Intermountain Industrial Assessment Center (IIAC) Sustainable Transportation and Energy Plan (STEP) Guidelines

The following guidelines supplement the Settlement Stipulation in Docket No. 19-057-33 and are intended to support the IIAC in the performance, creation, and delivery of the primary product of the STEP program energy assessments with a purposeful focus on the process (e.g., fieldwork), recommendation and report components of an assessment.

1. Assessment Process and Performance

1. Energy assessments and clean air analyses described in paragraph 9 of the Settlement Stipulation in Docket No. 19-057-33 and resultant IIAC reports are expected to reflect the goals of the STEP Act, including those identified in Utah Code Sections 54-4-13.1 or 54-20-105.

2. All interactions between the IIAC and a client should be conducted with the highest professionalism toward encouraging client confidence in the STEP program and eventual implementation of assessment recommendations. This includes:

- Recruitment activities
- Collection of pre-assessment data
- Performance of the assessment visit
- Timely delivery of the assessment report
- Follow-up activities

3. An assessment will include:

- Energy-use, and other operating data, analysis
- Facility walk-through and analysis
- Client facility representation interviews
- A report with recommended measures for reducing energy usage and emissions

4. Beyond pre-screening definitions in paragraph 11 of the Settlement Stipulation in Docket No. 19-057-33, the typical pre-assessment will begin with an introductory meeting between client facility representatives and the IIAC. The pre-assessment is intended to establish a minimum level of familiarity with each client prior to an assessment visit.

- Only approved Directors, Assistant Directors, or other IIAC-approved staff with equivalent technical proficiency can lead an assessment.
- Receipt and analysis of natural gas utility data, including usage and costs, for 12 months prior to an assessment is strongly preferred.

- The assessment scope and the characteristics of the facility including potential safety hazards, processes, and resources used should be discussed prior to facility analysis.
- Full compliance with the minimum safety standards established by the host facility is mandatory.

5. The next stage of a typical assessment visit is a facility tour lead by the most knowledgeable plant representative available.

6. When conducting measurements, representatives of the IIAC are required to work with facility personnel. The IIAC will not place data logging equipment or venture into a facility without assistance from facility representatives or other authorized personnel.

7. Prior to leaving the facility, a final meeting reflects best practice. At this meeting, the IIAC will speak with client facility personnel to clarify processes, discuss findings, get input on potential recommendations, and inform the client about next steps.

8. As part of an assessment, energy savings opportunities, emissions reductions, and other benefits need to be identified and reported to the client. Specifically, prior to assessment, a determination will be made by the IIAC that the annual usage or anticipated annual usage (per customer or aggregated customers) would exceed 2,500 Dth per year or the customer would utilize natural gas in such volumes that the total benefits are reasonably likely to be greater than the expense of the assessment and any additional STEP funded costs or subsidies.

9. It is a strong preference that recommendations are based on facility data or measurements taken at the time of the assessment. Where applicable, details of those measurements will be used as part of the recommendations.

2. Assessment Reporting

Assessment reports are to provide a professional reflection of the University of Utah, Dominion Energy Utah, the IIAC, and other partners, as applicable.

1. Contents of an assessment report

- Foremost, the assessment report should be a tool to assist the client facility personnel in implementing recommendations made by the team.
- Successful assessment reports provide an accurate, comprehensive record of the IIAC assessment visit and reflect an understanding of the facility acquired by the IIAC.
- Reports should be attractive and professionally assembled in an easy to read format.
- All data used in reports must be sourced from one of the following areas:
  - Measured during assessment
  - Vendor information (e.g., spec sheet)
  - Industry standard value
  - Client provided
  - Logical estimate from a clearly referenced and reliable source

