Audit No.	2-2021	Date:	8, 9, and 10 Jun-2021
Objective:	✓ To determine the compliance of the organization's Energy Management System, or part of such, with the audit criteria. ✓ To evaluate the capacity of the Energy Management System to ensure that the organization complies with legal, regulatory, and contractual obligations associated with the Energy Management System subject to audit. ✓ To evaluate the effectiveness of the specified Energy Management System to ensure that the organization is capable of meeting the objectives of the Energy management. ✓ To identify areas in which the organization can make potential improvements of the Energy Management System		
Scope:	✓ The processes related to the SGE: Supply management; HSE management; infrastructure maintenance management; Administrative management: Infrastructure and Services management; Human talent management; Operation management: Operation and Transportation coordination; Infrastructure Project Management; Internal and External Communication. For activities related to: ✓ "Commercialization of gas pipeline transport service and design, construction, operation and maintenance of gas pipelines, and compression stations of natural gas transport system." ✓ The limits in which the ISO 50001 standards: 2018 Energy Management System have been implemented are: Main Administrative Headquarters. Mariquita Gas Compression Station. La Sabana Gas Compression Station. Padua Gas Compression Station. Miraflores Gas Compression Station.		
Criteria:	✓ ISO 50001:2018 Standard Requirements. ✓ Legal requirements applicable to the gas transportation service, provided by TGI S.A. ESP and that have an impact on Energy Management. ✓ Requirements established by the Company in the documented information and that are associated with the Energy Management System.		
Auditor team:	✓ Laura Victoria Infante Galvis (Lead Auditor) ✓ Claudia Cecilia Gómez Arias (Auditor Team) ✓ José Gregorio Garavito (Technical Expert)		
WORKPLACE * Main Administrative Headquarters Bogotá * Gas Compression Station "Sabana" * Gas Compression Station "Mariquita * Gas Compression Station "Padua"			

* Gas Compression Station "Padua" * Gas Compression Station "Miraflores"	
PROCESSES: Sustainable Development management - (SGE), HSE management, Supply Management; Infrastructure Maintenance management; Administrative management (EE Projects); Human Talent management; Operation and transportation management; Communications.	
THE PROCESSES DEFINED IN THE PREVIOUS ITEM	
• **NON-COMPLIANCE DESCRIPTION:**	**REQUIREMENT**
No NCs are reported during the development of the audit.	NA
• **EVIDENCE:**	
NA	

- **OBSERVATIONS**

✓ The organization has a manual of job profiles which identifies responsibilities associated with the SGE, as well as some competencies related to the SGE, associated with its main roles within the organization. On the other hand, in reviews of each one of the headquarters, the key positions that are related to the SGE are identified. However, there is no clarity, in some cases, regarding the powers associated with these roles, such as the role of the EMS leader, or of the personnel hired to carry out activities that have impact on the SGE. This generates a risk associated with ensuring the competence of people who can affect energy performance and the SGE.

✓ It is evident that the organization has a supply process that according to the need and depending on the audited sample includes the criteria in the acquisition of products, equipment and services that use energy; notifies suppliers of these requirements and is consistent at award time. Nevertheless, it is necessary to make visible within the SGE the cases where energy efficiency is impacted, in order to determine criteria for the purchase of goods or services.

✓ For the consumption equipment of the administrative headquarters, for example refrigerators, coffee makers, televisions, among others, which according to the 2020 energy review, correspond to 33% of total consumption of energy, it is important to propose something that allows the reduction of the consumption; taking into account that this equipment continued to report consumption during the SARS CoV-2 contingency despite the fact that the number of staff was reduced at the headquarters. This creates a risk regarding the response that the organization should give to deviations in energy sector performance.

✓ Verification of the document master list is carried out to verify the correct version and place of use. Validating the PR-ASI-09 is in V. 6 in the master list and in the time of audit is shown in V4., generating risks in version control and control of information that is of organizational use. It is observed that the records (risk matrix) do not have information about their update date or changes that they may have from a period to another. That could cause the risk of non-traceability of important information that is constantly being updated, showing transformation, or theme management; such as context, interest groups, legal framework, and risks. Similarly, it is observed that the organization must guarantee the availability of documentation associated with calibrations/verifications/validation of the equipment with which third parties carry out tests for the approval of the acquisition of machines that affect energy sector performance.

