



# **KLD GREENHOUSE GAS EMISSIONS REDUCTION PLAN**

September 30, 2023

**KLD Associates, Inc.**

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## KLD GREENHOUSE GAS EMISSIONS REDUCTION PLAN

The shareholders of KLD Associates, Inc. have unanimously directed the Company's management to develop and implement a plan to systematically reduce greenhouse gas emissions due to the Company's activities. They have also made personal commitments to do the same in their own lives, and directs Management to encourage KLD's employees to do the same.

At the time this action was taken, there is an international consensus that greenhouse gases are a key factor in climate change, and that climate change presents a danger to people, infrastructure, and well-being. There are some argue that climate change is a natural cyclic phenomenon spanning centuries, and efforts to break the long-term pattern are futile. But it seems undeniable that human generation of greenhouse gases does exacerbate the existing trend, and is undesirable

Therefore, KLD has the directive to reduce its contribution to greenhouse gas production and emission, embraces it, and will take actions to make reductions systematically as rapidly as possible. This is Company Policy.

### **The Nature of KLD and Its Work**

KLD is a transportation consulting firm with a primary focus on transportation safety, with an aspiration to add related business lines over time.

#### **1) Crash Investigations**

Most of KLD's activity is investigating vehicular crashes for the National Highway Traffic Safety Administration (NHTSA). KLD's contribution is in collecting primary data from crashes throughout the United States, and providing that to NHTSA for its analysis and its actions in improving safety and crashworthiness.

To accomplish this work, KLD collects actual crash data from its base of field offices, each located in a Primary Sampling Unit (PSU) designated by NHTSA. A given crash investigation typically includes measurements at the actual crash scene, further measurements at tow yards, obtaining police accident reports, and gaining information on injuries and damage by interviewing those involved and obtaining relevant medical information.

To understand the scope of these activities and its generation of greenhouse gases, the overall KLD effort involves:

- A set of field offices, one in each designated PSU. There are presently 40 locations, expanding to 49 locations in mid-2024.
- Vehicles to transport crash investigators and equipment to the scene, typically with two vehicles per PSU. There are presently 80 vehicles, expanding to 98 vehicles in 2024 and likely more field offices (PSUs) thereafter.
- A base of operations located in San Antonio TX and a Corporate Office in Smithtown NY.
- Approximately 135 employees in Fall 2023, with 3 persons per PSU.
- Communication of collected data from field hand-held tablets to NHTSA over a secure Government network.

## 2) Evacuation and Emergency Planning

In June of 2023 acquired another business line, in order to diversify the services that could be offered to our clients and to add an additional set of clients. KLD has always focused on safety *in* transportation and has broadened that to add safety *by* transportation.

The entire group doing the evacuation and emergency planning at their former firm has moved to KLD, and the agreement with their former firm involves the transfer of all intellectual property, computer systems, relevant software, and good will to KLD (e.g., client lists, joint outreach to clients in the transition). It also deepens the bench in Senior Management.

That business line came to KLD with a very substantial reputation in planning for evacuation and testing readiness. Following the decennial Census, the NRC requires that all nuclear power plants in the United States update their evacuation time estimates (ETE) as contingency planning should an event occur at the plant. KLD's new group has done all of the required ETEs at the 57 operating plants in the United States following the 2020 US Census. In addition, the group has (a) done additional ETEs in Canada and elsewhere, (b) has long-term review and maintenance contracts to annually check whether the population and/or transportation infrastructure has changed significantly (which would trigger an ETE update), (c) has used the same methodologies to aid clients in contingency planning for wildfires and other phenomena, (d) analyzed and tested adequacy of siren alert networks, and (e) designed computer apps to push alerts to mobile phones, and to enable updates.

### **Analyzing KLD's Effect on GHG: Scopes 1, 2, and 3**

KLD has adopted the best practices outlined in Scope 1 and Scope 2 of the GHG protocol. The three levels of attention are aptly described as

- Scope 1 – focuses on GHG emissions over which KLD has direct control.
- Scope 2 – focuses on GHG emissions of energy that KLD buys.
- Scope 3 – focuses on GHG emissions of all other activities related to the company, both *upstream* (due to the company doing its business) and *downstream* (due to the use of the company's work product, its transport, and its end use and disposition).

