



ISO 14064-1 Verification / validation duration table
ISO14064-1 审定/核查时间计算准则和规则

1, 确定审定/核查天数的依据 The basis for determining the verification/validation days.

They contain the ratio between the number of GHG-effective personnel and the level of complexity of GHG statement. The verification/validation duration reveals the on-site and off-site effort including planning, execution, evaluation and reporting, but without breaks and travel times.

表 A 中包含了温室气体有效人员的数量和温室气体声明复杂程度之间的比率。审定/核查时间反映现场和非现场，包括审定/核查策划、执行、评价及报告，但是不包括休息和旅行时间。

Table A Minimum verification/validation duration 审定/核查的最少时间

Number of effective GHG management personnel 温室气体管理有效人数	Complexity 复杂性		
	Low 低	Medium 中	High 高
1-25	4	5	6
26-50	4.5	5.5	7
51-85	5	6	8
86-125	5.5	7	9
126-175	6	8	10
176-275	6.5	9	11
276-425	7	10	12
≥426	The validation /verification body may provide for verification/validation duration for a number of GHG management effective personnel exceeding 425. Such duration should follow the progression in this table. 温室气体管理有效人员的数量大于 425 时，审定/核查机构可按照本表的递进规律计算审定/核查时间。		

2, 确定温室气体管理有效人数 Determination of the GHG management effective personnel

For the calculation, consideration shall be given to the personnel who materially impact the GHG emission management, including the following: 计算时，应考虑对温室气体排放管理体系有重大影响的人员，包括以下人员：

- a) top management;最高管理者
- b) management representative(s);管理者代表
- c) GHG management team;温室气体管理小组
- d) person(s) responsible for major changes affecting GHG emission or removal performance;
负责影响温室气体排放和清除的重大变化的人员；
- e) person(s) responsible for the effectiveness of the GHG management
负责温室气体排放管理有效性的人员；
- f) person(s) responsible for developing, implementing or maintaining GHG performance improvements including objectives, targets and action plans;
负责制定、实施或维护温室气体管理绩效的人员。改进，包括目标、指标和行动计划；

g) person(s) responsible for significant GHG sources and sinks .
负责重要温室气体源和汇的人员。

Points a) -g) are grouped into three groups: 分为三组:

- top management according a)
最高管理者 a)
- management representative(s) and GHG management team according a), b), c), e) as well as
管理者代表和温室气体管理小组, 包括 a), b), c), e)
- person(s) responsible for major changes, developing, implementing or maintaining GHG performance improvements according d), f), g).
负责重大变更、开发、实施或保持去温室气体绩效改进的人员, 包括 d), f), g).

Usually 10% of the total employees in headquarter and 5% of the total employees in locations are counted as GHG management effective personnel if no detailed information is available.

如果没有详细信息, 通常总部员工总数的 10%和现场员工总数的 5%被视为温室气体管理有效人数

If the proportion of GHG management effective personnel is less than 10%, a reason must be provided when determining the verification/validation duration.

如果温室气体管理有效人数比例低于 10%, 则在确定审定/核查持续时间时必须提供理由。

Following reasons can be accepted: 以下理由可以接受:

- Plausibility of the information in the customer information: 客户信息表中信息的真实性:
 - o Systematic determination of GHG management effective personnel GHG 管理温室气体管理有效人数的系统确定
 - o Organization chart 组织机构图
 - o Qualified written declaration of the customer 客户的合格书面声明
- Industry structure:产业结构
 - o Logistic company with a lot of drivers; i.e. the driver trainers count as EnMS effective staff, not the drivers
物流公司, 司机很多;则司机培训师被视为温室气体管理的有效员工, 而不是司机
 - o Service provider with a large number of operative employees at the customers site without any influence on GHG emission
在客户现场有大量运营员工的服务商, 且不影响温室气体排放
 - o Manufacturing company with few different products and a high degree of automation (e.g. large car manufacturers with high regulatory density, regular trainings, extensive measuring and control systems, little to no influence of the lower and middle management board)
产品差异少、自动化程度高的制造企业 (如监管密度高、培训定期、广泛使用测控系统、中下管理层影响小到没有的
大型汽车制造企业)
- Level of organization:组织层次
 - o >250 total staff, according to experience, the GHG effective personnel is in the range of 5-10% of the total staff; i.e. it increases disproportionately and not linearly: 员工总数>250 人, 根据经验, 温室气体管理有效人员占员工总数的比例在 5-10%之间, 即不成比例且不呈线性增长:
 - From 250 to 300 staff, the reference to >7.5% share of total staff is sufficient
 - 从 250 名员工到 300 名员工, 占员工总数 7.5%以上的比例就足够了
 - >300 employees the reference to >5% share of total staff is sufficient
 - 超过 300 名员工, 超过总员工 5%的份额就足够了

