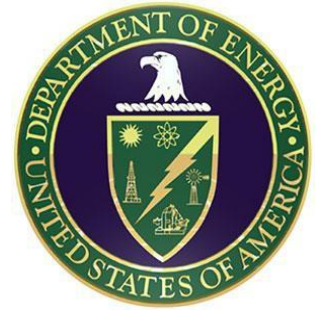




**Industrial
Assessment
Center**
U.S. DEPARTMENT OF ENERGY

IUPUI
INDIANA UNIVERSITY-PURDUE UNIVERSITY INDIANAPOLIS



Industrial Assessment Center

Energy Auditing Protocol 2020

Purdue School of Engineering and Technology
Indiana University Purdue University Indianapolis (IUPUI)
723 West Michigan Street, SL 260
Indianapolis, Indiana 46202
Phone: 317.274.9717 *Fax: 317.274.9744*
<http://www.engr.iupui.edu/IAC/>

Table of Contents

Contents

<i>Table of Contents</i>	2
I. Preface	3
II. Safety Standard	3
III. COVID-19 Recovery Support	4
SBA RESOURCES	4
FED program for small and mid-sized businesses:	4
IV. Pre-Audit Documents Required	6
V. Audit Process Summary	6
VI. Audit Process Breakdown	7
VII. Process Completion	8

I. Preface

This protocol has been developed to conduct energy audits safely during the COVID-19 pandemic. The safety of the auditing team members and of the client company's personnel will be given utmost importance while maintaining a high standard for the conducted audit during this period. The audit team members will sign a 'Safety and Code of Conduct Agreement', prior to an on-site visit, to ensure the safety standards set by the IAC as well as that set by the company to be audited are followed while on-site. Only members that have not been in contact with COVID-19 positive patients within 14 days prior to the audit, and those whose body temperatures, measured just before the site visit, are less than 100.4° F will be permitted to visit the company site to prevent any potential spread of the infection.

II. Safety Standard

The safety standard has been developed by recommendations from OSHAS's (Occupational Safety and Health Act) "Guidance on Preparing Workplaces for COVID-19" document. (<https://www.osha.gov/Publications/OSHA3990.pdf>)

Audit team members will practice the following steps when on site:

1. Wear appropriate PPE (Personal Protective Equipment) which will include but not limited to face masks, protective eyewear, face-shields, and gloves. All PPE are to be worn at all times including prior to congregating for the audit on campus, to-and-fro from the site within the vehicle, and on-site.
2. Practice appropriate respiratory etiquette, including covering coughs and sneezes.
3. Maintain six feet of distance from any company personnel working in the plant at all possible times.
4. Avoid unnecessary contact with another person or object.

5. Regular hand washing or using of alcohol-based hand rubs. Should always wash hands when they are visibly soiled and after removing any PPE if required.

III. COVID-19 Recovery Support

The following extract is from resources recommended by IAC. More details can be found using the link, <https://iac.university/covid-19-recovery-support>.

The U.S Small Business Administration (SBA) and Federal Reserve have created special loan programs to help small to medium sized businesses that are struggling due to Coronavirus (COVID-19).

The following links include short descriptions. Please verify any details or requirements with the SBA or associated agency as these programs continue to be developed and may be modified.

We will do are best to keep this page up to date. These details were last updated: 4/10/2020

SBA RESOURCES

SBA Loan Resources

<https://www.sba.gov/page/coronavirus-covid-19-small-business-guidance-loan-resources>

SBA National Resource Guide

<https://www.sba.gov/sites/default/files/2019-08/national-resource-guide.pdf>*

*The National Resource Guide includes a service called SCORE which gives free business mentoring from retired executives.

FED program for small and mid-sized businesses:

Fed Announces Main Street Lending Program for Small and Mid-Sized Businesses

<https://www.federalreserve.gov/newsevents/pressreleases/monetary20200409a.htm>

The Board of Governors of the Federal Reserve System announced a \$600 billion Main Street Lending program to support small and mid-sized businesses.

.