Scope 1 is listed as "direct" and Scopes 2 and 3 as "indirect".

Having considered its activities, KLD has classified vehicular fuel as Scope 1 rather than Scope 2, because we have direct control over the selection of vehicles used (ICE, EV, Hybrid), albeit it with the concurrence of the primary client. We have also classified air travel as Scope 1 because we have significant influence over how much air travel is done, although the clients can mandate certain travel to their locations,

The remainder of this document addresses: (1) the overall inventory system needed to support our GHG Plan, including setting and meeting targets, (2) Scope 1 and 2 in some detail, following by (3) a status report on Scope 3.

### **GHG Inventory System**

Implementing a GHG inventory system involves the following steps to track and manage our carbon emissions effectively.

1. Establish a Clear Purpose and Scope: KLD has defined the purpose of our GHG inventory system. We are documenting what emissions sources and types (e.g., carbon dioxide, methane, nitrous oxide) that will be included in our inventory.
2. Data Collection: Collect data on emissions sources. In the KLD work environment the number one emission source is fleet vehicles. We are ensuring data accuracy and reliability by using appropriate measurement methods and instruments.
3. Categorize Emissions: Categorize emissions into Scope 1 (direct emissions from owned or controlled sources), Scope 2 (indirect emissions from purchased electricity, heat, or steam), and Scope 3 (other indirect emissions from sources like supply chains, business travel, and employee commuting).
4. Data Management: KLD is setting up a data management system to store, organize, and update emission data regularly. Using specialized software or tools developed out of the GHG school of practice is making this process more efficient.
5. Emission Calculation: Calculate GHG emissions using appropriate emission factors, conversion factors, and activity data. KLD is using the EPA Simplified GHG Emissions Calculator to estimate and inventory our Scope 1 and Scope 2 GHG emissions.
6. Data Verification and Quality Assurance: Establish a process for verifying data accuracy and quality assurance.
7. Reporting and Documentation: Generate regular reports on GHG emissions. Document the methodology used, data sources, and assumptions made in the inventory. These reports are essential for transparency and accountability.
8. Goal Setting and Reduction Strategies: Set emission reduction goals and develop strategies to reduce emissions. Identify areas where emissions can be reduced, such as energy efficiency improvements or changes in transportation methods.
9. Monitoring and Tracking: Continuously monitor and track emissions to assess progress toward reduction goals. Adjust strategies as needed to meet targets.
10. Compliance and Reporting: If required by regulations or voluntary reporting initiatives (e.g., Carbon Disclosure Project), submit GHG inventory data and reports on time.
11. Employee Engagement and Training: Engage employees in sustainability efforts and provide training on emission reduction practices. A knowledgeable workforce can contribute to better data collection and reduction efforts.
12. Stakeholder Communication: Communicate KLD's GHG inventory findings and reduction progress to stakeholders, including employees, clients, shareholders, relevant agencies, and the public. Transparency will enhance our organization's reputation.
13. Continuous Improvement: Regularly review and improve the GHG inventory system. Stay updated on best practices and regulatory changes to ensure compliance and effectiveness.
14. Invest in Technology: KLD is investing in software and technology solutions specifically designed for GHG management. These tools can streamline data collection, analysis, and reporting.

KLD also has certifications for ISO 9001:2015 (Quality Management System, QMS) and ISO 14001:2015 (Environmental Management System), which provides a framework and mindset for the GHG Inventory System.

KLD has also had clients ask about our work related to ESG metrics (**E**nvironment-**S**ociety-**G**overnance). We expect varied inquiries over time, as various clients decide upon their own systems related to environmental and other concerns.

KLD has designated its CEO as the responsible officer in charge of our GHG, ESG, and ISO certification priorities. He will be assisted in this by our Assistant Controller and our Business Manager and will report on-going progress and plans to the Board (of which he is a member). KLD is opening a new position of Administrative Assistant for Compliance to support these efforts.

### **Scope 1 at KLD**

After detailed discussions and internal assessments, KLD has classified its three highest GHG priorities as:

1. Conversion of our leased fleet of vehicles from ICE to EV. That fleet now has 80 vehicles, and over the next 3 years may expand to approximately 140 vehicles.
2. Moving 100% of business processes to a paperless environment.
3. Reducing travel, particularly air travel, by converting to meetings via Zoom and Teams.

