



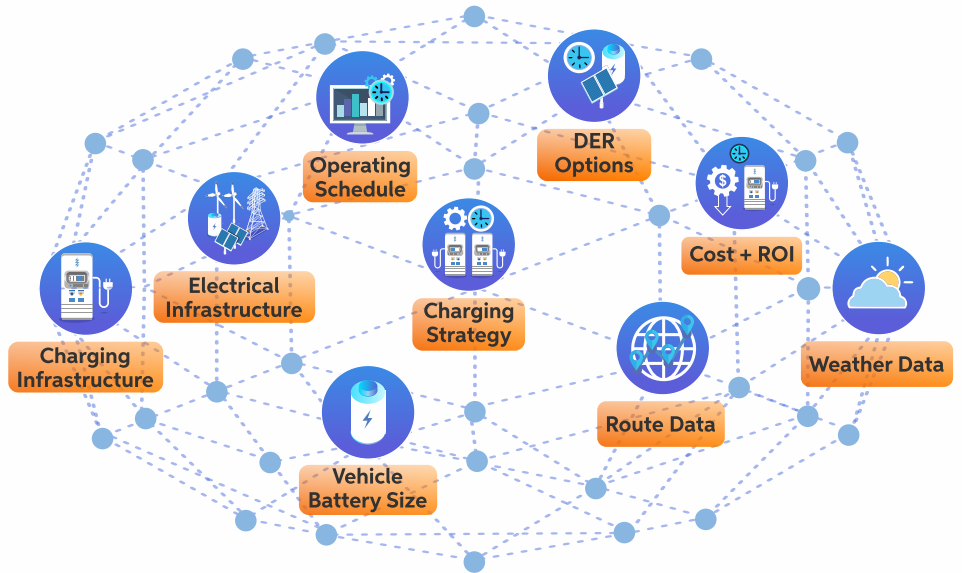
YOUR FLEET ELECTRIFICATION PARTNER

Welcome to
Microgrid Labs Inc.,
a technology and
consulting company
specializing in fleet
electrification and
microgrids

www.myevopt.com
www.microgridlabs.com

CHALLENGES IN FLEET ELECTRIFICATION

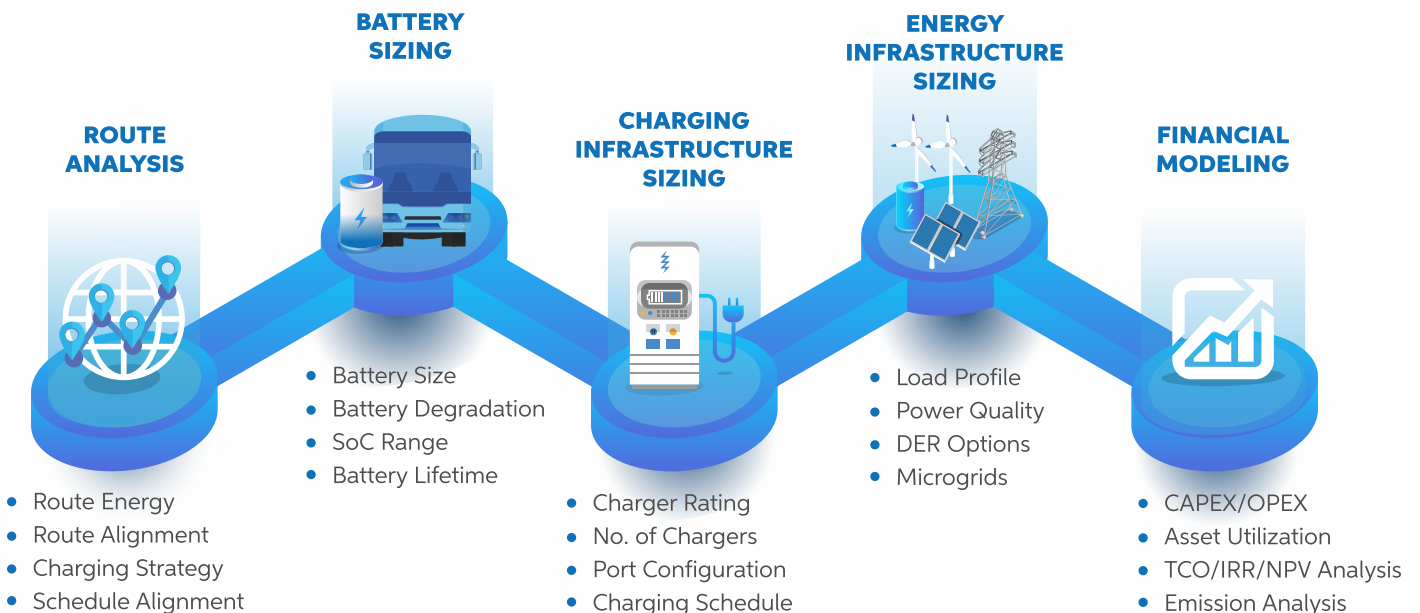
- Planning is the first crucial step and will have the highest impact on system performance
- Fleet electrification planning is complex and time consuming
- The multi-faceted nature of the problem and the interdependence of variables make these projects difficult to plan



