

AGREEMENT FOR ELECTRIC VEHICLE FLEET STUDY
Between the Madison Gas and Electric Company and the City of Madison
For the Madison Water Utility Fleet

This Agreement for Electric Vehicle (EV) Fleet Study (the “Agreement”) is entered into and effective as of the last date of execution on the signature page hereto (“Effective Date”) by and between Madison Gas and Electric Company, a Wisconsin corporation (“MGE”), and the City of Madison, a Wisconsin municipality (“Customer” or “City”) (individually, “Party,” and collectively, “Parties”).

RECITALS

- A. Sawatch Inc. (“Sawatch”) is a company that provides data-driven EV analytics to recommend optimized EV fleet changes.
- B. The Madison Water Utility is a municipal utility owned by the City which maintains its own fleet of vehicles and could benefit from an EV analysis of its fleet.
- C. MGE wishes to fund a study (the “Study”) by Sawatch that will provide information, analysis, and data-driven recommendations to help the Madison Water Utility make informed decisions on a potential switch from internal combustion engine vehicles to EVs, consistent with the May 3, 2021 Proposal for Madison Water Utility (the “Proposal”), which is attached hereto and incorporated herein as Attachment A.
- D. Customer is in agreement with the work set forth by Sawatch in the Proposal and wishes to participate in the MGE funded Study, in accordance with the terms and conditions set forth herein.

AGREEMENT

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Customer and MGE agree as follows:

- 1. **Recitals.** The recitals are incorporated herein and made a part of this Agreement.
- 2. **MGE Payment for Study.** In exchange for Customer’s agreement to comply with the terms of this Agreement, MGE shall directly pay Sawatch for the cost of the Study as described in the Proposal. MGE has sole discretion over the scope of the Study and will ensure that Sawatch complies with its Data Security Standards (the “Security Standards”), which are attached hereto and incorporated herein as Attachment B. If Customer wishes to receive services from Sawatch that go beyond the scope agreed to by MGE in the Proposal, Customer will pay for the cost of those services, and they will be subject to a separate agreement between Customer and Sawatch.
- 3. **Customer Cooperation.** Customer shall provide Sawatch with the data Sawatch needs in order to conduct its Study, as outlined in the Proposal. Customer agrees that it will

cooperate in good faith with Swatch, MGE, and their employees, agents, and consultants with regard to the Study.

4. **Access to Data.** Customer agrees that Sawatch may provide to MGE, and MGE has a right to access or receive: (a) any data Customer provides to Sawatch pursuant to the Study, and (b) any data, reports, portals, or analyses that Sawatch makes available to Customer. Customer agrees that MGE may disclose the existence of the Study and Study results with other MGE customers and in informative and commercial communications. It is Customer's and MGE's understanding that the data provided to Sawatch will not include any personally identifiable information, data which would otherwise be subject to certain protections. If any personally identifiable information is included in the data provided to Sawatch, the Parties will work with Sawatch to ensure that the use and release of this information is consistent with State law.

5. **Limitation of Liability.** Customer expressly agrees that in no event shall MGE be liable to Customer, regardless of legal theory alleged, for any special, direct, indirect, incidental, remote, consequential, exemplary or punitive damages, including but not limited to, damages for loss of profits, goodwill use, data or other intangible losses (even if MGE has been advised of the possibility of such damages) arising out of or in any manner connected with the Study.

To the maximum extent allowed by law, Customer agrees to, and hereby does, release MGE from all loss, damage, or injury whatsoever, known or unknown, arising out of or in any manner connected with the Study.

6. **Disclaimer.** The study is provided to Customer on an as-is basis. Customer's use of the study results is at Customer's own risk. MGE expressly disclaims all warranties of any kind, whether express or implied, including, but not limited to implied warranties of merchantability, fitness for a particular purpose, and non-infringement. Further, MGE makes no warranty that the study or its results will meet the vehicle owner's requirements or expectations or that study recommendations or predictions will go as planned.

7. **Term/Termination.** The term of this Agreement shall be for one (1) year ("Term"). This Agreement shall terminate upon the earliest to occur of the following: (a) the expiration of the Term, (b) by mutual agreement of MGE and Customer, (c) upon MGE's election to terminate this Agreement for safety reasons or by order of any regulatory body, (d) upon Customer's election to terminate this Agreement, following default by MGE under this Agreement or failure of Sawatch to provide the services as specified in the Proposal or abide by the Security Standards, or (e) upon MGE's election to terminate this Agreement following default by Customer under this Agreement.

8. **Amendment.** This Agreement shall not be amended without the prior written consent of MGE and Customer.