KLD classifies these as Scope 1 activities because to a very large extent it can and does exercise direct control over each of them. Part of the “exercising control” is in obtaining buy-in from clients for necessary concurrences.

#### **1) Relevant Statistics**

To understand the extent of Scope 1 activities:

- Vehicles and Fuel Consumption
  - The 80 vehicles would log some 815,000 vehicle miles travelled (VMT) annually.
- Paperless Work Flow
  - While some business processes were converted in earlier years (e.g., payroll direct deposit, time cards via computer or smartphone), many processes were handled in traditional ways (e.g., expense and travel vouchers, signing actual paper documents, paper storage of payroll summary records for accounting purposes).
- Travel to Client
  - Going forward, some 90 workers will travel for basic training (BT) in Oklahoma City OK for 3 one- week in-person sessions and 3-virtual sessions in their first year of employment, and then annually to another location for a week of refresher training once per year. In 2022 and earlier, all basic training was held in Oklahoma City OK.
- Travel within KLD
  - Field Operations Managers (6 of them in mid-2023) are assigned an average of 6 to 7 PSUs to monitor, which typically involves 2 trips per year to each of their PSUs, almost all by air.
  - Travel by the Project Manager and Operations Manager for meetings and field visits, typically 8 per year each, by air.
  - Travel to and from work by 135 people, 52 weeks per year, an average of 4 days per week (excluding vacation, sick, and holiday days).
  - Reports and data are transmitted over secure computer networks, routine phones calls are made, and some Zoom or Microsoft Teams meetings occur.

This is the context for evaluating opportunities to reduce greenhouse gas emissions generated by KLD's Scope 1 activity.

## **2) Opportunities for Reduction**

Reviewing the typical activities at KLD, a preliminary list of reduction was constructed by Project Management:

### Vehicles

- 1) Replace existing gas-powered vehicles with electric vehicles (EVs).
- 2) If impediments to EVs as replacement units exist, consider plug-in hybrid vehicles.
- 3) Reduce VMT by such actions as
  - Fewer trips
    - Replace some trips with arrangements for electronic delivery of records, or access to files.
    - Visit some places to cover two or more crash records acquisitions, rather than just one.
    - Reduce the number of days in the office, allowing remote work for a certain number of days per week.
  - Trip chaining, in which a set of stops is pre-planned and done sequentially on the same trip.
    - Visits to tow yards, police jurisdictions, interviews, and medical facilities offer possibilities.
- 4) Take note that remote work also means home-to-work trips are reduced.
- 5) Reduce vehicle idling.

### Paperless Business Processes

- 6) Reduce use of paper forms throughout the company by redesigning work flow and introducing supporting tools (and training on the new practices and tools),

### Travel

- 7) Consider making more of the basic training remote/virtual learning by Zoom, Microsoft Teams, or other means.
  - Past practice had been 5 non-consecutive weeks of basic training in Oklahoma City OK. This is the baseline.
  - In 2023 and beyond, this has changed to 3 one-week in-person sessions and 3-virtual sessions.
  - Realistically, further reductions can be achieved by making more of the basic training sessions remote.
- 8) Encourage virtual meetings by Field Operations Managers, Operations Manager, and Project Manager.
- 9) Schedule the work day to avoid congested periods. Where feasible, encourage uses of more efficient modes --- transit, carpooling, bicycling -- and use of more efficient vehicles.

## **3) Scope 1 Targets**

Our largest GHG Scope 1 emitter is our vehicle fleet. We see client agreement on a phased implementation being more warmly received (we have been in dialog with that client continually). But even with client agreement to a phased approach, the current vehicles are on 5-year leases which do not all end in the same year. Unless the client

mandates convergence to EVs on an accelerated schedule for their own priorities, full convergence could take up to 8 years.

Achieving this target is based upon the number of EVs, known mileage and fuel consumption in the existing ICE fleet, and mix of carbon-based vis-à-vis clean energy sources for the vehicles we control.

KLD does not own or lease any vehicles paid for out of our own budget.

We are now at the stage at which convergence to EVs is under serious consideration by the client, after much dialog between KLD and the client and within the client's management. Considering how essential client buy-in is necessary (it is the first major step in the process), we estimate we are now at 20% of target. If the metric is percent of fleet actually converted, we are at 0%.