- For companies with up to 10,000 employees and \$2.5 billion in revenue
- Available to borrowers that may have also received PPP loans
- Establishes two facilities: "New Loan" and "Expanded Loan"
 - New loan sizes from \$1 million up to \$25 million
 - Expanded loan sizes from \$1 million up to \$150 million
- Loan terms:
 - 4-year unsecured term loans
 - SOFR + 250-400 basis points
 - No prepayment penalty
- Restrictions on compensation, stock repurchases, and distribution apply
- Many "direct loan" CARES Act restrictions on borrowers do not apply, including those that would have related to labor and offshoring
- Loan applications will be managed through the borrower's bank

A borrower that accepts a Main Street loan will be required to make several certifications and attestations,

- Attest that it requires financing because of the COVID-19 pandemic;
- Attest that it will make reasonable efforts to maintain its payroll and retain its employees during the term of the Eligible Loan;
- Attest that it will follow compensation, stock repurchase, and capital distribution restrictions that apply to direct loan programs under Title IV of the CARES Act 4003(c)(3)(A)(ii);
- Refrain from using the proceeds to repay other loan balances and refrain from repaying other debts of equal or lower priority (except mandatory principal payments); and
- Certify there are no conflicts of interest as described under CARES Act 4019.

IV. Pre-Audit Documents Required

The following documents will be required prior to an audit. The documents will help the auditing team to formulate a utility assessment as well as generate a profile of the company for improved audit recommendations (AR).

1. Completed Pre-assessment Form
2. Utility bills of the latest 12 consecutive months
3. Plant Layout
4. Production process flow diagram

V. Audit Process Summary

The audit team will comprise of three to six student members as well as a professor. The energy audit will be conducted in three distinct parts over a period of two to three consecutive days.

Once an appropriate date has been selected, the first day will consist of a virtual video conference call between the audit team members and company personnel. The conference discussion will focus on the workings of the plant and production process flow. The virtual meeting shall take approximately two to three hours.

The next day, the selected student members and professor will travel to the site for data collection using IAC equipment. If permitted, the data measuring devices are to be left overnight to be collected the following day for a larger data set.

Depending on company schedule and personnel availability, a closing meeting shall be conducted either at the end of the data collection process in-person on site or a second video conference call shall be scheduled the following day. The closing meeting will be focused on the data collected, potential ARs and any follow-up questions.

VI. Audit Process Breakdown

Day 1 - Video Conference Call

1. A Zoom video conference link will be created by the IAC and sent out to all auditing team members and company personnel.
2. All members are to be present in the meeting at the assigned time using personal devices (phones, laptops, and tablets) with uninterrupted internet connection. If the connection is predicted to be unstable, the dial-in option is also permitted.
3. The audit lead shall present a prepared presentation using the share screen function of the zoom application. The presentation will be interactive with the company personnel present which includes analytical questions regarding the equipment and processes that occur within the plant. (1 – 1.5 hour)
4. After introductions and analytical questioning, we encourage the company personnel to present a descriptive walkthrough of the plant layout and process flow (e.g. PowerPoint presentation with pictures/videos). (1 hour).
5. After the plant description portion, the video conference shall be concluded following any final thoughts and comments. (< ½ hour)
6. After the conference call, the auditing members will generate a list of potential ARs as well as a list of data that will be measured by the assigned audit team members and professor to be collected the next day on site which will be sent over to the company contact.

Day 2 - Data Collection

1. Assigned audit team members will be prepared with required data list before going on site.
2. On site, the team will ensure proper PPE is used and safety procedures are followed.
3. The team will require a quick plant tour to understand needed points of data collection. (1/2 hour)

4. Audit team members on site will video call remotely working audit members to conduct a private brainstorming session to discuss the findings within the manufacturing floor for any additional potential ARs. The on-site team members shall then prepare to collect data for them as well. (15 – 30 minutes)
5. The audit team shall revisit the manufacturing floor for data gathering with an assigned company technician. (1 – 2 hours)
6. If permitted, the measuring devices are to be left overnight.
7. After the data collection period, the team members shall collect all equipment.
8. This concludes the data gathering process.

Closing Meeting/ Conference Call

1. Depending on company schedule and personnel availability, a closing meeting shall be conducted either at the end of the data collection process in-person on site or a second video conference call shall be scheduled the following day.
2. The audit team members shall present potential ARs as well as any information that was learned during the data collection period.
3. Final thoughts and comments.
4. This concludes the closing meeting.

VII. Process Completion

Once the audit has been completed, the IAC shall perform energy assessments and analyze collected data to formulate practical applicable ARs with paybacks of less than five years. A final report consisting of all ARs, findings and information will be sent to the company at the end of a 60-day period. An implementation report will accompany the final report which is to be completed by the company and sent back to the IAC. An Implementation report to be filled out by the company will be sent out between 270 to 300 days after the site visit to review the effectiveness of the conducted audit.