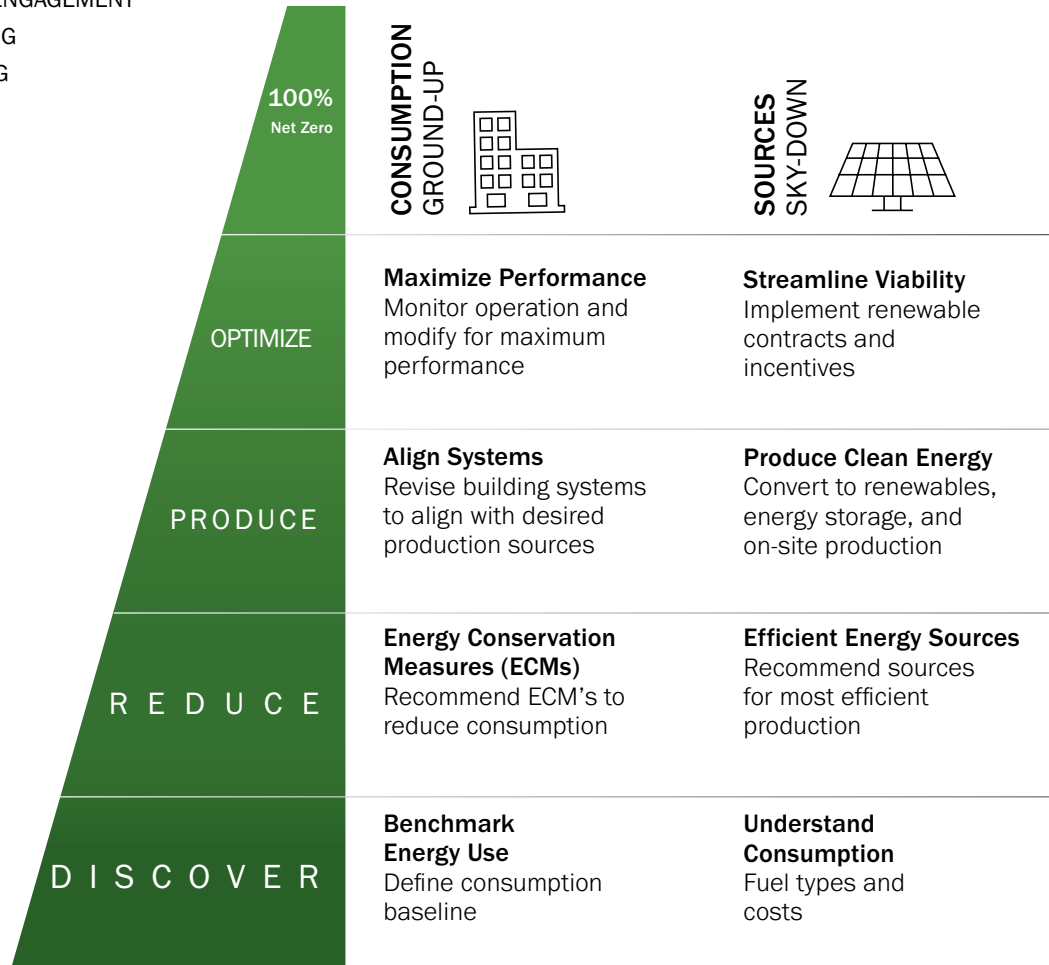


RELEVANT EXPERIENCE, CONT.

WHAT WE DO

- ARCHITECTURE + ENGINEERING
- RENEWABLE ENERGY SYSTEMS
- ENERGY SOURCE EVALUATIONS
- BUILDING ASSESSMENTS
- BUILDING OPTIMIZATION
- STAKEHOLDER ENGAGEMENT
- COST ESTIMATING
- COMMISSIONING
- MICROGRIDS

GROUND-UP AND SKY-DOWN METHODOLOGIES



HOW WE DO IT

Action-oriented

- Tailored energy planning*
- Carbon mitigation strategies*
- Emissions & supply chain inventories*

Collaborative

- Interactive workshops*
- Client & community engagement*
- Customized dashboards & reporting*

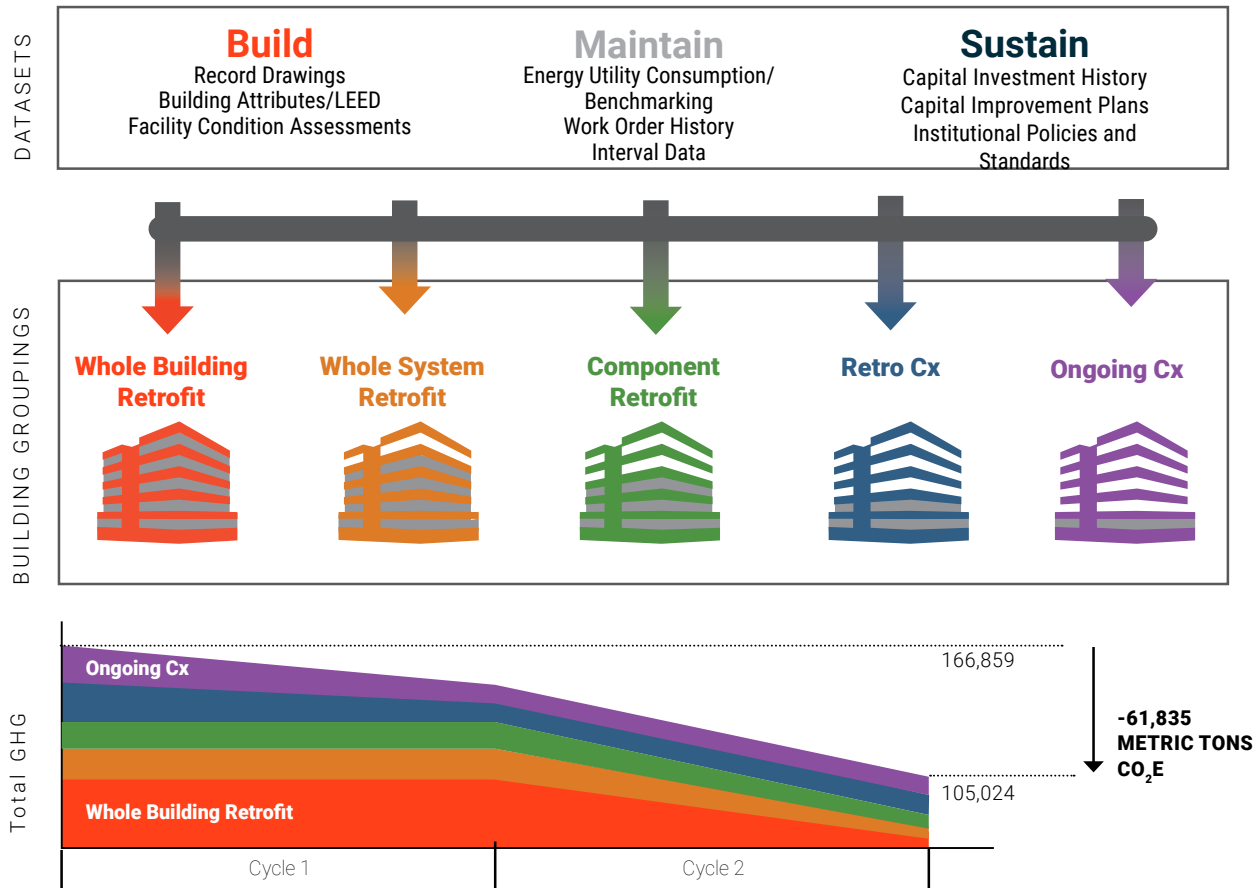
Focused

- Reduction strategies*
- Optimization methods*
- Production planning & incentives*

D.C.-Wide Sustainability Plan

Washington, D.C.

Supporting D.C.'s Net-Zero Energy Goals



Projection chart shows the reduction in GHG by scope type and by cycle.

The Department of General Services led an initiative to demonstrate leadership in the energy reduction goals for DC in the design, construction, and operations of a diverse building portfolio. As DGS embarks on a new decade of work to evolve the city's public building portfolio, the Strategic Energy Master Plan goals and the Sustainable DC initiative serve as a foundation for inspired action. The plan is one of several components in the Clean Energy Omnibus Bill passed by the Mayor of DC. This includes the creation of a Building Energy Performance Standard.

The DC Strategic Energy Management Plan includes planning for deep energy retrofit and zero-net energy master plan for DC's portfolio of over 600 buildings and 60 million sf, including office buildings, schools, recreation centers, and public safety facilities. This plan supports DC's sustainability framework, with a goal of 50% greenhouse gas emissions reduction by 2032. The plan is intended to reduce public building

greenhouse gas emissions by 61,835 metric tons CO₂e.

DLR Group orchestrated technical analysis and engagement across multiple agency groups in the planning, coordination, analysis, and compilation of the DC Strategic Energy Master Plan.

Energy Master Planning covers 600 buildings and 60 million SF to reduce greenhouse gas emission by 50%.

Don't Just Take Our Word for It

DLR Group just completed a comprehensive energy master plan for the city of Washington D.C.

[VIEW IT HERE](#)



The state of Maine's Department of Administrative and Financial Services, through the Bureau of General Services (BGS), is responsible for close to 2 million square feet of public improvements in Augusta, Hallowell, and Vassalboro, ME. The state's previous Master Plan was outmoded, and revisioning was necessary to anticipate the facilities' needs through 2040, with a focus on sustainability and resiliency in the face of climate change. DLR Group partnered with civic stakeholders to identify desires and needs. The plan embraces the modernization of state-owned facilities and actively works to preserve and restore open spaces and historic buildings. The team also informed the reduction of transportation emissions and facilitation of walkability to develop

healthier spaces. These allowed the advancement of the state's 2020 Climate Action Plan, and provide the framework needed to develop building and infrastructure plans which would fulfill the State's current and future needs. DLR Group provided master planning services.

Master planning of close to 2 million square feet for the next two decades to meet ambitious state goals for sustainability.