The next-largest Scope 1 target is the conversion to a paperless work environment. We estimate that we are at 50% completion, and can reach the target in 2 years (EOY2025).

## **Scope 2 at KLD**

Given the nature of our business, the principal Scope 2 target ("Burn") is electricity at our various leased offices.

### **1) Relevant Statistics**

To understand the extent of the Scope 2, note that:

- The offices (and vehicles) and are heated or cooled (depending on the season) for at least 8 hours per day, 5 days a week (except for the fixed holidays; KLD schedules 9 fixed holidays and 2 floating holidays, the latter to provide our diverse workforce flexibility in observing religious or cultural days of significance).
- We have industry-standard data for energy consumption of various devices (computer, room lighting, etc.) and we have our energy bills.
- Vehicles least on field visits in our evacuation and emergency planning provides some Scope 2 opportunities related to fuel consumption by the energy efficiency and fuel of rented vehicles.
- Some items that might be classified as Scope 2 have been moved to Scope 1 at KLD, because the company has significant direct control or influence over them (e.g., leased vehicle selection, amount of air travel).

### **2) Opportunities for Reduction**

The principal means of KLD reducing GHG Scope 2 emissions are:

- 1) encouraging the landlords to use more efficient lighting and HVAC, and
- 2) KLD controlling when the lights are on, when the computers are turned off rather than allowed to go into rest mode, and the settings on room temperature (if the leased space actually allows us to control that). We can also consider energy consumed on the journey to/from work, and influence it by allowing more remote work and/or short work weeks (the latter may be more difficult because

of employee resistance to longer days).

### 3) Scope 2 Targets

We estimate that we are at 25% of target, and can be on target in 2 years (EOY 2025).

### Scope 3 at KLD

In the true spirit of Scope 3 as we understand it, even the task of enumerating the Scope 3 emissions is daunting and needs attention by us. We may use a consultant to review our business, in addition to receiving training in webinars or short courses for our own people in assessing and quantifying Scope 3 items. Some tools that are commercially available will be assessed, but some that have been inspected have been too generic to provide enough guidance given the nature of our business.

Only after we have this enumeration and quantification in hand can we set Scope 3 targets and time frame. That undertaking has started, and will receive special attention in 2024.

### Confounding Factors

To keep perspective, let us remember that KLD's primary mission is to

- Collect data that is essential for investigating patterns in crashes and taking actions to improve safety, specifically by reducing injuries, injury severity, and deaths.
- Plan safe and efficient routes for the movement of people in situations in which evacuation is needed (some situations are such that "shelter in place" is the best solution in some or all of the affected areas).

The mission has to be accomplished, and will logically influence GHG targets and options in some cases.

Looking forward, we also see even more PSUs to improve statistical accuracy, and more emphasis on other modes of travel (trucks, pedestrian, bicycle) and the effects of newer vehicle types (for instance, EVs and autonomous vehicles) in the traffic stream. Attention to crashworthiness has yielded results, and now allows a concurrent and greater emphasis on crash causation --- not just the damage done, but the underlying reasons the crash occurred.

But these truths cannot be allowed to be the fig-leaf covering inaction. We must do our part, in the context of the mission. Sometimes this will mean focusing on the proper metrics. For instance, the policy decision has been made to improve the overall program's results by moving from 32 to 40 PSUs and beyond. Metrics based on per-PSU measures have more meaning than total VMT, for instance.

Aside from proper metrics, there must be a deeper dive into confounding factors in each apparent opportunity.

**Electric vehicles** are an excellent starting point for our consideration. It now appears to be a truism that EVs hold the key to the future, and are a major priority for the Government and the vehicle manufacturers.