9. **Assignment of Agreement.** Customer may not sell or assign all or any part of its interest in this Agreement without MGE's prior written consent.

10. **Notices.** All notices required under this Agreement shall be in writing and shall be delivered as follows:

Notices for MGE shall be delivered to:

Debbie Branson
Madison Gas and Electric Company
PO Box 1231
Madison WI 53701-1231
Fax: (608) 252-4734

Notices for Customer shall be delivered to:

Krishna Kumar
Water Utility General Manager
119 East Olin Ave.
Madison, WI 53713
Fax: (608) 266-4426

Notices shall be deemed delivered upon receipt if sent by facsimile or personally delivered and shall be deemed delivered two (2) business days after delivery into the United States first-class mail, postage prepaid, addressed to the other Party.

11. **No Partnership.** None of the terms and provisions of this Agreement shall be deemed to create a partnership between MGE and Customer in their respective businesses or otherwise, nor shall any terms or provisions of this Agreement cause MGE or Customer to be considered joint venturers or members of any joint enterprise.
12. **Non-Discrimination.** In the performance of the services under this Agreement, MGE agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, handicap, national origin, or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs, or student status. MGE further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity, or national origin.
13. **Entire Agreement.** This Agreement contains the entire agreement between MGE and Customer with respect to the subject matter of this Agreement and supersedes all previous negotiations, agreements, or understandings, whether written or oral. This Agreement is binding on each Party's permitted successors and assigns.
14. **Counterparts and Electronic Signatures.** This Agreement may be executed in multiple counterparts, each of which shall be deemed to be an original for all purposes. The signature of a Party transmitted by fax or email, or the electronic signature of a Party in a

mutually agreed format, shall be considered an original signature for purposes of this Agreement.

15. **Non-Waiver.** The failure of MGE to insist upon or enforce in any instance strict performance by Customer of any of the terms of this Agreement or to exercise any rights herein conferred shall not be construed as a waiver or relinquishment to any extent of its rights to assert or rely upon any such terms or rights on any future occasion.
16. **Survival.** The terms and conditions of this Agreement which by their nature require performance by either Party after the termination of the Agreement including, but not limited to, limitations of liability, indemnification provisions, governing law, and any other provisions or partial provisions which by their nature would reasonably extend beyond termination of the Agreement shall be and remain enforceable after such termination or expiration of the Agreement for any reason whatsoever.
17. **Governing Law and Venue.** Interpretation and enforcement of this Agreement shall be in accordance with the laws of the State of Wisconsin. The Parties agree that the proper and exclusive venue to resolve any dispute arising out of or in any way related to this Agreement shall be the Circuit Court for Dane County, Wisconsin. The Parties agree to submit to the jurisdiction of the courts of the State of Wisconsin with regard to any litigation resulting from such dispute and waive any objection to such jurisdiction.

IN WITNESS WHEREOF, the Parties hereto execute and enact this Agreement as of the date the two Parties have executed this Agreement.

MADISON GAS AND ELECTRIC COMPANY

Date

By: _____

Name: Deborah L. Branson

Title: Manager Electrification

CITY OF MADISON

Satya Rhodes-Conway, Mayor

Date

Maribeth Witzel-Behl, City Clerk

Date

Countersigned:

David P. Schmiedicke, Finance Director

Date

Approved as to form:

Michael Haas, City Attorney

Date

Execution of this Agreement by the City was authorized by Resolution Enactment No. RES-__ - ____, ID No. _____, adopted by the Common Council of the City of Madison on _____, 20 ____.

Attachment A
Proposal for Madison Water Utility



May 3, 2021

Debbie Branson
Manager Electrification
Madison Gas & Electric

RE: Proposal for Madison Water Utility

Dear Ms. Branson:

Sawatch, Inc. (d.b.a. Sawatch Labs) is pleased to have the opportunity to submit a proposal to Madison Gas & Electric (MGE) for an Electric Vehicle (EV) Suitability Assessment for Madison Water Utility (MWU). The project includes in depth analysis and consultation designed to provide Utility, Fleet, Sustainability, Infrastructure and Procurement stakeholders data to identify make informed decisions.

Sawatch Labs is the most trusted provider of detailed, data-driven EV analytics. We use actual vehicle use data to report and advise on operational and economic metrics. We have had the opportunity to work with entities of all sizes across 25+ states and have included a selection of our projects in the qualifications section of the attached proposal. We appreciate your consideration and invite the opportunity to provide clarification or answer any questions you may have about our offering.