Riverside Community College District

Riverside, California



Solar energy +
battery to reach
sustainable goals



The Riverside Community College District brought DLR Group to add solar to their campuses and support their sustainable goals. The district includes three schools: Riverside City College in downtown Riverside, Moreno Valley College, and Norco College, and the Ben Clark Training Center. DLR Group created a solar master plan which includes current energy use and future projected campus plan and energy use. This information informs recommended solar arrays and battery energy storage to help offset energy consumption and energy demand on the campuses. The plans includes options to hit 25%, 50%, and 100% energy offsets for each campus.

The report also contains guidelines to use for future buildings to be solar ready.

Engineering and solar master planning on 450+ Square Miles on District-wide project to meet sustainability and energy production goals.

More Experience

*See our Optional /
Encouraged Information
Response for more
experience*

DLR Group Team Project Roles

**Envisioned Roles:
Utility Consultants,
Microgrid Innovators,
Owners Engineer**

Wesley Davis, PhD, PE
*National Renewable Engineering
Leader / Microgrid and Utility
Consultant / Power System
Planning & Design Expert /
Renewable Integration Expert*

Jason Majerus, PE, CEM
*Senior Engineering Leader
and Energy Management
Specialist*

Coral Pais, PE, BEMP
*Mechanical Engineer /
Energy Master Planning Expert*

Sean Avery, PE, LEED AP
*Electrical Engineering Leader /
Solar Engineering Planning &
Design Expert*

John Weiskopf, PE, SE
Structural Engineering Leader

**Additional Roles:
Environmental and
Sustainability
Specialists**

Lindsey Perez, AIA, LEED Fellow
Global Sustainability Leader

Prem Sundharam, AIA LEED
AP BD+C, WELL AP
Applied Research Leader

**Additional Roles:
High Performance and
Energy Specialists**

Shona O’Dea, LEED AP
BD+C, BEMP
High Performance Design Leader

Terry Wholgenant, CIPE,
BEMP
High Performance Design Leader

Bret Henderson, CEM
Smart Building Analyst

Shadi Sherafat, CCP, CMVP
Commissioning Leader

The above roles are what DLR Group is prepared to provide to Cuyahoga County for services in the areas of energy master planning, microgrid design, distribution infrastructure, and distributed generation. This project team consists of experts and specialists who share in the mutual desire for the success of this project.

The team members have a robust understanding of your project needs and goals as well as a deep base of expertise in energy and planning, program management, technical and financial energy strategies, sustainability and carbon mitigation, and community engagement. In addition, we can draw on the additional resources of our employee-owners as other specialized services are identified.

POTENTIAL CHALLENGES

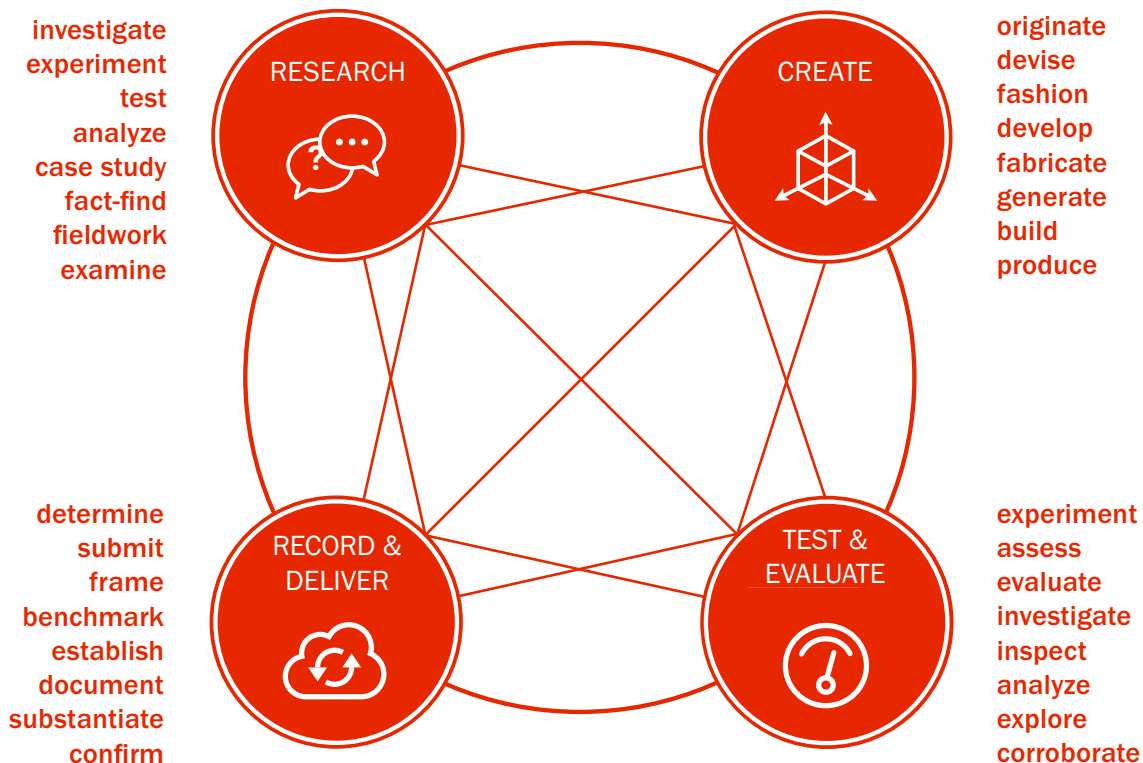
What challenges or barriers addressed through a collaborative and focused planning process.

There are some potential risks in achieving project goals. Central to this is the desire to set realistic objectives created by a combination of systems needing to work together simultaneously to deliver affordable rates, while providing required reliability and capacity. Multiple systems such as: microgrids, the transmission and distribution system, energy storage, market design and rate structures all require a complex multi-variable solution to a dynamic problem. We acknowledge that there are many critical variables in an already complex space. Starting with stakeholder engagement to provide early feedback is key to providing the few but realizable solutions that impact all boundaries variables. Bringing in a developer who can bear the financial project risk early on is critical.

We acknowledge that many critical variables exist in an already complex space. Starting with early stakeholder engagement to provide early feedback is key to creating the most viable and realizable solutions.

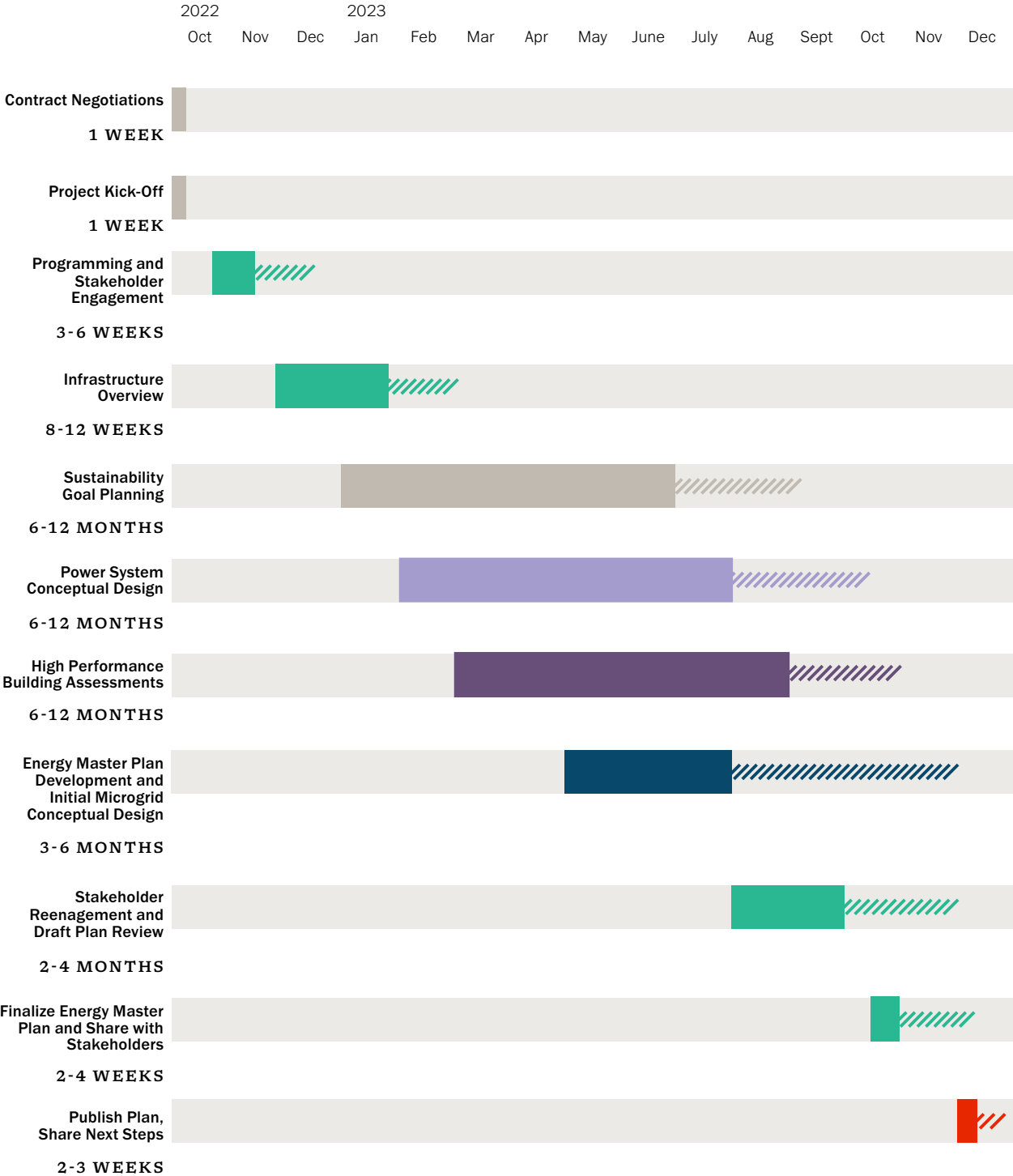
We mitigate this risk through a rigorous design and planning process (shown below). The timeline on the next page gives an overview of the milestones and major considerations in this planning project.

We are prepared to meet with Cuyahoga County and it's representatives to present additional ideas and answer follow up questions. We are also looking forward to inclusion on the list of providers and potential partners to work in collaboration on this project.