But one must consider that:

- At the present time in most of the United States, electricity is generated from fossil fuels. See the sidebar for the states in which KLD has field offices in 2022. Yes, there may be advantages to having the point of generation localized at the power plants, but the US is far from renewable, carbonless energy sources. The efficiency of energy conversion must also be considered. The terrain and weather must be considered. Maine may be best in the sidebar, but the weather is severe, traction difficult in some seasons, the terrain is hilly, and the need for passenger compartment heating is demanding.
- The vehicle must carry a crew and equipment, and cannot simply be a passenger car.
- And the vehicle must have good coverage on a single charge, because some of the PSUs are large (encompassing several counties) and because one cannot risk running out of charge in awkward places (or having a crew idle while charging).
- The network of charging stations is growing at an amazing rate, and the Federal Government is making major investments in that network. The initial concern is whether the network covers our travel domain; the future concern as EVs become more dominant is the queueing at specific charging stations.
- There must also be more information on life cycle costs for EVs and gas-powered models, including maintenance costs and battery replacement needs.
- Finally, viewing the vehicle as an emissions source, one cannot forget that tire wear-and-tear is itself a significant contributor.

State	Fossil Fuel Source of Electricity
Indiana	87%
Utah	87%
Missouri	83%
Ohio	82%
Massachusetts	77%
Wisconsin	76%
Texas	67%
Pennsylvania	65%
Virginia	61%
Arizona	58%
Alabama	56%
Oklahoma	55%
New Jersey	50%
California	49%
Montana	47%
New York	46%
Illinois	36%
Idaho	26%
Maine	26%

The above are simply factors to consider in realistic planning. A closer look at them results in giving priority to phasing in EVs based upon the specifics of the PSU, expanding the list of PSUs covered as vehicles and infrastructure develop further.

Of course, there are also two dominant factors: (1) KLD client pays for the vehicle, and must be convinced that the move is cost-effective as well as good policy, (2) the existing fleet will last for at least 3 years more before leases expire and replacements are needed.

The **opportunities to reduce VMT and congestion** seem enticing as a shorter-term goal: make fewer trips, chain trip destinations together, increase remote work days, make trips to/from work in the off- peak, monitor use of vehicles to assure work-only trips. During the COVID pandemic, KLD switched to remote work almost entirely, acquired data remotely from police jurisdictions, and deferred some tow yard visits. And encouraged the crash technicians to share “lessons learned” amongst themselves and with supervisors in Zoom and telephone meetings. Some of these steps were untested and counter- intuitive at the time, but have become more familiar. The unfamiliarity was a confounding factor, but has been mitigated by a different need --- the COVID response --- and more feasible for implementing as a greenhouse gas mitigation.

**Selecting green office space for leasing** is an aspiration, but runs counter to other considerations: (1) in practice, there are limited options available for field offices in most PSUs; (2) the landlord's focus is not yet on providing green offices as a marketing tool in the price range of spaces that we have leased to date; (3) location of the field office within a PSU can bring benefits in VMT reduction that outweighs green office space. We can control the number of days the office is needed, and thermostat settings. But in most cases, there are multiple tenants and building energy needs are defined by the common good (as perceived by the landlord) and not the preferences of a single tenant.

**Reducing vehicle idling** can have an almost immediate reduction in greenhouse gas emissions.

**Reducing use of paper forms** throughout the company has been set at KLD as a short-term goal for cost- effectiveness, productivity, and data quality. This move also has the ancillary benefit of reducing greenhouse gas emissions.

### **Metrics**

As noted, it is likely that the number of PSUs will grow in coming years, and even that the activity levels at PSUs will increase. Therefore, the most meaningful metrics will be based upon "per PSU" indicators and as we gain experience, also based upon level of activity at a PSU, compared to 2022 as a baseline. By "level of activity", we mean number of people assigned to the PSU, new and different tasks added, and target levels for cases per year per PSU.

### **Looking Forward with the KLD GHG Plan**

At this time, the key elements of the KLD Plan are:

- 1) Familiarize the client with the need and the options for greenhouse gas emissions reduction, such that decisions and selections can be made with that reduction as a factor.
  - Timeline: Oct 2022 to June 2024, sooner if feasible.
- 2) Document the feasibility of using EVs for the tasks currently done with gas-powered vehicles. Consider hybrid alternatives.
  - Timeline: End of Q1, 2024
- 3) Set a goal of 15% EV's in all new and replacement vehicle acquisitions on all orders after Q2 of 2024.
  - Firm up this goal based upon #1 and #2 above. Allocate vehicles to PSUs best suited to them (area covered by PSU, terrain, weather) and % of electricity from non-fossil fuels in the area. Consider life cycle costs (including fuel). Move existing vehicles to other PSUs if necessary to hit goal.
  - Timeline: vehicle orders placed in Q3 2024 and beyond
  - Metrics are hitting target and estimated reduction of greenhouse gases.
  - Report results at the end of year (EOY), 2024 and forward.
- 4) Increase goal in #3 based upon experience with EV's.
  - Timeline: EOY2024 and beyond
- 5) Reduce VMT by 10% in Q1+ Q2 2024 compared to same period in 2023. Increment goal by another 10% reduction in 2025 compared to 2023. Refine goals thereafter, by EOY2024.
  - Use combination of ways to reduce VMT.
  - Metrics are based upon "per vehicle" averages