2, 确定温室气体声明的复杂性 Determination of GHG statement complexity

The complexity is based on the following considerations: 复杂性基于几个方面的考虑:

- annual GHG emission of organization or projects;
- number of GHG emission categories
- number of GHG sources, sinks and reservoirs ;
- scope;
- assurance level;
- 项目或组织年度温室气体排放量;
- 温室气体排放类别的数量
- 温室气体源、汇及库的数量;
- 范围
- 保证等级

The data on GHG emission, the number of GHG sources, sinks and reservoirs, assurance level, energy sources and the number of significant energy uses are taken from customer information (customer data).

有关年度温室气体排放量、温室气体源/汇及库的数量、范围及保证等级数据取自客户信息（客户数据）。

For each consideration, two pieces of information are needed to calculate complexity:

对于每一个因素，需要确定两方面的信息来计算复杂程度。

- a) the weight or multiplier; 权重;
- b) the complexity factor which is based on a range. 一定范围内的复杂程度系数

The formula to calculate the **complexity, C**, is: 复杂程度 C 的计算公式是:

$$C = (W_E \times F_E) + (W_C \times F_C) + (W_{SSR} \times F_{SSR}) + (W_S \times F_S) + (W_{AL} \times F_{AL})$$

Where 其中

F_E : is the annual GHG emission complexity factor from Table B

是表 B 中年度温室气体排放量的复杂程度系数

F_C : is the GHG emission categories complexity factor from Table B

是表 B 中年度温室气体排放类别的复杂程度系数

F_{SSR} : is the number of GHG sources, sinks and reservoirs factor from Table B

是表 B 中温室气体源、汇及库数量的复杂程度系数

F_S : is the number of scope complexity factor from Table B

是表 B 中范围的复杂程度系数

F_{AL} : is the assurance level complexity factor from Table B

是表 B 中保证等级的复杂程度系数

W_E : is the weight of the factor from Table B for annual GHG emission

是表 B 中年度温室气体排放量的权重

W_C : is the weight of the factor from Table B for GHG emission categories

是表 B 中年度温室气体排放类别的权重

W_{SSR} : is the weight of the factor from Table B for n the number of GHG sources, sinks and reservoirs

是表 B 中温室气体源、汇及库数量的权重

W_S : is the weight of the factor from Table B for scope

是表 B 中范围的权重

W_{AL} : is the weight of the factor from Table B for assurance level

是表 B 中保证等级的权重

表 B 确定审定/核查时间的温室气体复杂程度准则 Table B GHG emission complexity criteria

Considerations 因素	Weight 比重		Range 范围	Complexity factor 复杂程度系数	
Annual GHG emission 年度温室气体排放量	20%	W_E	<= 10,000 tCO _{2e}	1	F_E
			10,000 tCO _{2e} <= 50,000 tCO _{2e}	1,2	
			50,000 tCO _{2e} <= 100,000 tCO _{2e}	1,4	
			> 100,000 tCO _{2e}	1,6	
Number of GHG emission categories 温室气体排放类别数量	20%	W_C	1 to 2 GHG emission categories 1-2 种	1	F_C
			3 GHG emission categories 3 种	1,2	
			4 GHG emission categories 4 种	1,4	
			≥ 5 GHG emission categories ≥ 5 种	1.6	
Number of significant GHG sources, sinks and reservoirs (SSSRs) 主要温室气体源/汇/库的数量	30%	W_{SSR}	<=5 SSSRs	1	F_{SSR}
			6-10 SSSRs	1,2	
			11-15 SSSRs	1.4	
			≥ 16 SSSRs	1,6	
Scope		W_S	Scope 1 and 2 范围 1,2	1	F_S

范围	10%		Scop3 1,2 and 3 范围 1,2,3	1.4	
Assurance level	20%	W_{AL}	limited assurance level 有限保证等级	1	F_{AL}
保证等级			reasonable assurance level 合理保证等级	1,4	

Once the complexity value has been calculated using the formula, the value is used to determine the level of GHG statement complexity based on Table C.

按照上述公式计算得到复杂程度值，用该值可以根据表 C 来确定温室气体声明复杂程度的等级。

Once the complexity value has been calculated using the formula, the value is used to determine the level of GHG statement complexity based on Table C.