Fleet Electrification Complexity

MODEL BASED SYSTEM DESIGN

- Compiling and sifting through the challenges of fleet electrification projects
- System level optimization to size individual components and validate the design through end-to-end simulations
- Microgrid Lab's proprietary fleet electrification software EVOPT allows you to model and run simulations for your electric fleet

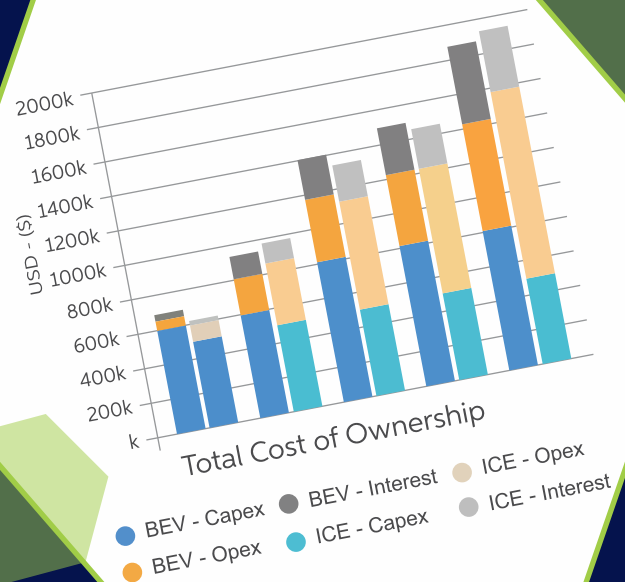


OUR SERVICES

FEASIBILITY ANALYSIS

Identify routes best fit for electrification and evaluate the technical and financial feasibility based on Total Cost of Ownership (TCO)