Proposed Project Timeline

Sample timeline based on the typical energy planning project



DLR Group is prepared to meet with the County and/or its representatives to present these ideas and to answer any follow up questions.




**Optional/Encouraged
Information**

Cuyahoga County Department
of Sustainability

1422 Euclid Ave, Suite 300,
Cleveland, OH 44115
06-30-2022 | 5:00 PM

SECTION

01



Answers to Questions



Answers to Questions

Below are DLR Group’s answers to questions that the County should consider in the development of potential RFQs / RFPs

1. VISION

a. What is your vision as to how the County Utility could fit into the emerging energy ecosystem?

At DLR Group we see a future for microgrid energy systems that support reliability, resiliency, efficiency, and focus on the uninterrupted quality of the power supply.

The main idea proposed for this project stems from the emerging energy ecosystem. Considerations for a modern delivery system that leverages renewable energy, energy storage, technology, and communications are paramount to project success. These considerations will enable microgrid planning and deployment. All considerations require a planning and shift from the traditional grid delivery from a mostly radial delivery system to a transformative bidirectional power system. The end result is to create a plan that is designed to provide a modern grid for the County Utility that is has the ability to move power in both directions. For example, when local grid loads are low and solar production is high, the county utility must be capable of moving power from the rooftop solar generating source back towards the substation, or to an adjacent feeder serving another part of town where loads are high and generation is low or nonexistent. See the concept drawing on page eight of this document.

b. How might the County Utility improve services compared to traditional systems?

The County Utility can improve services by transforming the planning, design, construction, maintenance, and operations to a modern electric power distribution system.

The modern electric power distribution system should be planned, designed, constructed and operated for bidirectional power flow, high penetration of renewables leveraging energy storage. In addition, the modern grid should be planned for higher reliability and system

performance with established set targets measured by SAIDI (System Average Interruption Index), SAIFI (System Average Interruption Index), and other acceptable reliability performance metrics. Furthermore, enhanced county utility planning methods should begin to forecast the adoption of solar and electrification resulting in an improved, robust, modern ecosystem for Cuyahoga County. Lastly, these changes will enable a modern grid that can support a future of robust and dynamic microgrids.

c. How would you propose building a system in a manner that constrains costs based upon available loads, yet is flexible enough to adapt to new end users who are attracted to the system?

Cost optimization can be achieved by establishing goals that both serve available goals and accommodate newly added loads.

For example, the cost to serve any one customer currently is determined by a cost-of-service study where the cost to maintain the system, invest in the replacement of aging infrastructure, and serve new loads, is assigned to a rate class to recover the cost for a set objective. If the new objective is something different, then the county utility will need plan, design, construct and operate that new objective. It is understood that the new objective (improved reliability, bidirectional power flow or microgrids) will be passed-on to the customer via rates.

One novel way to minimize the cost impact is establishing a Five-Year Construction Plan accounting for a need to upgrade and substation in part of town due to forecasted overload. This would allow local communities to install more solar and/or energy storage to avoid costly upgrades.

d. How might your approach be different for new developments, such as industrial or commercial parks, versus existing customers? Would you envision merging district energy or transportation or hydrogen into the development?

DLR Group would approach new developments and commercial parks from a holistic master planning point of view.

Currently most existing campuses are being re-planned to reduce the carbon footprint and minimize their energy usage index (EUI). A new industrial or commercial park has the advantage of being planned for a minimal or carbon neutral footprint guided by a master planning strategy. We can envision merging the district energy and transportation or hydrogen into the development. Business zones, HUB zones and Opportunity zones, there is the opportunity to create Carbon Free Zones, Microgrid Zones, with the approach that the industrial or commercial park is designed, and master planned for optimal energy efficiency and minimal carbon impact.

c. How might you go about marketing your vision to end users?

Marketing the vision for this project would start from initial stakeholder engagement and go through to project completion and beyond.

Communicating the importance of your vision and sharing can be done via a website and/or dashboard tracking production and energy use.

Community engagement is the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the wellbeing of those people. It is a powerful vehicle for bringing about environmental and behavioral changes that will improve the health of the community and its members.

At DLR Group, community engagement is part of our integrated process that establishes active partnerships as opposed to passive recipients. Co-designing with communities levels the playing field and informs the imagination, which helps shape common ground and differences to ultimately drive better design and decisions.

The first step in taking a new approach to industrial and business parks is to hold a series of stakeholder meetings where the strawman proposal is presented along with the associated cost and benefits. Stakeholder input would be captured, the master plan refined and shared iteratively with stake holders. Initial stakeholders include the developers, existing tenants, the County Utility, and others. Initial factors included are below.

FACTOR 1: PURPOSE

Purpose sets the priorities of our projects. Community engagement can be practiced to involve and engage the community, explore issues and generate new ideas, reach a consensus, or network and share.

FACTOR 2: CONTEXT

Understand the community from within. Different community groups, social issues, language, diversity of experience, cultural norms, geography, and economic challenges are critical factors in partnering with community.

FACTOR 3: SCOPE

Consider the following:
Is engagement appropriate at all?
How much can really change?
What level of participation is needed?

FACTOR 4: PARTICIPANTS

Know your audience. It is important to differentiate between citizens, consumers, communities, and stakeholders.

FACTOR 5: PROCESS

The culmination of purpose context, scope and participants which defines the structure and timeline of community engagement.

2. BUSINESS ECONOMIC MODELS

a. How do you envision revenue flowing through the various entities?

Revenue would flow through various entities based on a newly created County Utility Rate Rider. The rider could be based on the overall cost of the system enabling the newly created industrial or commercial park to achieve a set of stakeholder driven goals. The most difficult aspect of revenue flow is perhaps the back office accounting. Such accounting is already done in many locations around net energy metering.

How does a utility rate rider work?
Riders offer discounts or adders to the base rate. For example, a customer wants GreenPower, they typically pay a premium. This works like a regular rate with exceptions. For example, Residential Service with Time of Use, or EV, or, PV Generation, or Hot Water, or Demand Response. All variations are added to the base rate of Residential Service.

b. The County envisions a scenario where the developer/concessionaire is compensated through a pass-through model from power purchase agreements with individual customer/off-takers. Do you see any problems with this model or have suggestions on possible alternative compensation models?

The challenge with this approach is educating customers and stakeholders on how the new system will work. In most third-party power purchase arrangements, the developer builds the system and owns the output at a set PPA price. In turn the developer may offset their clients utility bill by sharing in the PPA revenue. How the benefits from the developer are allocated could also be an issue however monthly or quarterly true-ups could be a mechanism to address cost allocation under the rate making principle of the cost causer pays.

c. What process would you take with the County to design customer billing (i.e., tariffs) in a fair and transparent way?

Customer billing would be identified as an issue to be addressed as the system is designed and stakeholder input is captured.

d. What types of tariffs are needed to support the County initiative?

To achieve the County's state goals, several tariffs will need to be identified and designed under traditional rate making principles using customer cost of service methodology. Some of the rates that will need to be considered are: TOU (time of use), on-peak and off-peak, EV charging, veteran, disability and senior citizen rates, GreenPower, Microgrid, perhaps even premium reliability or zonal rates, and ancillary rates that compensate for frequency regulation and grid congestion relief. Another rate classification. Could be demand response or conversely generation response, meaning the customer reduces load with a signal from the County or increases generation with a signal, or both to minimize impact to the grid.

e. Would you be willing to provide the capital for the scope/role the County envisions?

DLR Group is best positioned to provide master planning and engineering design services. We are prepared to work with developers and financiers that the County identifies.

f. How would you ensure prices for specific projects (e.g. new distribution line or a microgrid) are competitive?

Competition could be created by designing a market for demand, delivery and supply of energy. Prices would be ensured similar to utility rates by setting system design objectives, and the cost to meet the stated objective. Costs are then passed on to consumers using the system.

3. ORGANIZATIONAL MODELS

a. Would you be willing to contract directly with the County to be responsible for the full scope of this initiative?

DLR Group is positioned to serve in the role of leading the master planning project and design and consulting.

b. What are the tradeoffs for one firm serving all roles versus separate firms serving separate roles?

Having a prime firm leading the master planning efforts is advisable. The master planning consultant will be responsible for leveraging multiple entities with specific capabilities. For example, there may be a need to design a microgrid and a firm to design rates. Rate design and engineering design are two different skills where a master planner would leverage both.

c. How would you structure the relationship between yourself, the County, and other entities (if applicable)?

The master planner would work under the supervision of the County with other entities as key stakeholders with valued input. DLR Group envisions a collaborative relationship where shared goals are identified and integrated into the master plan. This includes local agencies and emergency management teams.

Possible entities include the American Public Power Association, the Electric Power Research Institute, The Institute of Electrical and Electronic Engineers and local universities including the Great Lakes Energy Institute at Case Western Reserve. There are also additional potential opportunities for DOE grants and agency collaboration.

d. What level of responsibility, if any, would you be willing to have for microgrid project identification and development, customer identification and selection, customer contract negotiations, etc.?

DLR Group would take on the responsibility of consultant and master planner to identify potential microgrid opportunities in industrial parks, commercial districts and zones, and residential areas. Intimate knowledge of the existing power grid is necessary to identify microgrids, along with experienced power system planners and innovators. Given that microgrids are a new phenomena in the delivery of electric

power, significant care must be taken to address all engineering, safety, and laws or physics that allow for the delivery and usage of electricity as we know it.

e. What level of pre-design and other information or assurances would you need to respond to an RFP/Q and engage in negotiations with the County?

A clear understanding of the County's objectives, organizational structure and access to key personnel and stakeholders. RFQ/P's should include and identify the measurable goals and outcomes the County wants to achieve.

f. What level of commitment would you need to have from potential County utility customers to respond to an RFP/Q and engage in negotiations with the County?

DLR Group provide master planning and engineering services and would only need a commitment from the County to work in this capacity.

4. CONCESSION AGREEMENT & OTHER CONTRACTS

a. What contracts will need to be in place and between what entities?

DLR Groups typical contract for services agreement is included at the end of this document.

b. What critical terms and conditions need to be addressed?