2. Best practices for quality assessment reports regularly include the following:

- Cover Page
  - Report Number
  - Date of Assessment
  - Logos
  - Contact information
  - Names of the members assessment team
- Table of Contents
- Executive Summary: overall summary of the assessment and relevant descriptive data. In addition, a summary of the assessment recommendations should be included.
- Facility and Operations Description
  - Explain facility in a way that makes it apparent to reader of this section that the author has a solid understanding of the facility operations.
  - Contains facility size, a general facility layout, process description and the locations of important equipment.
  - If applicable, a process flow chart that maps the production process is normally an asset to delineate the flow of all resource inputs, waste streams, by-products and finished goods.
- Existing Best Practices of Facility/Client: The best practices section should briefly describe specific best practices observed during the visit that the IIAC acknowledges and encourages the client to continue.
- Utility Cost Analysis: Best practice reflects that at least one year of utility data be secured. Natural gas usage is a focus and, if applicable, other impacted utility data – water, sewer, waste, electricity, propane, fuel oil, etc. The energy data should be presented in an easy to read, graphical format, i.e., tables, bar and/or pie charts.
- Major Energy Consuming Equipment: Include boilers, water heating systems, HVAC (Heating, Ventilation and Air Conditioning), etc. This list should include the sizes of the major pieces of equipment and their energy requirements.
- Analysis of Potential Air Quality and Other Benefits as described in Utah Code Section 54-20-105(3).

3. Assessment Recommendations

1. Each recommendation included in the report should be self-explanatory and should not require readers to look back at other recommendations or parts of the report.

2. Recommendations should consider the best action to take to implement a process improvement to achieve a desired STEP goal. Multiple recommendations involving the same identified improvement should not be included. Judgment needs to be used here. In some cases, addressing the improvement in multiple ways may be necessary. For example, one recommendation might be to change from steam to hot water heating while another may address steam leaks in the current system. Assessment leads may believe including both to be advisable.

3. Formatting of the recommendations should be standardized and include the following:

- Table summarizing details.
- Observations from site visit to the facility. Include data, pictures and personal observations.
- Recommended actions.
- Anticipated Benefits
  - Detailed calculations of assessment recommendations.
  - Normally details of calculations are given. In all cases an effort should be made to explain the rationale behind the recommendation.
  - Transparency in all calculations is desired.
- Implementation Costs
  - Details include capital, labor and maintenance/operational costs.
  - A cost benefit analysis most useful to customer should be included – e.g., net present value, simple payback, etc.

4. Employment of Student Personnel in Conducting Assessments

1. Student Personnel Training

- Train assessment personnel on safety aspects of assessments prior to being involved in any on-site assessment. Train assessment personnel on the use of personal protective equipment and that personnel are ultimately responsible for their own safety.
- Prior to going on an assessment, train assessment personnel on the proper use of any equipment and instrumentation that will be using during the assessment.
- Brief assessment personnel on best practices and related tools.

2. Student Assessment Personnel Utilization and Experience

The Parties to the STEP Settlement Stipulation recognize that the IIAC will simultaneously be conducting energy audits for the U.S. Department of Energy (DOE) under a separate DOE program. Like the DOE, the development of the future workforce is a valued aspect of STEP funded IIAC assessments. The following guidelines are designed to support a high-quality, positive and safe workforce development experience for higher education student personnel while participating in STEP assessments. The following DOE program references shall be considered best practices for student activity funded through the STEP program. To the extent that student development can be encouraged consistent with the efficient and prudent use of STEP funds, the IIAC will follow the DOE student assessment personnel utilization and experience guidelines. If the following guidelines are in conflict with the most efficient use of STEP funds for ratepayer benefits, the IIAC will use the STEP funds in the most efficient manner for ratepayer benefits.

- Personnel should be involved in scheduling activities, assigning deadlines, and completing deliverables.
- Personnel roles in individual assessments: A student personnel Team Leader should be assigned for each assessment. A student personnel should be assigned for each assessment. The names

of students present during the site visit and their roles should be made clear to the client and included in the assessment report.

- Personnel should normally not specialize in any technologies or systems but should be well-rounded in their skills sets.
- Encourage longevity within the program: Where possible, personnel should be hired early in their educational program.
- Tasks should be carefully assigned to match current personnel qualifications.

3. Student Assessment Personnel Employment

- All personnel participating in assessment site visits must be employees of the university.
- Personnel will normally be matriculated into an Accreditation Board for Engineering and Technology (ABET) accredited department.
- Personnel involved can come from a variety of departments to support a multi-disciplinary approach to address the full continuum of skills that best supports assessment success.
- Personnel must be currently progressing toward their degree to perform STEP work for the IIAC.