按照上述公式计算得到复杂程度值，用该值可以根据表 C 来确定温室气体声明复杂程度的等级。

表 C ---- 温室气体声明复杂程度等级 Table C ---- Level of the GHG statement complexity

Complexity value 复杂程度值	Level of the GHG statement complexity 温室气体声明复杂程度等级
<1,15	Low 低
1,15 bis 1,35	Medium 中
>1,35	High 高

3 . Special provision and special process 特殊规定和特殊过程

3.1 Mixed engagement /agreemet 组合项目协议

A mixed engagement is an engagement combining verification and validation activities performed at the same time and on the same GHG statement.

组合项目协议是指针对同一温室气体声明同时实施审定与核查活动。

The mixed engagement is not applicable for GHG projects.

组合项目协议不适用于温室气体项目。

In the framework of a mixed engagement /agreement (validation +verification) , increase in the verification/validation time are needed as a result of the complexity of validation and verification activities as well as difference between them.

在包含审定和核查的组合项目协议框架内，考虑到组合项目包含的各个项目的复杂性，它们之间的差异性，需要适当增加审定/核查时间。

The minimum increase in duration is 10%.

最小允许的审定/核查时间增加数量为 10%。

3.2 Validation and Verification of multi-site organization 多现场组织审定与核查

If GHG inventory that the GHG statement bases on includes data and information input from several separate facilities, considerations such as logistics and planning of verification for such data and information input from each facility and their combination shall be taken, including impacts on duration.

如果 GHG 声明所基于的 GHG 清单包括来自若干相互分离的设施的数据和信息输入，应考虑对来自单个设施的数据及其组合以及相关信息输入进行核查的有关后勤安排和策划，及其对核查时间的影响。

In principle, taking into account the following the sampling of facilities is not possible for validation and verification:

- facility complexity on GHG inventory, difference in GHG information system and controls at facility level, difference in measurement and monitoring
- difference in selection of GHG sources, sinks and reservoirs, and their quantification process at each facility

原则上，考虑到下述因素，不允许对多个设施进行抽样核查和审定。

- GHG 清单中的设施的复杂性，GHG 信息系统和控制措施在设施层次上的差异，以及设施的测量/监测过程的差异；
- 适用于 GHG 清单中各个设施的 GHG 源、汇、库的选择和量化过程的差异

In this situation, the facilities that have the same or similar GHG sources, sinks and reservoirs could be sampled for site visit, but offsite validation and verification for every site is a must.

For facilities that are applicable for sampling the minimum sample size for onsite visit is determined according to Table D
 在这种情况下，对那些温室气体排放源、汇及库相同或者相似的设施可以进行抽样进行现场访问，但是对每一个设施非现场的
 审定或核查是必须的。
 适用于抽样设施的现场访问，其最小抽样比例按表 D 执行。

Table D Sample size for facilities applicable for sampling 表 D 抽样设施最小抽样样本比例

Number of facilities	Minimum sampling size for onsite visit	Notes
1-2	100%	
3-10	50%	
10-20	40%	No less than 5
20-50	30%	No less than 8
≥ 50	20%	No less than 15

The calculation result of sample size is rounded to the upper whole number.
 抽样场所计算结果向上圆整到整数。

In any case, the verification/validations are determined per site. The calculation sheet (F-GHG-01-02 is used for this. A reduction of 30% can be made for the additional sites / branches due to pure production/service processes and no management/leading processes and support processes at the site/facility. This must be examined and justified on a site-specific basis.

在任何情况下，审定/核查时间都是根据每个现场确定的，应使用 F-GHG-01-02 合同评审表计算。对于纯生产/服务流程，现场没有管理/领导流程和支持流程每个现场可减少 30%。必须根据现场具体情况对此进行检查和论证。

For sites with a very small share of the total GHG emission (for example in the case of an organization with a store or shop structure), the minimum verification/validation time may be fallen below in consultation with the technical coordinator. It is necessary to check whether the verification/validation time in the central office has to be increased. The decision must be documented.

对于温室气体排放占总排放比例很小的场所（例如，对于有商店或商店结构的组织），最少审定/核查时间可以下降，但是应与技术协调员协商。有必要检查是否需要增加中央办公室的审定/核查时间。这些决定必须予以记录。

Note 说明

If material misstatement is found while onsite visit of a sampled facility, an additional 20% facilities will be sampled for onsite visit. And if misstatement is found again, all facilities shall be visited.

如果现场访问时发现抽样现场出现实质性错误陈述，将增加 20%现场访问抽样样本量，如再次发现实质性错误陈述将对所有现场实施访问。