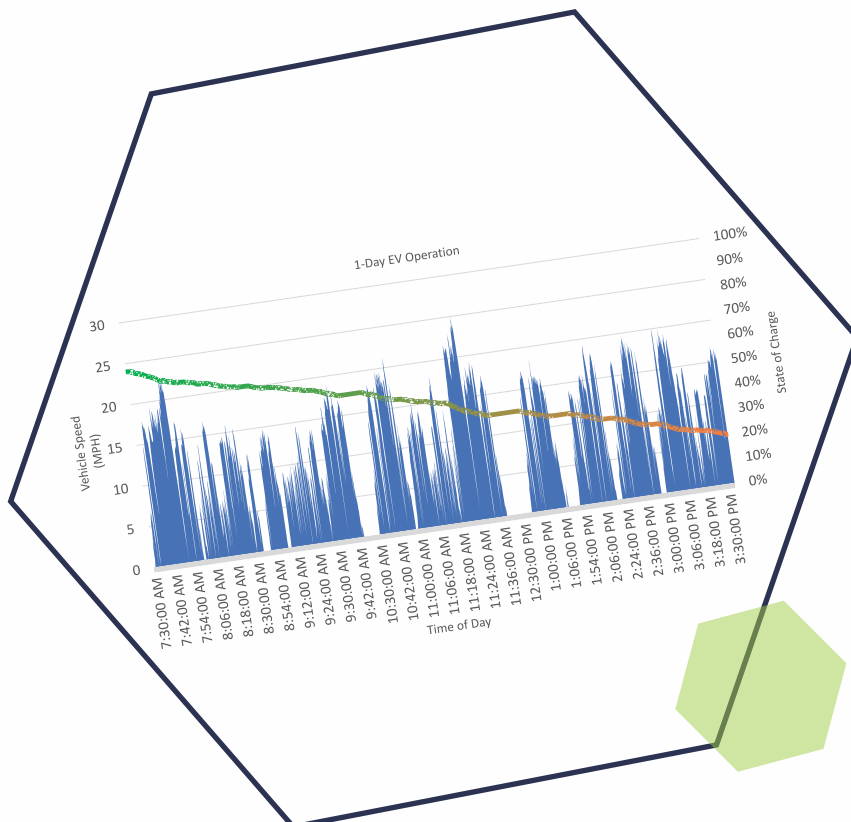
- Route Energy Analysis
- Vehicle/Battery Options
- Charger Sizing
- Load Profile Generation
- Financial Analysis – TCO



PRELIMINARY PLANNING

Preliminary sizing of the system for preparing budgets, grant applications, and initial discussions

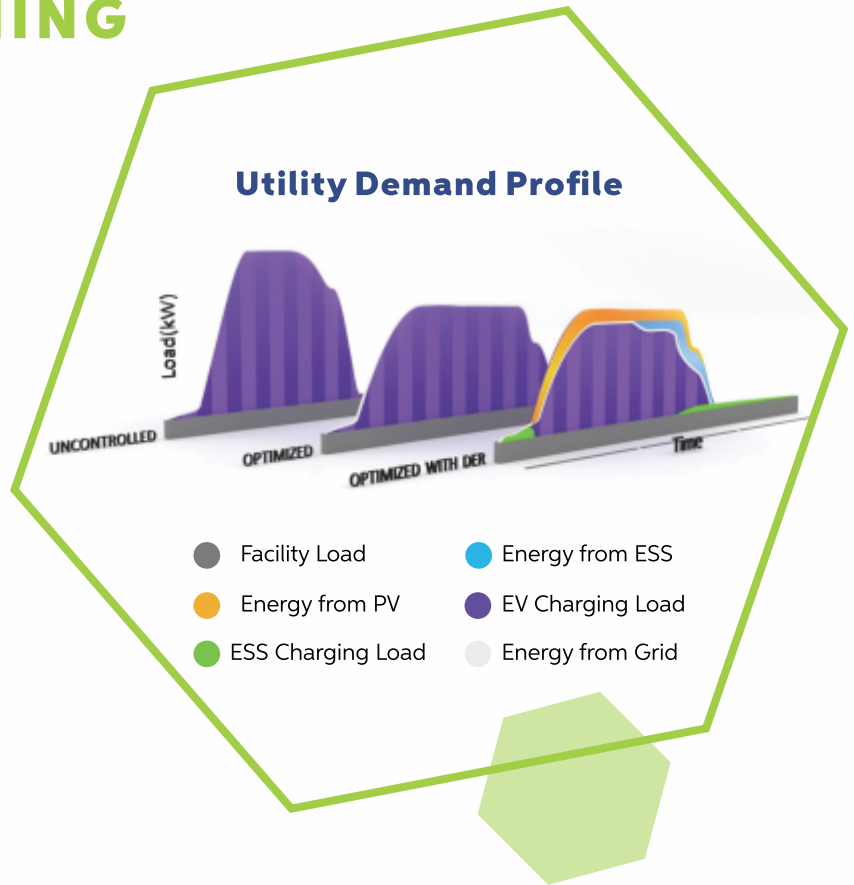
- Feasibility Analysis
- Custom Duty Cycle Analysis
- Range Validation
- Financial Analysis –TCO/NPV/IRR
- What-if Analysis
- Conceptual Design