Sincerely,

Mary Till
Director of Business Development
720-468-3550
till@sawatchlabs.com

sawatchlabs.com
info@sawatchlabs.com
Tel: 303-578-2465
Denver, Colorado | Petaluma, California



Electric Vehicle Suitability Assessment and Infrastructure Planning

Sawatch Labs' Electric Vehicle Suitability Assessment (ezEV) provides internal combustion engine fleets with specific recommendations for which vehicles are good candidates for replacement with an EV. This is determined based on an economics comparison and, perhaps more importantly, by analyzing the operational impacts of daily driving behavior for each vehicle. Our Infrastructure Optimization application (ezIO) is the companion product to ezEV and provides total estimated energy demands per location. The results provide decision makers with a vehicle-specific Total Cost of Operation (TCO) comparison, estimated charging infrastructure needs, and metrics on the environmental benefits.

1. Process and Timeline

The EVSA requires a minimum of 90 days of telematics data for each vehicle. The Utility has existing telematics data and so we can pull up to 12 months of data for analysis at no additional cost to the project. As such, this timeline is based on when that data collection would be complete.

Prompted by the special circumstances of a global pandemic, Sawatch Labs is offering to conduct up to three scenarios of our analysis without additional cost to the project. Sawatch Labs will provide separate, standard ezEV & ezIO deliverables set for each scenario analysis for the Utility to review, compare, and make electrification decisions. Scenarios may include variance in the observation periods (historic and future data-sets), gas prices or vehicle lifetimes, EV models, etc.

Once a contract is finalized, Sawatch Labs will work with the MGE and the Utility to finalize the list of vehicles for which the data will be analyzed. In most cases the data can be programmatically gathered. In this case Sawatch Labs would request that the Utility create a user in their telematics dashboard.

2. Deliverables

Sawatch Labs will provide a summary report of the ezEV Suitability Assessment for the fleet. The ezEV Suitability Assessment will include ezEV results for each individual vehicle and by agency (including EV suitability scores and infrastructure needs). Additionally, a 1-page summary will be provided for each vehicle providing information on the observed driving, estimated energy use, EV recommendation, charging infrastructure needed, estimated cost to charge the vehicle, estimated annual and lifetime savings, and estimated GHG emissions reductions. A sample of the 1-page vehicle summary is provided in Appendix A.

Table 1. ezEV and ezIO Deliverables and Projected Timeline

Task	Deliverable	Schedule	Participants
T1. Kickoff webinar meeting with MWU staff ¹	D1. Webinar	TBD based on MWU's preference	SL, MGE, MWU
T2. Data Acquisition ²	N/A	TBD based on MWU's preference	SL, MWU
T3. Initial training of ezEV and ezIO applications (optional)	D3. Webinar training	2 weeks after Task 3	SL, MGE, MWU
T4. ezEV Suitability Assessment & EVSE Site Map Analysis Conducted	<p>D4a. ezEV scores and summary data for each vehicle made available in a secure online dashboard</p> <p>D4b. 1-page PDF vehicle summary provided for each vehicle</p> <p>D4c. Fleet summary data table (.csv) and Report (.pdf)</p> <p>D4d. ezIO Interactive EVSE site map analysis & data table (.csv)</p> <p>D4e. Vehicle & fleet-wide anticipated charging needs</p> <p>D4f. ezEV Suitability Assessment completed</p>	<p>6- 8 weeks after completion of Task 2</p> <p>6- 8 weeks after completion of Task 2</p> <p>6- 8 weeks after completion of Task 2</p> <p>6- 8 weeks after completion of Task 2</p> <p>6- 8 weeks after completion of Task 2</p> <p>6- 8 weeks after completion of Task 2</p>	
T5. Presentation of Results ¹	D5a. Presentation of results via webinar ¹	Based on the MWU's preference but no sooner than completion of Task 4.	SL, MGE, MWU
<p>¹<i>It is anticipated that the kickoff and results meetings will occur via webinar. If MWU or MGE would prefer for these meetings to be in person, we are happy to discuss that option in more detail.</i></p>			



Task	Deliverable	Schedule	Participants
² Because MWU has ongoing telematics data collection we can use either future collected or historic data sets for the “current operations” observation period. As such, the timeline may vary based on the requested observation period.			

3. Approach and Methodology

Sawatch Labs developed the ezEV analytics platform to determine how an EV would perform following the same drive cycles and driving patterns of an existing vehicle. This allows you to see how an EV would have performed had it driven the same trips that your vehicle drove over the period of observation, providing a clear understanding of whether or not an EV would be successful in the same use case. The analysis uses telematics data and requires a minimum of 90 days of data for each vehicle to ensure that the observed driving is representative of each vehicles’ driving patterns.