DLR Group is already working with the County on other projects. Terms and conditions for this specific project should be addressed in the issuance of the RFP.

c. What term lengths would respondent be comfortable with for a distributed energy or microgrid PPA?

This will depend on the County's stated goals and objectives for the project. As state earlier, DLR Group would like to provide master planning and engineering services so this would be beyond that scope.

5. INITIATIVE TIMELINES

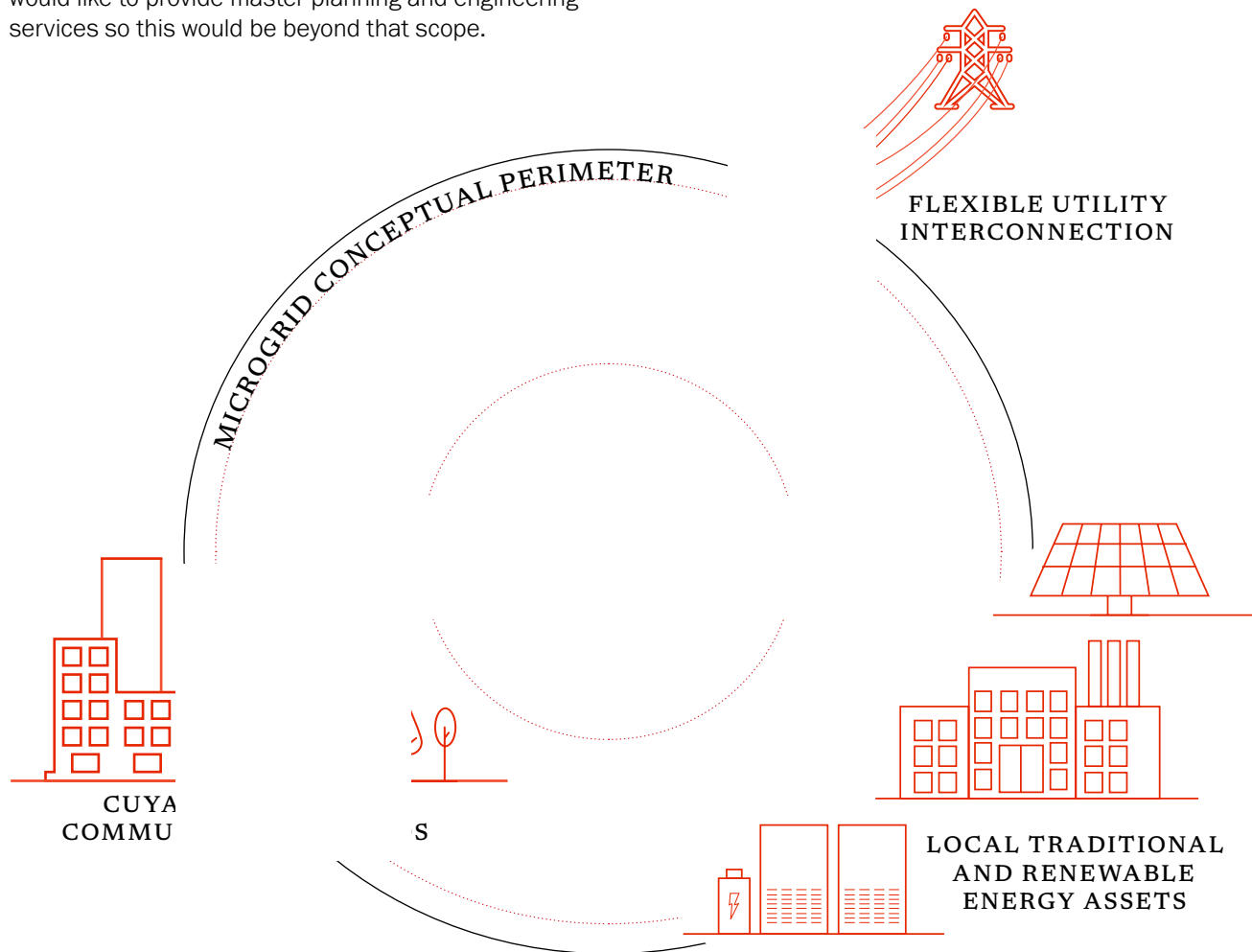
a. What is a typical turn-around time for you to sign a contract for your role(s)?

b. What is a typical development time for a microgrid, from customer recruitment through operation? What are the major milestones?

See the typical timeline for initial master planning in the response for Minimum Requested Information.

c. What impact on this initiative do you foresee, if any, from the current supply chain disruptions?

Access to solar panels, inverters, EV charging stations, and utility equipment such as transformers is a predictable supply chain issue at this time.



6. TECHNOLOGY

a. What technologies should the County consider to address power issues for commercial and industrial customers? (power quality issues vs. short power outages vs. long power outages).

Technologies that should be considered include battery storage, improved reliability from the distribution system, power quality and harmonic mitigations, hosting capacity for maximum renewable energy, automatic sectionalizing for self-healing network technology and AI (artificial intelligence).

b. Can you provide high-level cost estimates for distribution infrastructure, distributed generation, and/or microgrid technologies across different sizes? (e.g. 14.4 kV feeder, 1 MW/1 MWh battery, 5 MW solar PV).

Nearly every jurisdiction's and geographical location, combined with a mixed application, will have a unique design and cost curve. Cost can be better quantified in a master planning study where clear objectives are established.

c. Are there ranges of economic feasibility that the County should be aware of when considering on-site generation, storage, etc. For example, do projects only over X MW prove to be economically feasible in your experience?

In most cases there are economies of scale when it comes to energy feasibility. However, when envisioning a microgrid, this is difficult to gauge as each application and load profile will be different. An unproven rule of thumb is to break the utility feeder into two or three zones while also considering the existing single zone. Conceivably, feeder zones could be planned and designed into future microgrids and markets based on usage and generation profiles.

d. How should cybersecurity of the utility, individual microgrids, customers, or other pertinent entities be ensured?

Cybersecurity could be achieved by adopting some aspects of to the current NERC Critical Infrastructure Protection (CIP) Standards, dealing with sabotage reporting (CIP-001), asset identification (CIP-002), and electronic security perimeters (CIP-005). Alternatively the County could leverage existing cybersecurity practices already being used in customer billing, water treatment or other critical areas.

e. What is your approach to managing: capacity and transmission peak load contributions? Energy market arbitrage? Frequency regulation?

The high-level approach would be to establish clear and achievable objectives constrained by prevailing market rules, County objectives and stakeholder input.

7. DIVERSITY, EQUITY, AND INCLUSION

a. How will you ensure Diverse, Equitable and Inclusive (DEI) partnership(s) throughout this Initiative?

Risks are outlined on page nine of the Minimum Requested Information submittal.

8. OTHER

a. What potential risks, setbacks, or hurdles do you see for this Initiative?

Risks are outlined on page nine of the Minimum Requested Information document.

b. Please provide any other information that you feel would be pertinent to the County at this stage of the process.

DLR Group proposes a holistic approach to master planning where reduced scope can focus on a small set of realizable objectives. Master planning will allow the County to break a seemingly large project apart, develop micro solutions in multiple areas that can be globally tethered together to solve a macro problem.

SECTION

02

Diversity, Equity, and Inclusion



Diversity, Equity, and Inclusion

DLR Group envisions a Diverse, Equitable and Inclusive (DEI) project that impacts all communities with access to the modern grid

DLR Group is a 100 percent employee-owned firm. Any employee can purchase stock in DLR Group during the firm's annual stock exchange in December. As of January 1, 2020, approximately 60 percent of the firm's 1,200 employees are investors in DLR Group. No single individual shareholder owns more than five percent of the firm. The voice of every employee-owner is heard and valued at DLR Group. We actively seek to attract a diversity of new voices to both our firm and to the design profession.

Each employee-owner is responsible for instilling a culture of equity, diversity, and inclusion (EDI) within our offices, our design teams, and with our business partners and local communities.

DLR Group is a design firm fueled by a meritocracy, not a mirrortocracy.

To support this meritocracy, DLR Group employee-owners clearly identified evolving our practice to nurture a more inclusive and equitable design culture as a component of our five-year, 2021-2025 strategic vision for the firm. A direct outcome of the strategic planning process is un-prompted and ongoing dialogue about EDI in our offices. People of varying ages, genders, and backgrounds are engaging with each other to learn, and ultimately gain a clearer understanding about EDI. These conversations are the initial steps in evolving our workplace. To formalize our EDI commitment, DLR Group has aligned with nationally recognized expert [Hackman Consulting Group](#). Senior firm leadership, in collaboration with Hackman Consulting Group is creating a shared language and framework for learning across the entire firm. Using this framework, Hackman Consulting will guide DLR Group through an education process using shared materials, informal office dialogue sessions, and formal training programs.

The intent is to fundamentally evolve our internal structure to a better, more dynamic, and diverse firm. A truly integrated DLR Group, both in make-up and in practice, will be the vanguard of a more inclusive design industry. Women now make up 42% of our design staff compared to 25% in 2010. People of color make up 23% of our design staff compared to 7% in 2010.

During our Fiscal 2020 year, 51% of all new hires were female and 32% were people of color. Additionally, 25% of DLR Group design professionals elevated to Senior Principal, 43% of new Principals, 43% of new Senior Associates, and 54% of new Associates were women. And 10% of Principals, 14% of Senior Associates, and 28% of new Associates were people of color.



DLR Group also is seeking more diversity in our studio and practice leadership roles within the firm. At the start of our Fiscal 2021 Year, 35% of regional studio leaders – design professional leading a specific studio in a region/office (Hospitality, K-12 Education, etc.) – are female compared to 21% in 2015. Similarly, 37% of professionals leading a region/office practice discipline (Engineering, IT, Interiors, etc.) are women compared to 20% in 2015.

Fourteen percent of our regional studio leaders and 12% of design professionals leading a region/office practice discipline are people of color.

We believe this is reflective of the changing dynamics of the design profession. The effort to bring diversity and new perspectives to DLR Group will never be completed. DLR Group, and all firms, will continue to work toward, and experience, a more diverse and balanced state in coming years. The organizational chart of leading firms in five years, in 2030, and in 2035, will be substantially more diverse than today.