DETAILED PLANNING

Detailed planning of the system and sizing of the components for procurement and utility interconnection

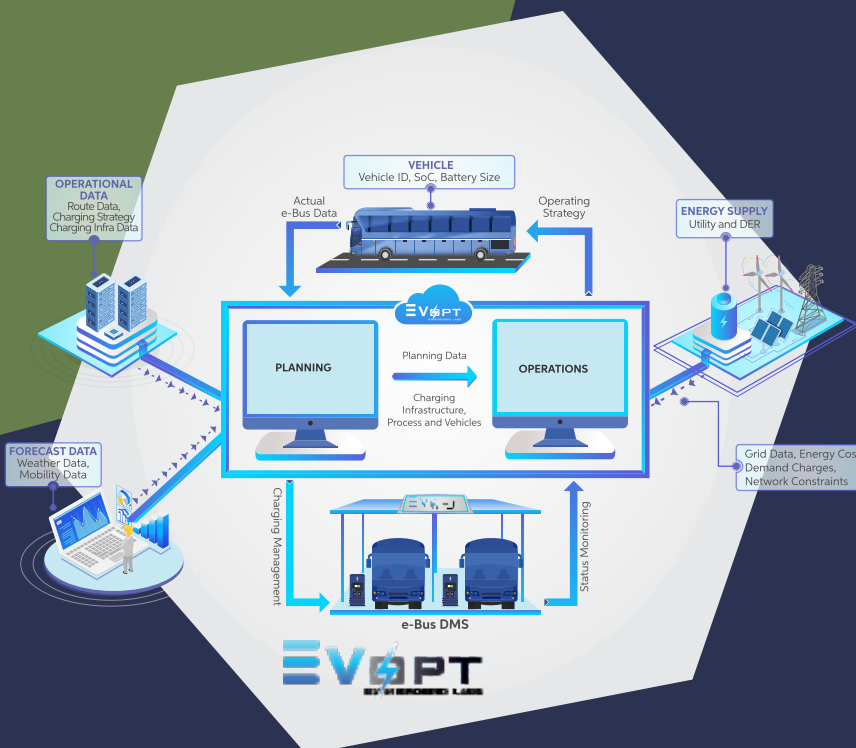
- Preliminary Planning
- Charging Strategy Development
- Managed and Smart Charging
- System Optimization
- DER and Microgrid
- Power Quality Analysis



IMPLEMENTATION SUPPORT

Provide technical support for project implementation and complete additional analysis as needed

- Validate Detailed Planning
- Develop and Refine Component Sizing
- Interface with Suppliers/Utility
- Model Selection for Vehicles and Chargers
- Selection of Charge Management System
- Risk Analysis



OUR EXPERTISE

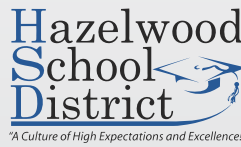
- Extensive mathematical *modeling, simulation, and optimization* experience in fleet electrification and microgrid systems
- System level approach covering fleet operations, vehicle parameters, charging infrastructure and energy infrastructure
- Research partnerships with leading Universities and National Labs. Supported by the National Science Foundation

OUR EXPERIENCE



**Massachusetts Bay
Transportation Authority**

Modeling, Simulation
and Optimization for
100+ transit bus fleet



"A Culture of High Expectations and Excellence!"

Detailed transition
planning for 100+
school bus fleet



Integrated fleet
electrification and
Microgrid planning



Transition planning of 50 commercial fleets



and many more...

OUR RESEARCH PARTNERS





VALUE PROPOSITION



Minimize Cost



Guarantee Operations



Mitigate Risks

OUR LOCATIONS

Colorado

1200 Pearl Street, Suite 314,
Boulder, CO 80302 USA

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North Carolina

Durham, NC 27709 USA

California

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GLOBAL PRESENCE

India (New Delhi)

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