The ezEV fleet assessment scores each vehicle based on its suitability to be replaced with an EV using tens of thousands of data points contributing to 170 different attributes for each vehicle. The overall ezEV Score is a composite score that incorporates energy use, economics, overnight parking (time and location consistency), and confidence that the data collected is a representative sample of overall vehicle activity. The energy score assesses the frequency of which all driving completed by the vehicle on each day analyzed could be completed by the recommended EV with a fully charged battery. For example, an energy score of 93 indicates that on 7% of the days analyzed, the vehicle consumed more energy than would be provided with a fully charged battery and would, therefore, need to charge during the day. The economics score assesses the financial impact of replacing the vehicle with an EV in this procurement cycle, including purchase and operational costs and savings. Financial incentives are not included in this analysis because the availability varies.

Each metric is based on a score of 0–100. The higher the overall ezEV score, the better suited a vehicle is for replacement with an EV. Lower scores do not necessarily indicate that an EV would not work in a particular application or duty cycle. Instead, lower scores suggest that modifying driving habits, reserving internal combustion engine (ICE) vehicles for long distance driving and/or identifying midday charging opportunities may be necessary for an EV to meet the current demands on that vehicle. A sample of a vehicle summary is provided in Figure 1. This would be available for all vehicles included in the ezEV Suitability Assessment directly in the Utility’s secure online dashboard. The metrics will also be provided for the entire fleet in a sortable table (an example of the sustainability metrics table is provided in Figure 1).

Figure 1. ezEV All Metrics Summary Table

Home

EVSA | All metrics

All Metrics

Annual projected figures based on tracked period
Click on a header to sort by that metric. Click on a vehicle to see specifics for that vehicle

Year	Make	Model	Recommendation	Annual Est. VMT	Overall Score	Economics Score	Operational Savings (Lifetime)	TCO Change (Lifetime)
2016	HONDA	Civic	No Change	35,790	71	106	More than \$21,000	More than \$21,000
2014	TOYOTA	Venza	2019 Kia Soul BEV	13,710	92	101	\$12,000-15,000	\$6,000-9,000
2013	HONDA	Pilot	2019 Kia Soul BEV	10,780	95	100	\$9,000-12,000	\$3,000-6,000
2012	JEEP	Grand Cherokee	2019 Kia Soul BEV	7,530	91	92	\$6,000-9,000	Cost parity
2010	TOYOTA	PRIUS	Optimization Candidate	3,930	91	83	\$3,000-6,000	Cost parity
2013	CHEVROLET	Volt	Optimization Candidate	470	90	71	Cost parity	-\$6,000-9,000

Download


Figure 2. ezEV Single Vehicle Assessment

ezEV Suitability Assessment | 2013 Honda Pilot (Vehicle 3)

Back Table

Recommended Replacement:
2019 Kia Soul BEV

Select Vehicle To Compare:
2019 Chevrolet Bolt



Vehicle: 2013 Honda Pilot

Period of observation: Jan. 21, 2019 - Jul. 14, 2019

Vehicle ID: Vehicle 3

VIN: 5FNYP4H54DB005086

The daily activity of this 2013 Honda Pilot would require an average of 9 kWh per day. Based on the observed driving, midday charging would be needed approximately once per month.