SECTION

03

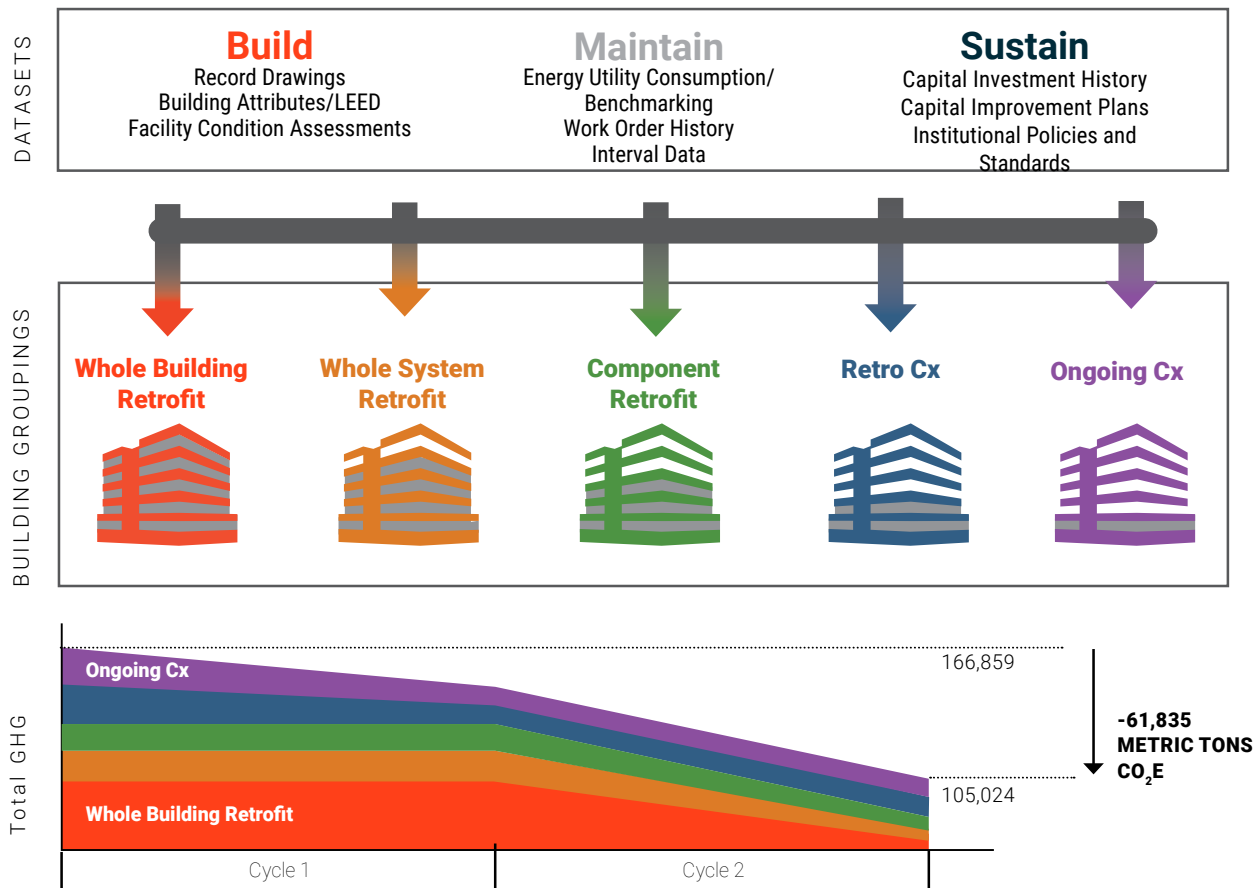
Published Case Studies



D.C.-Wide Sustainability Plan

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DLR Group just completed a comprehensive energy master plan for the city of Washington D.C.

[VIEW IT HERE](#)



The state of Maine's Department of Administrative and Financial Services, through the Bureau of General Services (BGS), is responsible for close to 2 million square feet of public improvements in Augusta, Hallowell, and Vassalboro, ME. The state's previous Master Plan was outmoded, and revisioning was necessary to anticipate the facilities' needs through 2040, with a focus on sustainability and resiliency in the face of climate change. DLR Group partnered with civic stakeholders to identify desires and needs. The plan embraces the modernization of state-owned facilities and actively works to preserve and restore open spaces and historic buildings. The team also informed the reduction of transportation emissions and facilitation of walkability to develop

healthier spaces. These allowed the advancement of the state's 2020 Climate Action Plan, and provide the framework needed to develop building and infrastructure plans which would fulfill the State's current and future needs. DLR Group provided master planning services.

Master planning of close to 2 million square feet for the next two decades to meet ambitious state goals for sustainability.

Riverside Community College District

Riverside, California



Solar energy +
battery to reach
sustainable goals



The Riverside Community College District brought DLR Group to add solar to their campuses and support their sustainable goals. The district includes three schools: Riverside City College in downtown Riverside, Moreno Valley College, and Norco College, and the Ben Clark Training Center. DLR Group created a solar master plan which includes current energy use and future projected campus plan and energy use. This information informs recommended solar arrays and battery energy storage to help offset energy consumption and energy demand on the campuses. The plans includes options to hit 25%, 50%, and 100% energy offsets for each campus.

The report also contains guidelines to use for future buildings to be solar ready.

Engineering and solar master planning on 450+ Square Miles on District-wide project to meet sustainability and energy production goals.

Long Beach Community College Master Plan

Long Beach, California

Developing a Carbon Neutral Implementation Plan



DLR Group was engaged by Long Beach Community College District to develop an Integrated Energy and Sustainability Master Plan (IESMP) to provide a road map and set of design recommendations to achieve district-wide Zero Net Energy (ZNE). This plan will be fully integrated with the District's 2041 Facilities Master Plan and inform the District's reprioritization of future construction projects. The IESMP addresses a number of conservation considerations beyond energy use to ensure that sustainability is addressed throughout a wide range of natural resources. DLR Group reviewed the facilities master plan to identify planned new building and major renovation projects and identify corresponding Baseline Energy Use Intensity (EUI) targets based

on average building of same type and climate conditions. DLR Group provided benchmarking, performance analysis, design recommendations, indoor air quality testing, commissioning, monitoring-based commissioning, energy procurement planning, and ZNE planning.

Innovation master plan provides strategies and energy conservation measures lead to 50% energy reduction and an estimated \$1 million in yearly utility savings.



McDonald's Corporation Global Headquarters

Smart Building Analytics for Energy and Indoor Air Quality Chicago, IL

McDonald's Corporation global headquarters' building owner Sterling Bay engaged the DLR Group team to conduct ongoing Smart Building Data Analytics on its 500,000 gross square feet in Chicago. The building houses Hamburger University, which is a training facility at the McDonald's Corporation global headquarters in Chicago, Illinois. It instructs high-potential restaurant managers, mid-managers, and owner-operators in restaurant management.

The end product is a system that is customized to ensure the property's systems operate as expected, minimizing energy consumption, and ensuring this LEED Platinum building maintains the highest standard in indoor air quality, occupant comfort, and health and wellbeing.

DLR Group's team conducted BACNet integration at the property - integrating more than 700 pieces of equipment with 10,790 data points. Once the data was integrated to our analytics platform, our team identified several energy saving opportunities, and other operations improvement measures. Recommended energy savings measures were implemented by either the facilities engineering team or the controls contractor. After implementation, DLR Group verified proper operation and calculated energy savings, which were then reviewed by a third party. The facility saved \$59,875 per year in utility costs as a result of these measures. To ensure the long-term success of the program, DLR Group's Smart Building Data Analytics platform provides automated email alerts to the facilities team whenever the energy saving measures are not operating as intended. This important step helps to ensure the building realizes the energy savings on an ongoing basis.

Project Relevance

- Smart Building Analytics

Completed: 2022, ongoing MBCx
Size: 500,000 SF

Reference:
Jeff Napolilli, Chief Engineer
312-392-0410
jnapolilli@SterlingBay.com



Adaptive Reuse of Decommissioned Power Plant

Master Plan for Net Zero Campus
Shanghai Electric Power Co., Ltd
820,000 SF



The Yang Shu Pu Power Plant is situated on the western bank of the Huangpu River. Decommissioned in 2010, It was the first power plant built in China and is one of the oldest coal fired power plants in the world. DLR Group's design for the plant's redevelopment uses an aggressive adaptive reuse strategy to realize a net-zero mixed-use campus. This will fulfill the client's goal of demonstrating a commitment to sustainable urban growth in Shanghai and their mission to be a leader in providing clean energy.

The master plan for Yang Shu Pu encompasses a 250,000 square meter net-zero campus. The program includes office high- and mid-rise buildings; street-front, podium, and kiosk retail; hotel; museum and exhibition centers; R&D facilities and labs; lecture and auditorium space; and a marina. Sustainable design emphasizes energy performance to achieve net-zero operations through passive design strategies, efficient systems, and on-site renewables. A core design strategy is the adaptive reuse of original plant structures into visible icons of energy conservation. DLR Group provided architectural, master planning, site planning and engineering services.



Cuyahoga County Justice System Master Plan

Cleveland, OH
Cuyahoga County

DLR Group prepared a comprehensive justice system master plan and programming for Cuyahoga County's detention, courts, and sheriff operation for their downtown Cleveland location. While the focus of the master plan is establishing the framework for new Court and Detention facilities, the effort itself has gone beyond simply defining facility needs and, more importantly, developing a framework for the future vision of the delivery of the justice services to the citizens of Cuyahoga County. The court-related effort has focused on the county's Common Pleas Court and the city's Municipal Court.

DLR Group orchestrated through a series of Workshops a methodology to build consensus among the city and county stakeholders. These Workshops focus on ten primary deliverables for this project:

- Assessment of existing facilities
- Data Acquisition
- Service Demand Analysis and Projections
- Analysis of Systemic Alternatives
- Operational and Functional Programming
- Development of Space Standards
- Staffing Forecasts
- Space Programming
- Site Programming
- Options Development

As a means of reducing the county's jail population, the county proceeded with DLR Group's recommended in developing an Interim Central Booking Center in their existing jail. This center engages the Municipal and Common Pleas court operation from pre-trial services, probation, and initial appearance court. An operational and architectural program and criteria documents were developed for the county to solicit design-build proposals. DLR Group was engaged to assist the county in reviewing the various proposals for recommendation and continues to play a role in overseeing the compliance of the design by the design-build team.