- Report VMT results
  - Report estimated emissions reduction based upon latest literature relating emissions to VMT.
- Timeline:
  - Release detailed plan by end of Q2 2024.
  - Implement in Q3 2024 and thereafter.
- 6) Work with client on feasibility of reducing training trips (done). 2023 implementation was done as follows:
  - Timeline: In 2023, implement as 3 one-week non-sequential sessions in Oklahoma OK and 3-one-week remote sessions.
  - Reporting: EOY 2023, similar in later years.
- 7) In 2024, reduce FOM air travel by 20% relative to 2022 as a baseline. Do not consider 2023, because the addition of 8 PSUs may distort that year. During 2025, consider whether another 20% reduction from baseline is feasible. If so, implement in 2025.
  - Timeline: As stated.
- 8) In 2024, decrease presence of workers to 4 days per week wherever feasible by using remote work for one day. Try to make it the same day in field offices as well as San Antonio & Smithtown, if real effect on energy consumption. In 2025, aim to decrease presence of workers to 3 days per week by using remote work for two days.
  - Timeline: As stated.
- 9) Lead by example: senior management, others, report their own newer practices in their non-work life in order to encourage others. Invite comments. Do not treat as an obligation, but as an opportunity.
  - Timeline: Dec 2024 and forward.
- 10) Reduce vehicle idling by emphasizing this in training and in field visits, particularly on-scene and tow yard visits. In addition, post a reminder on the front panel of the dashboard, as a reminder.
  - Timeline: Collect data on existing vehicle idling practice in Q4 of 2023, without the mandates.
  - Implement in Q1 of 2024 and forward. Use Q4 2022 as a baseline (no explicit mandate). Estimate reductions in idling time by quarter, generate estimates of reduction in greenhouse gas emissions by estimates of emissions per hour based upon manufacturer data or literature.
- 11) Reduce use of paper forms throughout the company. For reasons of cost-effectiveness, productivity, and data quality, KLD has set a goal of zero use of paper by EOY2025, except for any records that must be kept on paper because of government mandates. The ancillary reduction in greenhouse gas emissions exists (e.g., paper not used, copying not done) and shall be estimated by reduction of paper use (and therefore paper purchases and thus production reductions) and estimates on emissions reductions from the literature.
  - Timeline: Use 2021 as a baseline. Since 2022, the implementation has been underway. This includes to date paycheck stubs available only online from ADP, no printed payroll records and filing, use of auto-fill forms for travel and expense vouchers, applications and new hire paperwork. Report results annually.

The timelines above are set with an awareness of (1) competing duties on the project(s) including opening 9 new PSUs in mid-2024; (2) vehicle leasing dates; (3) needed dialog to have all interested parties participating.

### **Reporting**

This document will be posted on both the public and myKLD sections of the KLD website. It will be shared with clients. A summary announcement will be sent to local officials and media, with reference to the KLD website for this document (announcements sent at the end of Nov 2022 or beginning of Dec 2022, so as to not be lost in attention of recipients to Nov 2022 elections or end of year holidays.

Annual reports will be posted on the website at the end of each calendar year, starting in 2022. Other results will be shared in accord with the timelines of the prior section.

Later versions of this document will include notes of the refinements to the Plan and reasons they were made. The present document will be kept available as a reference, by hyperlink.

### **Responsible Parties**

The KLD Board shall be responsible for receiving draft reports, accepting them (or not), and posting them. The CEO will track on-going results, with an obligation to report to the Board semi-annually. As noted earlier, the CEO will be supported by the Assistant Controller and the Business Manager and by the addition of an Administrative Assistant for Compliance.