96

Overall

100

Confidence

96

Energy

100

Economics

92

Parking

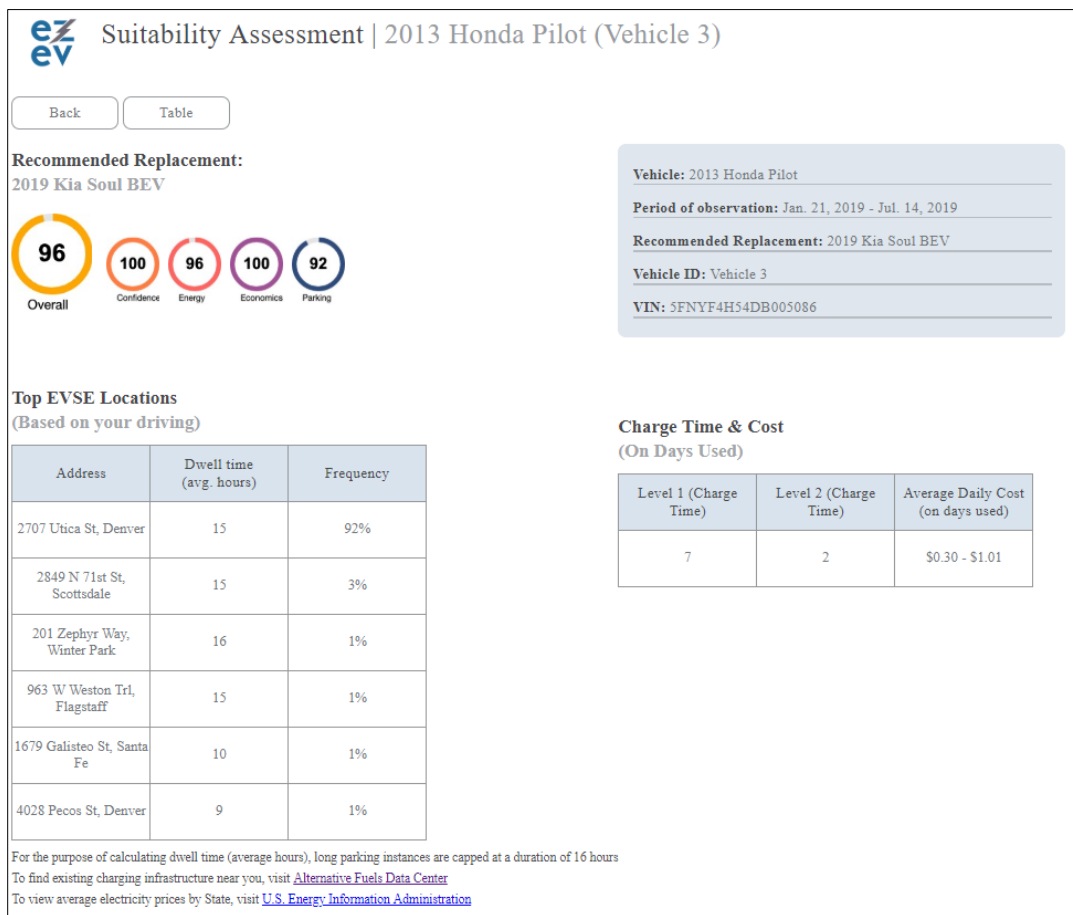
Estimated Operational Metrics in a 2019 Kia Soul BEV
These metrics estimate what the usage numbers would be if the miles driven by your 2013 Honda Pilot had been driven in an EV

VMT	GHG Reduction	Operational Savings*	TCO Change* (Lifetime)	TCO Change** (%)
10,500	51%	\$12,000-15,000	\$6,000-9,000	12%

* Total Cost of Ownership (TCO) Change and Operational Savings reflect the financial savings over the lifetime of the vehicle.

For each vehicle that is identified as a good candidate for replacement with an EV, Sawatch Labs will provide the specific EV model recommended to replace the existing vehicle. See Figure 2. ezEV Single Vehicle Assessment. Data will be provided on the estimated financial and environmental impact of replacing the vehicle with the specific EV. ezEV is a dynamic application that allows users to toggle through all available EV models to understand impacts of choosing a vehicle other than the recommendation. All EV models available to the client fleet will be added to the analysis.

Figure 3. Sample ezEV Charging Infrastructure Analysis



Additionally, each vehicles' overnight parking patterns will be assessed to identify optimal locations to install EV charging infrastructure to support that vehicle. The amount of time that a vehicle parks overnight and the hours needed to fully charge based on driving will also be provided to determine the level of charging infrastructure required for each vehicle. See Figure 3. Sample ezEV Charging Infrastructure Analysis an example of this output.

This per-vehicle parking analysis will then be aggregated using our Infrastructure Optimization (ezIO) application. ezIO provides insight into where, when, and for how long you can expect vehicles to charge based on their actual daily operations and where they park when off duty. This provides powerful insight into what

you can expect for your charging peak demand at each parking location, allowing you to determine when and where managed charging solutions will be integral. We believe our EVSE planning tool is superior due to our granular analysis of charging needs per day, not per trip and not averaged across months/years. We use this duty cycle analysis, layering the daily charging needs for each vehicle at this location, to identify the daily charging demand curve in 15-minute intervals at each location (see **Figure 5**). From there, our tool allows users to see how changing the fleet electrification percentage will impact the daily charging demand at each location.

Not only does this information help fleet and facility managers plan for EVSE infrastructure buildout for the near- and long-term, but it also allows the utility to understand the increasing demand at each location to proactively identify areas where the existing services may be insufficient to meet a quickly growing demand.