- **AREAS FOR IMPROVEMENT**

✓ Within the DOFA matrix, include the way in which compliance with the proposed strategies will be monitored.

✓ Clarify within the organization in which cases the change management procedure, PMIN-080, applies, in which cases the maturation projects apply, in which cases none apply, or if another procedure or methodology must be used.

✓ Include the communications matrix within the documented information of the Management System.

✓ It is pertinent to consider the formulation of other energy performance indicators, for example, in the maintenance line that could affect energy sector performance, since efficiency is not necessarily guaranteed only with maintenance routines. For example: annual, consumption or performance tests or other mechanisms that demonstrate efficiency.

✓ The organization has a context analysis according to the DOFA methodology in which elements related to the SGE are evident, it is necessary to strengthen this context analysis with elements that were identified in the development of the audit.

✓ The estimate of future energy consumption is identified in all the work centers that are part of the SGE; however it is suggested to review the data for the Sabana station.

✓ There is evidence of planning for the fulfillment of the objectives of the SGE, it is recommended that for all the initiatives there be a document where the resources, responsibilities, and when they will end.

- **STRENGTH**

✓ Willingness and knowledge of the audited team.

✓ Knowledge, Documentation "Energy Sector Review"

✓ Robust technological platform that allows you to address a virtual audit.

✓ Active participation of process leaders and work team.

✓ Effective management of the SGE that allows demonstrating energy performance based on the reduction of costs, reduction of gases, greenhouse effect and a sustainable organization.

✓ There is an operational automation process in the ECGs, related to the starts of compressor motors and their electronically controlled purge. This allows less gas to be vented to the relief system at each start.

- **CONCLUSIONS**

✓ As a result of this audit, four (4) observations and seven (7) improvement aspects were identified in the application of the audited processes in order to guarantee continuous improvement of the Energy Management System and the performance of the organization.

✓ The audit teams carried out an audit based on processes focused on the significant issues required by the Standard, likewise the audit methods used were interviews, document review and observation of activities and facilities, verified through virtual platforms.

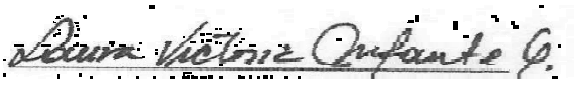
✓ Similarly, and reviewing the findings reported in each of the audited processes, the audit team

concludes that TGI S.A. ESP has established and maintains an Energy Management System that meets the requirements of ISO 50001: 2018; However, to demonstrate its strengthening, it is pertinent to analyze the observations and aspects to improve reported in this report and, the actions resulting from their analysis are carried out if appropriate.

- ✓ Looking to receiving the external audit and once the observations of this internal audit exercise have been addressed, which will strengthen the system, TGI S.A. ESP is prepared to attend follow-up No. 2, to the ISO 50001:2018 standard.

Finally, it is established that the Energy Management System is:

- ✓ **Appropriate**: Sufficiency of the actions to meet the requirements: The Management System of the Energy of TGI S.A. ESP is adequate, since in general terms; it has the capacity to meet the requirements established in the applicable regulation, the agreements with its users, the ones considered through internal procedures and policies, and those specified in the ISO 50001: 2018 Standard.
- ✓ **Convenient**: Degree of alignment or coherence of the object of review with the goals and policies of the organization: The Energy Management System of TGI S.A. ESP is convenient since the programs, projects, activities and actions respond to the strategic approach of the organization; it was possible to demonstrate that the structure of the SGE responds to the approaches of the organization visualized in its strategic plan 2019-2027.
- ✓ **Effective**: Extent to which the planned activities are carried out and the planned results are achieved: The Energy Management System of TGI S.A. ESP is effective, which it is demonstrated by the level of execution of its strategic plan and the satisfactory results obtained to date. The performance of the organization energy sector is remarkable, which is evidenced through the EE projects developed by the Organization.

Lead auditor:	**Approved by:**
 **LAURA VICTORIA INFANTE**	**CAROLINA BONILLA PORTILLA**

Elaborated by: Laura Victoria Infante.
Revised by: Silvia Higuera
Approved by: Carolina Bonilla