DLR Group led the entire planning effort coordinating with numerous consultants to examine and develop a future vision for the county's justice system. For the courts, DLR Group assessed the existing functional conditions, prepared staffing and spatial projections, introduce "best practices" for consideration in the planning of the facility, and developed several alternatives including new, renovation and expansion to house the future needs of the entire judicial system.

Due to COVID-19, the courts planning component has been placed on hold until January 2021, at which time DLR Group will finalize our master plan to address the preferred alternative to house the future needs of the county and city judicial system.

Awards/accomplishments on the project:

In November 2020, the Steering Committee unanimously approved DLR Group's proposal to proceed with the design and construction of a new low-rise detention center with a population estimated at 1,600 but to be reassessed based on the implementation of population management strategies.

Visible Clean Power on the Las Vegas Skyline

11 Acre Rooftop Array for Mandalay Bay Resort Conference and Convention Center



The scope of this project encompassed the design of the second largest rooftop solar array in the world at the Mandalay Bay Resort Conference and Convention Center in Las Vegas. As one of the first utility-scale rooftop arrays ever designed, the project consists of 21,325 modules that cover 11 acres of roof area allowing for peak energy production throughout the day, with max production in the summer months. Producing over 6.4 MWp of clean energy, the array is configured to provide over 20 percent of the hotel and casino's power demand utilizing a state-of-the-art monitoring and control system. DLR Group provided electrical and structural design services for the project.



Clean Energy for Steel Mill Production

Big-horn Utility Scale
300 MW Solar

DLR Group was the engineering partner for this 300 MW solar power plant in Colorado. The benefit to the off-taker is 55% of their energy consumption will come from renewable sources resulting in an estimated 60% reduction of carbon emissions.

At peak production, the photovoltaic array will produce 613,400 megawatt-hours per year - enough energy to power the equivalent of 50,054 homes annually. The project is estimated to displace approximately 433,770 metric tons of carbon dioxide, which is the equivalent of taking more than 93,713 cars off the road. The project consists of more than 700,000 solar panels installed on 1,500 acres of land.

Planning and Design in the Islands

2.7 M SF Master Plan, Design Guidelines, and Technical Standards in USVI



Encompassing 45 facilities across three islands, this master plan will chart the course for 21st century learning through newly established educational specifications, building programs, sustainability/energy goals, technical specifications, and design concepts. The master plan encompasses more than 2.7 million SF of educational spaces across St. Croix, St. John, and St. Thomas. This portfolio needs to work in tropical environments susceptible to hurricanes.

As the project has progressed, DLR Group is also providing bridging documents for the design of the first campuses to be built, which will replace schools most devastated by recent hurricanes.

The USVI has approximately 300 MW of peak load according to the US Energy Information Agency database.



Click or scan the QR code to view the Online Master Plan

SECTION

04



Press Releases



Recent Press Releases

Here are just a few of our recent news headlines and links featured on our website.

[Renewables: The Future of Energy](#)



Solar canopy at NRG Miami Heat Arena in Miami. Photo by Moris Moreno.

By the year 2050, a whopping 85% of the world's electricity is expected to come from renewable energy sources, according to Bloomberg New Energy Finance forecast. Buildings account for nearly 40% of global carbon emissions; how can you make the pivot now to prepare for the future?

The answer is clear that we must be innovative in the pursuit of a carbon-free future, think differently, and invite new and relevant players to the energy landscape. Renewable energy planning for the consumer and the supplier is critical to an environmentally friendly and resilient future.

[Sustainability Master Plan Underway at Riverside CCD](#)

Riverside Community College District, which serves 1.4 million people living in Riverside County and serves 60,000 students annually across Riverside City College, Moreno Valley College, and Norco College, has hired DLR Group to complete its first comprehensive sustainability master plan to meet California's aggressive carbon and sustainability goals. The project includes a sustainability and climate action plan, as well as integrated energy master plans for each of the three campuses.

“This project touches every individual on campus and reflects the institution’s culture of embracing sustainability, equity, and the wellbeing of its students and the surrounding community.”

Leigh Anne Jones, AIA, LEED AP BD+C
Principal, DLR Group

[DLR Group and the Department of General Services Partner on Energy Management Plan for District of Columbia](#)

The Department of General Services has released a new Energy Management Plan for government buildings in the district to dramatically cut energy use across more than 25.7 million SF of real estate. We are honored to partner with the DGS in their mission to set a national benchmark for building energy performance standards.

“Holistic design doesn’t stop at architecture and engineering. Leading in environmental stewardship means recognizing the importance of the built environment globally and understanding how it interacts with the environment locally.”

Coral Pais, PE, BEMP
Senior Associate

SECTION

05

Your Team



Wesley Davis, PhD, PE

Principal | National Renewable Energy Leader



A strategic leader with a proven track record of planning, design, and operations of electrical distribution systems, Wesley is passionate about integrating renewable resources into the evolving grid. As National Renewable Energy Leader, he leads DLR Group’s energy practice. His expertise encompasses enhanced power transmission, distribution, and storage planning for diverse urban and rural locations. He supports net zero planning and design integration throughout the world and is enthusiastic about renewable energy project success from initial planning and design to breaking ground and commissioning.

Read his dissertation about enhancing distribution planning methods [here](#).

“Planning power distribution systems in the 21st Century presents both technical and regulatory challenges. Future grid distribution planning and the difficult engineering problems that result are part of my everyday life. I am honored to be a catalyst to move the industry forward with increased reliability, more renewables, and better resilience.”

Education

Doctor of Philosophy, Electric Power Engineering

University of North Carolina at Charlotte

Master of Science, Electrical Engineering

Kansas State University

Bachelor of Science, Electrical Engineering

North Carolina Agricultural & Technical State University

Registration, Accreditations, Affiliations

Professional Engineer: NC

Institute of Electrical and Electronics Engineers - Power

and Energy Society and, Transmission and Distribution

Illuminating Engineering Society of North America

International Association of Electrical Inspectors

Jason Majerus, PE, CEM

Principal | Senior Engineering Leader | Energy Management Specialist



Jason leads a multidisciplinary engineering team and has served as mechanical engineer and project manager on an array of complex projects. He leads and oversees project development, energy analysis, design engineering, specifications, construction administration, and commissioning for the projects with which he is involved. Jason has a wealth of experience in HVAC, plumbing, and fire protection system design for new construction, renovation, and historic preservation projects with a focus on high-performance system design, sustainability, central plant optimization, and indoor air quality. His diverse experience and knowledge of building systems brings a valuable perspective to the firms integrated design approach.

“Our engineers focus on more than just the basics. Our aim is to seamlessly integrate high-performance systems into the design of our buildings.”

Education

Bachelor of Science, Mechanical Engineering
Syracuse University

Registration, Accreditations & Affiliations

Professional Engineer: AL, AK, FL, GA, MS, OH, TX
Certified Energy Manager
LEED Accredited Professional BD+C

Coral Pais, PE, BEMP

Senior Associate | Mechanical Engineer | Energy Master Planning Expert



Coral joined DLR Group in 2014 after completing her Masters thesis on Indoor Environmental Quality (IEQ) Evaluation in Schools through Post Occupancy Evaluation. Since then she has worked on a range of project types including Higher Education, Cultural, Federal, and Healthcare. Her areas of expertise include energy modeling, high performance design, and various certification programs including LEED, WELL, and RESET. She is adept with simulation software including Trane TRACE 700, IES-VE (load/energy/daylighting), and Sefaira. As a Building Energy Modeling Professional (BEMP) and member of the firm’s High Performance Design Team, Coral uses building performance simulation to help designers not only quantify energy savings but also inform decisions throughout the architectural design process.

“Holistic design doesn’t stop at architecture and engineering. Leading in environmental stewardship means recognizing the importance of the built environment globally and understanding how it interacts with the environment locally.”

Education

Master of Science, Building Performance & Diagnostics

Carnegie Mellon University

Bachelor of Science, Architectural Engineering

Illinois Institute of Technology

Registration, Accreditations & Affiliations

Professional Engineer: OH

Building Energy Modeling Professional (BEMP)

LEED Accredited Professional BD + C

RESET Accredited Professional

WELL Accredited Professional

International Building Performance Simulation Association (IMPISA)

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)

Sean Avery, PE, LEED AP

Principal | Electrical Engineering Leader | Solar Engineering Planning & Design Expert



Sean is an Electrical Engineer whose experience spans power, controls, and lighting design. He is involved in the design of energy-efficient systems to ensure user comfort, wellbeing, and effectiveness. He is an expert in early modeling and analysis to inform the development of effective passive design strategies. Sean is passionate about tackling complex lighting design challenges such as complicated control designs and projects with a focus on end-user performance and wellbeing. In recent years, he's grown his specific passions for lighting design and high-performance building design, with an emphasis in on-site renewable power generation. Sean shares his expertise as a speaker and a well-respected mentor.

“Integrated design is all about having a clear vision. If you define a singular goal then all involved parties can work together simultaneously through the duration of a project to achieve something incredible.”

Education

Master of Science,
Bachelor of Science, Electrical Engineering
- Power Systems
University of Washington

Registration, Accreditations & Affiliations

Professional Engineer: AK, AZ, CT, HI, ID,
MT, OR, WA, Virgin Islands
LEED Accredited Professional
National Council of Examiners for
Engineering & Survey
Illuminating Engineering Society of North
America
Institute of Electrical and Electronics
Engineers

John Weiskopf, PE, SE

Principal | Structural Engineering Leader



John is a talented structural engineer and has experience leading and collaborating with engineering teams nationwide to get to the best, most creative solution. As an award-winning professional with experience in multiple project types, John is committed to reducing dependency on fossil fuels and transforming our world to a better, more sustainable place. He is an advocate for integrated design which he defines as comprehensive, intelligent, and timely design with all stakeholders involved to produce the best possible design product. John brings his passion for long-term relationships and commitment to success to the table. Invested in the power of collaboration, John believes that the best ideas don't come from just one person, but from a cumulation of ideas from many people.