The application will highlight the months and days with greatest demand per location so fleets can:

- Plan charging infrastructure based on charging needs
- Predict when charging will coincide with a facility’s existing peak demand and plan strategies to mitigate an overall increase in facility peak demand
- Identify opportunities to charge efficiently and economically by implementing smart charging programs and policies

Figure 4. Example ezIO Projected Monthly Peak Demand

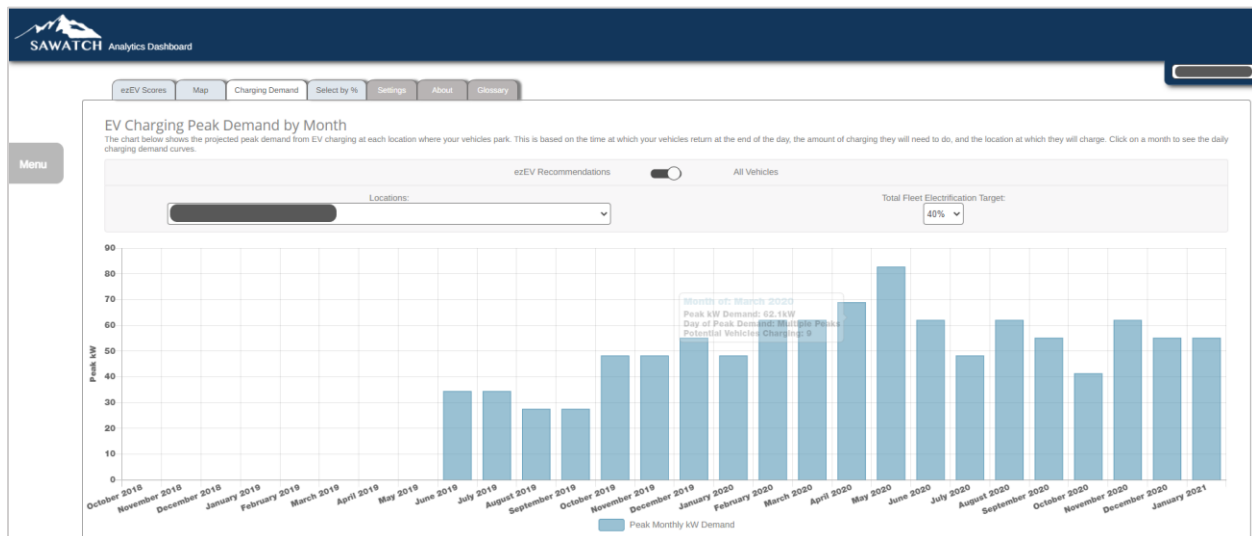
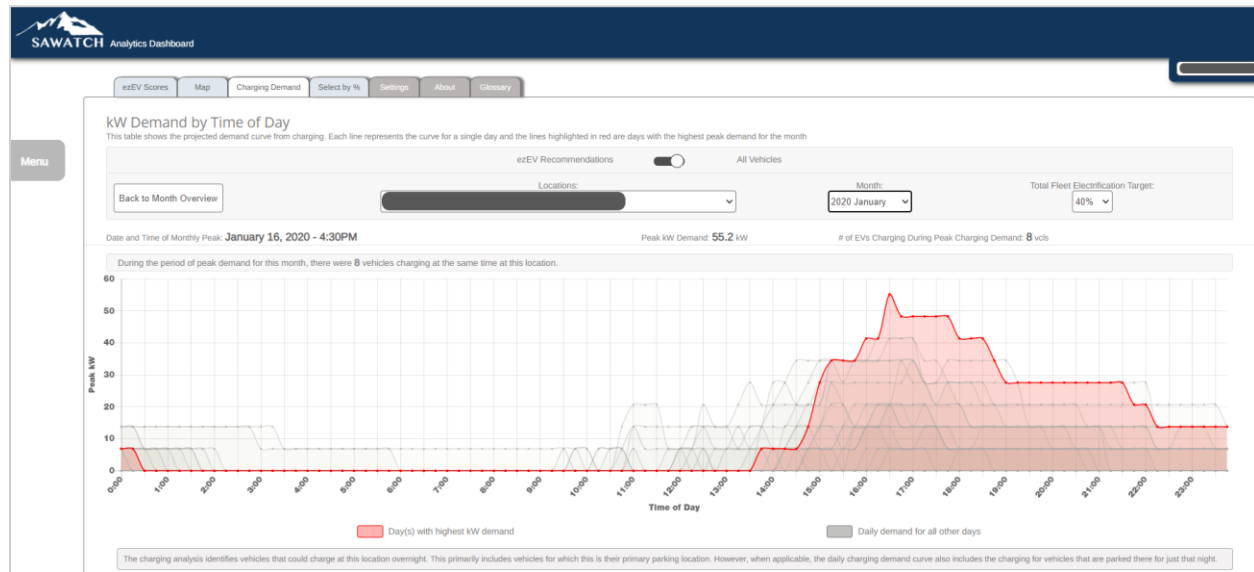


Figure 5. Example ezIO Daily Demand Per Month



4. Qualifications

Sawatch Labs is uniquely suited to complete an EVSA for the Utility and do so in a timely manner. We are industry leaders in EV analytics and our domain expertise in telematics data and fleet analytics is unrivaled. Sawatch staff have extensive experience working with fleets to establish data-driven approaches to EV adoption and management. Moreover, Sawatch staff also have significant institutional knowledge regarding government fleets, having supported multiple municipal, county, state, and federal fleets by conducting EVSAs and supporting the development of data-driven ZEV adoption plans. To date, we have worked with fleets in 24 states and analyzed more than 100 million miles of data and 2.6 million trips (a partial list of clients is included below). Additionally, our staff brings 10 years of past experience working with utilities and clean energy, allowing us to not only speak the language of fleets but also to understand the potential impacts that this new electricity demand may have for organizations.

Sawatch Labs has developed multiple web-based platforms to support EV adoption and optimization in fleet applications. Our ezEV Analytics platform uses telematics data to show how an EV would have performed had it driven the same trips that your vehicle drove over the period of observation, providing a clear understanding of whether or not an EV would be successful in the same use case. The ionEV platform is designed to measure, analyze and report EV use to maximize total electric miles and, therefore, environmental and financial benefits. Fundamental to both the above-mentioned platforms is our energy modeling algorithm that has been refined with real-world testing and many project applications.

Leveraging telematics data in particular is the most timely and cost effective way to complete this analysis. Using existing data, Sawatch can provide near real-time data on EV operations in an easy to use online dashboard. Furthermore, because Sawatch is a software development and engineering firm we can quickly and easily customize dashboards, features and results for specific projects.



5. References

Xcel Energy Fleet Electrification Advisory Program

Client Name and Organization:

Stacey Simms, PMP

Senior Portfolio Manager, Fleet Electrification Advisory Services, Electric Vehicle Initiative

Xcel Energy

stacey.l.simms@xcelenergy.com

303-859-4575

Status: In Progress

Description: Sawatch Labs has teamed up with Xcel Energy to help fleet operators assess individual vehicles to determine if a vehicle's driving needs could be met with an electric vehicle (EV). The project aims to support the development of fleet electrification plans, assess charging site suitability and estimate the cost of infrastructure installation. This low- or no-cost program is available to fleets that reside in the Xcel territory of Colorado and Minnesota.

EV WATTS

Client Name and Organization:

Ewan Pritchard, PE, PhD

Subject Matter Expert, Sustainable Transportation, Energetics

EGPritchard@energetics.com

919-819-0098

Status: In Progress

Description: Sawatch Labs has partnered with Energetics and several Clean Cities Coalitions to gather a national dataset of EV operations around the country for the EV WATTS Project. This public dataset will be used by National Labs, research organizations, and others to better understand how EVs are driven and charged. This will also inform future technology and infrastructure development. The EV WATTS team is currently recruiting fleets and local EV clubs. Find out more at www.ev watts.org.

Electric Vehicle Suitability Analysis and ZEV Plan for the State of North Carolina

Client Name and Organization: Robert Riddle, Executive Director Division of Surplus and Motor Fleet

Department of Administration, North Carolina

robert.riddle@doa.nc.go

919-830-1347

Status: Complete

Description: Sawatch Labs analyzed ~2600 vehicles historical data within the State fleet to identify which were good candidates for replacement with an EV. Sawatch Labs developed a ZEV plan for the State fleet with actionable electrification targets for 2020, 2025, 2030, and 2040. *Example:* An article was released by North Carolina in which Sawatch Labs' work is referenced. The final ezEV Electric Vehicle Suitability Assessment provided to the State by Sawatch Labs has also been made available on the State website. To view a copy please reference Appendix C: Electric Vehicle Suitability Assessment: North Carolina



Electric Vehicle Suitability Analysis: State Charging Impacts & Net-Zero University Opportunities

Client Name and Organization: National Renewable Energy Laboratory (NREL)

Ted Sears, J.D., M.S.
Senior Team Leader, Center for Integrated Mobility Sciences
Sustainable Transportation Integration Group
Nat'l Renewable Energy Laboratory
ted.sears@nrel.gov
202-297-4321

Jesse Bennett
Electric Vehicle Implementation Engineer
Nat'l Renewable Energy Laboratory
jbennett@nrel.gov
720-595-8965

Status: In Progress

Description: Sawatch Labs is conducting analyses for the National Renewable Energy Laboratory's work supporting the U.S. Department of Energy's State and Alternative Fuel Provider Fleet Program. The analyses for the several projects are powered by Sawatch Labs ezEV and use telematics data from participating fleets to identify how and where EVs can contribute to meeting their EPA requirements. This project has a component focused on helping universities identify how EVs can play a role in their fleet's efforts to meet broader campus-wide net-zero energy goals. The other component is focused on helping state fleets understand the impact that EV charging will have on their electricity costs as fleet electrification increases.