"I am passionate about my profession. Every day presents the opportunity to design and build something great.."

Education

Bachelor of Science, Civil Engineering
University of Missouri - Columbia

Associate Degree, Civil Engineering
Jefferson College

Registration, Accreditations & Affiliations

Professional Engineer: AR, FL, IA, IN, KS, KY, MA, MN, MO, NM, OH, OK, SD, TX, VA, WI, WY

Structural Engineer: AZ, CO, CT, DC, GA, HI, IL, MI, NC, NE, NJ, NV, NY, PA, SC, UT

American Concrete Institute

Structural Engineers Association

American Institute of Steel Construction

Society of American Military Engineers

Lindsey Perez, AIA, LEED Fellow

Principal | Global Sustainability Leader



Lindsey leads the firm’s sustainable design team and is an expert on LEED, Green Globes, WELL, Fitwel, and Architecture 2030 project planning and certification processes. A passionate advocate for integrated design, she works with design teams to incorporate sustainable strategies in every project. She is highly proficient at facilitating workshops and maintaining open lines of communication between all parties. Lindsey is one of approximately 250 LEED Fellows among over 200,000 LEED accredited professionals worldwide. An industry thought leader, she speaks regularly on sustainability, resilience, clean energy, and net zero energy planning for such organizations as AIA Orlando, USGBC Florida, ASHRAE, Greenbuild, and the Society of College and University Planners.

“At DLR Group, sustainability is more than just a word. It’s a belief that we can do better for ourselves, the community, and the planet by thinking holistically about sustainable actions - from ecological health and resource conservation to human and community health - balancing the needs of each.”

Education

**Master of Architecture,
Bachelor of Architecture**
University of Kansas

Registration, Accreditations & Affiliations

Architect: FL, KS
American Institute of Architects (AIA)
LEED Fellow BD + C

U.S. Green Building Council
Green Globe Professional
Fitwel Certification

Prem Sundharam, AIA LEED AP BD+C, WELL AP

Senior Principal | Applied Research Leader



Prem is an internationally recognized thought leader on sustainability and evidence-based design. As the firm's Applied Research Leader, he collaborates with design teams to develop long-term strategies for a more environmentally responsible design practice. He is also an integral part of the DLR Group R&D Studio, working to ensure that the outcomes and learnings of research initiatives are ultimately applied by integrated design teams in each client sector. Prem played an instrumental leadership role to ensure DLR Group was an early and notable signatory of The 2030 Commitment. As an architect with an engineering background, he is a passionate advocate for sustainability and the aims of Architecture 2030.

“Innovation is not invention. Innovation is very contextual and when a borrowed idea is applied, that continual improvement process evolves our understanding of the challenge, which then allows us to ask better questions.”

Education

Master of Architecture,
Iowa State University
Bachelor of Science, Civil Engineering
Bharathiar University - India

Registration, Accreditations & Affiliations

LEED Accredited Professional BD + C
WELL Accredited Professional
American Institute of Architects (AIA)
U.S. Green Building Council

Shona O’Dea, LEED AP BD+C, BEMP

Principal | High Performance Design Leader



Shona’s focus on efficiency and indoor environmental quality is an important component of DLR Group’s Performance Design team, supporting the firm’s pursuit of sustainable design and operation. Her primary goal is to challenge people to think differently about the way they design and operate buildings, advising teams from sustainable goal setting to efficient operations. She uses building simulation to help designers quantify energy savings and understand the interaction between building design, mechanical systems, and the environment.

“I envision a redefinition of sustainable design to a data-driven, scientific-centric process where building performance is verified.”

Education

Master of Science, Technology

Purdue University

Master of Science, Sustainability, Innovation, and Technology

Dublin Institute of Technology

Bachelor of Science, Building Services Engineering

Dublin Institute of Technology

Registration, Accreditations & Affiliations

Certified Passive House Consultant

Building Energy Modeling Professional (BEMP)

U.S. Green Building Council

LEED Accredited Professional BD+C

WELL Accredited Professional

RESET Accredited Professional

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)

Terry Wohlgenant, CIPE, BEMP

Senior Associate | High Performance Design Leader



Terry brings a distinct expertise to DLR Group's mechanical engineering team. As a designer with more than three decades experience, his project understanding spans every market sector. His experience ranges from small residential to industrial, including large residential, commercial office complexes, retail facilities, hotels, resorts, municipal and county/state facilities, correctional, institutional, educational, religious buildings and automobile dealerships. Terry's duties include systems selection, load calculations, equipment sizing and selection, fixture selection, layout and drafting of HVAC and plumbing systems, client contact, project coordination, specification writing, value engineering, job inspections of work in progress, and surveys of existing facilities. His computer program experience includes AutoCad, and load calculation programs including those from Trane, Carrier, and CHVAC.

“The best solutions come from a collaborative process, when there are no restrictions placed on the ideas that are presented and an open discussion is encouraged.”

Education

Associate of Arts
Phoenix Institute of Technology

Registration, Accreditations & Affiliations

Building Energy Modeling Professional (BEMP)
LEED Accredited Professional
American Society of Heating, Refrigerating, and
Air-Conditioning Engineers (ASHRAE)

Bret Henderson, CEM

Smart Building Analyst



As a smart building analyst, Bret makes a difference by creating healthier surroundings for people every day by creating energy efficiencies that affect both indoor and outdoor environments. Bret is experienced in detecting inadequacies in a building’s energy consumption and analyzing data to create more sustainable energy solutions.

With a focus on intelligent indoor air quality, he quantifies the makeup and status of a building’s air and creates insights as to how the building is being operated. This opens the door to a healthier indoor environment for clients ranging from schools to skyscrapers.

“In a world of rising energy demands, reducing building energy use is the tangible way that I make a difference towards a more sustainable environment.”

Education

Bachelor of Science, Mechanical Engineering
Rensselaer Polytechnic Institute

Registration, Accreditations & Affiliations

Certified Energy Manager (CEM)
Association of Energy Engineers

Shadi Sherafat, QCxP, CMVP, LEED AP BD + C

Senior Associate | Project Role | Commissioning Leader



Shadi is a retro-commissioning, commissioning, and energy optimization professional with 11 years of engineering work experience in the USA and Australia. Her wide range of experience in different work environments and cultures has given her a vision towards pragmatic comprehensive solutions. Her passion for sustainable engineering and operation has led her towards extensive involvement in different aspects of industry, from sustainable design and commissioning to energy optimization and CHP feasibility studies. She helps the DLR Group commissioning team in streamlining their work process to enhance commissioning and monitoring based commissioning procedures. She also does project management as the lead commissioning authority for different projects and sectors including Commercial, Higher K-12 Education, Hospitality, and Office buildings.

“We live most of the time of our lives inside the building I’m enthusiastic about how the buildings are designed and the way they are operating and impacting energy. My passion is to work towards elevating human experience in the built environment while saving our valuable resources.”

Education

Master of Environmental Studies,
University of Melbourne - Australia

Bachelor of Science, Mechanical Engineering
Monash University - Australia

Registration, Accreditations & Affiliations

LEED AP Building Design & Construction (BD + C)
Qualified Commissioning Process Provider (QCxP)
Certified Measurement and Verification Professional (CMVP)

SECTION

06



DLR Group Profile Information



WHO WE ARE

DLR Group is a global integrated design firm.

Our promise is to elevate the human experience through design. This inspires a culture of design and fuels the work we do around the world.

We are 100% employee-owned: every employee is literally invested in our clients' success. At the core of our firm are interdisciplinary employee-owner teams, engaged with all project life-cycle stakeholders. These teams champion true collaboration, open information sharing, shared risk and reward, value-based decision making, and proficient use of technology to elevate design.

Our clients experience this through our service model:

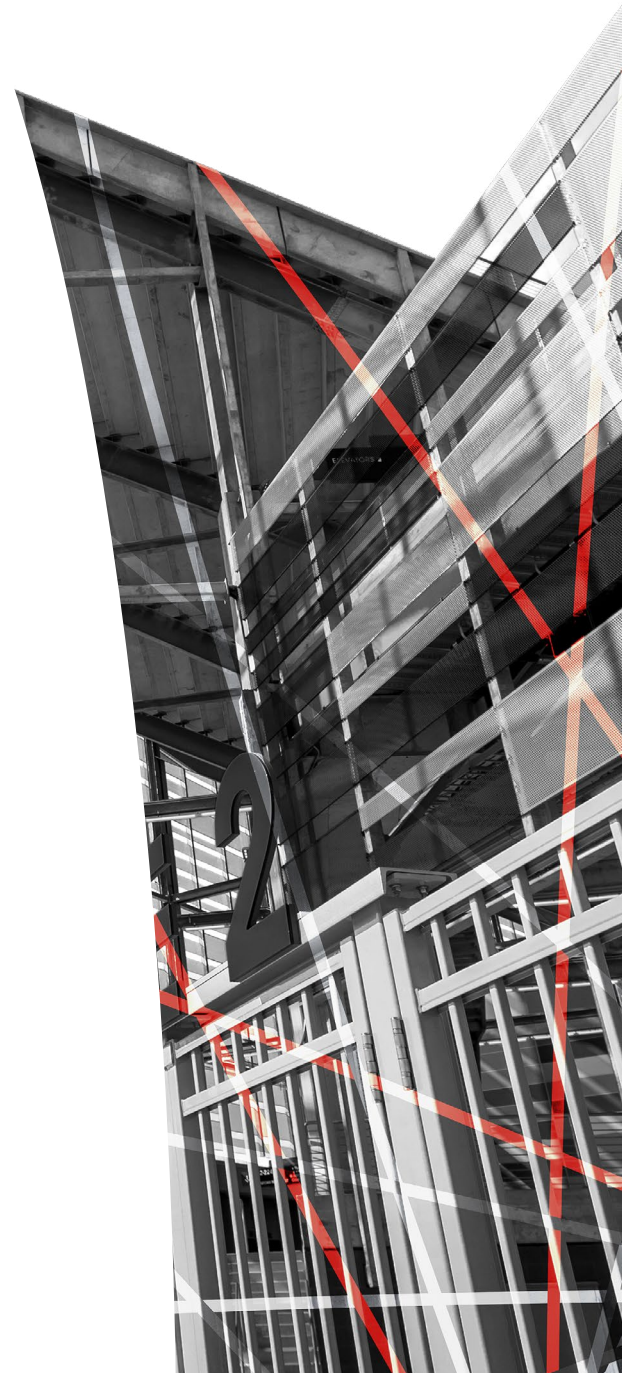
listen.DESIGN.deliver

1,300+
Reach 

Our integrated team is backed by the resources of the entire firm. This enables DLR Group to scale teams to meet your challenges and deliver specialized expertise to any location whenever and wherever it is needed. Distributed management means the best ideas can come from anywhere, and being 100 percent employee-owned fosters a culture of entrepreneurial innovation.