Electric Vehicle Suitability Analysis for the Colorado Department of Public Health & Environment

Client Name and Organization: Rachel Wilson-Rousel, Sustainability Unit Manager; Scott Edwards, Colorado State Fleet Management

Status: Completed analysis for CDPHE 3 years in a row

Description: Sawatch Labs analyzed 57 vehicles across 7 state agencies that were up for replacement in FY 2019 to identify which were good candidates for replacement with an EV. The final recommendations were provided in December 2019 and the agencies submitted requests to purchase 26 EVs (9 battery electric vehicles and 17 plug-in hybrid electric vehicles). The second round of analysis was conducted in the first half of 2019 and the third round of analysis on 100 vehicles was completed in the summer of 2020.

Supporting Electric Vehicle Deployment Projects Nationwide

Client Name and Organization: Natalia Swalnick, Electrification Coalition

Status: Complete

Description: From 2017 through 2020, Sawatch supported a variety of EV deployment projects as part of a consulting agreement with the Electrification Coalition. This includes ezEV Suitability Assessments for Columbus (OH), Atlanta (GA), Plainsboro (NJ), Boston (MA), and San Diego (CA), Charlotte (NC) supporting private sector electrification as part of the Smart Columbus grant, and supporting aggregated purchasing programs in partnership with the U.S. Department of Energy's Fleets for the Future initiative (<http://www.fleetsforthefuture.org/>) and with the Climate Mayors EV Procurement effort

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info@sawatchlabs.com
Tel: 303-578-2465

Denver, Colorado | Petaluma, California



Appendix A: Sample ezEV Vehicle Summary

The metrics for each vehicle analyzed will be made available through the Utility's secure online dashboard. Additionally, a PDF summary will be provided for each vehicle similar to the attached summary.

Appendix B: Electric Vehicle Suitability Assessment: Cincinnati, OH

Case Study on EVSA provided to Cincinnati, OH sponsored by the Electrification Coalition.

<https://www.electrificationcoalition.org/wp-content/uploads/2021/01/Cincinnati-New-Case-Study-Final-1.5.2021.pdf>

Appendix C: Electric Vehicle Suitability Assessment: North Carolina

Please find the ezEV Suitability Assessment provided to the North Carolina Motor Fleet at:

<https://files.nc.gov/ncdoa/Comm/Other/Zero-Emission-Vehicles-Suitability-Assessment-2019.pdf>.

Attachment B
Security Standards



Sawatch Labs Data Security Standards

Data Transfer

Sawatch Labs implements suitable measures using industry standard practices to prevent our data from being read, copied, altered or deleted by unauthorized parties during the transmission thereof or during the transport of the data media. This is accomplished by:

- Use of adequate firewall, encryption and activity monitoring technologies to protect the gateways and pipelines through which the data travels;
- Sawatch Labs uses https (TLS) to encrypt all network requests and responses, authentication using a unique username and password, and where appropriate SSH authentication (public key/private key encryption) to authenticate users in the system;
- Monitoring of the completeness and correctness of the transfer of data (end-to-end check).
- Data is encrypted both in transit and while at rest.

Systems Access

Sawatch Labs implements suitable measures to prevent unauthorized access into each of our proprietary applications. This is accomplished by:

- Sawatch Labs uses https (TLS) authentication (using a unique username and password) to authenticate users in the system;
- Our applications allow for flexible rights management, to allow limited access to various areas within the system, for specific users;
- Customer data is completely isolated from other customer data, i.e. information (GPS data, user info, exception rules, et al.) stored in a customer database is not accessible or available to other databases, even if the two databases are on the same physical server; and
- Only authorized Sawatch Labs' employees are able to connect into all hosted databases for troubleshooting purposes. Connections are established only through SSH authentication and username/password authentication is strictly prohibited.

General Info

No data, including but not limited to, Personally Identifiable Information (PII) is ever stored on, copied to or transferred via removable storage devices, unless there is a specific requirement from the end-user, with their written approval. Any such data under Sawatch Labs' control is strictly controlled and suitably destroyed when no longer required.