Locations

Austin	Las Vegas	Seattle
Charlotte	Lincoln	Sacramento
Chicago	Los Angeles	San Diego
Cleveland	Minneapolis	San Francisco
Colorado Springs	New York Omaha	Seattle
Columbus	Orlando	Tucson
Dallas	Phoenix	Washington, D.C.
Denver	Portland	Dubai
Des Moines	Riverside	Shanghai
Honolulu	Sacramento	
Houston	San Diego	
Kansas City	San Francisco	



SUSTAINABILITY LEADERSHIP

ENVIRONMENTAL STEWARDSHIP IS A CORE VALUE THAT BRINGS SUSTAINABLE DESIGN SOLUTIONS

DLR Group champions sustainability which is why environmental stewardship is one of our core values. DLR Group is an early adopter of the Architecture 2030 Challenge and an initial signatory of the AIA 2030 Commitment. Our AIA 2030 Commitment reporting consistently exceeds the industry average of reporting firms. In addition to our work toward the 2030 Challenge, we are a signatory of the AIA Materials Pledge which raises the bar of our impact on climate change by implementing full transparency and optimization of building materials we specify daily.

DLR Group was a driving force behind the signing of the China Accord in Shenyang, China in 2015. The China Accord champions the unprecedented opportunity available to China during the next 20 years to create healthy, resilient, and integrated regional infrastructure, cities, and buildings as models of economic and urban sustainability.

We encourage and support a variety of green building accreditations among our design professionals, with hundreds of employee-owners accredited in LEED, WELL, RESET, Green Globes, Fitwel, and International Living Futures Institute. Accomplishments in sustainable design include awards and recognitions from the AIA Committee on the Environment (COTE), over a million square feet of net-zero ready facilities, LEED certification of over 290 projects, and ongoing research and development programs to advance sustainable design solutions.

10 PLATINUM
72 GOLD
93 SILVER
32 CERTIFIED
87 PENDING



240+
LEED Projects



LEED Accredited
Professionals

280+

Integrated Team

Our engineers work as an integrated team with our architecture, interiors, and planning professionals. This allows an unparalleled level of collaboration and integration of all disciplines, bringing value to every phase of the design process.

Operations Focus

Our goal is the long term operating efficiency of high performance systems and energy optimization. Having operations experts ensures a quality deliverable and provides a seamless transition from design to final occupation.

Future Ready

We offer a full service approach to analyze, monitor, and improve performance, from building inception to the end of its useful life. Achieve control of your building's energy consumption and performance future.

Value-Based Design

We use performance modeling and life-cycle costing to make informed decisions early in the design process. Our proactive culture holistically balances project goals and budgets to ensure optimal results for you.

System Experts

We are fully staffed with employee-owners in all engineering disciplines: mechanical, electrical, plumbing, fire protection, structural and civil. With our experience and a holistic approach we design renewable solutions.



Exhibit A: Standard Terms & Conditions

Effective 8/1/2017

These Standard Terms & Conditions, together with fee proposal or letter agreement which incorporates them, constitutes the entire integrated agreement of the parties ("Agreement") and supersedes all prior negotiations, representations, or agreements, either written or oral. In the event of an inconsistency among the documents comprising this Agreement, these Standard Terms & Conditions shall control unless the other document specifically cites a paragraph of these Standard Terms & Conditions and expressly states that the other document is intended to control.

1. STANDARD OF CARE. Architect shall perform its services consistent with the professional skill and care ordinarily provided by firms providing similar services and practicing in a similar locality under similar circumstances (the "Standard of Care"). The Standard of Care applies to all services performed by Architect and shall not be deemed altered by any other provision of the Agreement.

2. TIME STANDARDS. Architect shall perform its services as expeditiously as is consistent with the Standard of Care and the orderly progress of the work.

3. APPLICABLE CODES. Architect shall identify, interpret and apply all applicable regulations, ordinances, codes and other laws in a manner consistent with the Standard of Care.

4. COORDINATION. Architect shall coordinate any services provided by the Client or Client's consultants with the services of the Architect in a manner consistent with the Standard of Care. Architect shall be entitled to rely on the accuracy and completeness of services and information furnished by the Client or Client's consultants. Client shall provide prompt written notice to Architect if Client becomes aware of any error or defect in the Architect's services.

5. WARRANTIES. The Standard of Care is the only performance standard applicable to services of the Architect. Notwithstanding any other provision of the Agreement to the contrary, no warranty, express or implied, is applicable the services provided by Architect.

6. INSURANCE. For the duration of this Agreement, Architect shall maintain, to the extent commercially feasible, the following types and limits of insurance:

Commercial General Liability: \$1 million/occurrence & \$2 million/aggregate
Automobile Liability: \$1 million combined single limit
Workers' Compensation: applicable state statutory limits
Employers Liability: \$1 million
Professional Liability: \$1million/claim & \$2 million aggregate

Architect shall provide certificates of insurance evidencing compliance and shall cause Client to be named an additional insured on policies other than Workers' Compensation and Professional Liability.

7. DESIGN CONTINGENCY RESERVE. Owner and Architect acknowledge that the Standard of Care is not perfection and that changes may be required as the result of errors or omissions in the plans and specifications. Owner shall establish a design contingency reserve in an amount equal to an agreed upon percentage of the construction contract sum THAT IS TO BE STATED IN THE FEE PROPOSAL OR LETTER AGREEMENT which shall be used to cover any expenses associated with respect to such changes. Owner shall make no claim against Architect with respect to changes within the design contingency reserve.

8. ADDITIONAL SERVICES. Except for services required due to the fault of Architect, additional services shall be calculated based on Architect's normal hourly rates and shall include an adjustment in the above noted schedule if appropriate.

9. PAYMENT. Invoices for Architect's services will be issued monthly. Payment is due one month after issuance. Past due invoices shall accrue interest at a rate of one percent per month. Any objections to Architect's invoices shall be stated in writing, identifying the basis for such objection with specificity, within fourteen days of issuance.

10. WITHHOLDING. Client shall not withhold amounts from the Architect's compensation to impose a penalty or liquidated damages on the Architect, or to offset sums requested by or paid to contractors for the cost of changes in the contactor's work unless Architect agrees or has been found liable for the amounts in a binding dispute resolution proceeding.

11. COPYRIGHT. Architect shall be deemed the author of its work product(s). Architect grants Client a nonexclusive license to use the Architect's work product(s) for purposes of constructing, using, maintaining, altering, and adding to the Project, provided Client substantially performs its obligations under this Agreement.

12. WAIVER OF CLAIMS COVERED BY PROPERTY INSURANCE. To the extent damages are covered by property insurance, the Client and Architect waive all rights against each other and against the contractors, consultants, agents, and employees of the other for such damages.

13. WAIVER OF CONSEQUENTIAL DAMAGES. The parties agree to mutually waive consequential damages for claims, disputes or other matters in question arising out of or relating to this Agreement.

14. INDEMNITY. Architect shall indemnify and hold the Client and the Client's officers and employees harmless from and against damages, losses and judgments arising from claims by third parties, including reimbursement of reasonable attorneys' fees and expenses recoverable under applicable law, but only to the extent caused by the negligent acts or omissions of the Architect and/or the subconsultants for which it is responsible. Architect's duty to indemnify shall not include the duty to defend the Client.

15. LIMITATION OF LIABILITY. ARCHITECT'S LIABILITY FOR TORT OR CONTRACT CLAIMS ARISING FROM OR RELATING TO THIS AGREEMENT SHALL NOT EXCEED THE LIMITATION OF LIABILITY AMOUNT THAT IS TO BE STATED IN THE FEE PROPOSAL OR LETTER AGREEMENT.

16. DISPUTE RESOLUTION. Disputes arising out of this Agreement shall be subject to a four-step dispute resolution procedure, each step being a condition precedent to the next. First, direct negotiations between the representatives of Client and Architect having day to day responsibility. Second, direct negotiations between senior management representatives. Third, non-binding mediation in accordance with the Construction Industry Rules of the American Arbitration Association. Fourth, litigation in a state or federal court of competent jurisdiction. This Agreement shall be governed by the law of the place where the Project is located. EACH PARTY HEREBY WAIVES THE RIGHT TO TRIAL BY JURY FOR ANY CLAIM ARISING FROM OR RELATING TO THIS AGREEMENT.

17. TERMINATION. Either party may terminate this Agreement for convenience upon seven days' written notice to the other party.

18. FORCE MAJEURE. Architect is not responsible for damages arising directly or indirectly from any delays for causes beyond the Architect's control.

19. ASSIGNMENT. No party may assign this Agreement without the express written consent of the other.

20. CERTIFICATES. Architect shall accommodate Client's reasonable requests for certificates pertaining to the work, but shall not be required to execute certificates that require knowledge, services, or responsibilities beyond the scope of the Agreement.

21. NO THIRD-PARTY BENEFICIARIES. Nothing contained in the Agreement shall create a contractual relationship with, or a cause of action in favor of, a third-party against either Client or Architect.

22. SEVERABILITY. If one or more of the provisions of this Agreement are found to be invalid or unenforceable, then such provisions shall be severed to the extent of such invalidity or unenforceability and the balance of the Agreement shall remain valid and enforceable. Further, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term.