

CenturyLink GHG Inventory Assurance

Assurance Review Findings

PROCESS















WSP is pleased to provide CenturyLink with this findings report summarizing the results of our review of CenturyLink's 2013 greenhouse gas (GHG) inventory, with the intention of providing limited assurance of its accuracy and completeness for the purposes of responding to the 2014 CDP Climate Change information request. WSP has conducted our review consistent with guidance provided by ISO 14064-3, and has done so in its capacity as an independent third party reviewer. The assurance review is intended to provide CenturyLink and external parties with an additional level of confidence that CenturyLink's 2013 GHG inventory is complete, accurate, in compliance with the GHG Protocol and covers appropriate sources and facilities given CenturyLink's stated objectives. In addition to serving as a data quality check, WSP's review process is intended to assure the adequacy of internal corporate data and process management systems for updating GHG activity data on an on-going basis. The assurance review scope is delineated in Table 1.

Table 1: Assurance Review Parameters

Assurance Parameters	WSP Approach
GHG reporting protocol against which the assurance was conducted	The Climate Registry General Reporting Protocol, version 2.0, March 2013 (TCR 2013a) including updated emission factors released April 2, 2013 (TCR 2013b) (collectively the TCR GRP)
GHG assurance protocol used to conduct the assurance	ISO 14064-3: Greenhouse gases -- Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions
Level of assurance	Limited
Organizational boundary	Operational control
Geographic boundary	All legacy CenturyLink, Quest, and Savvis operations in the US
Inventory period	January 1, 2013 to December 31, 2013
Operational boundary	All Scope 1 and Scope 2 emissions.

WSP's process checklist is shown in Table 2, which presents the specific tasks undertaken during the review of CenturyLink's GHG inventory and our discussion with CenturyLink staff and delegates responsible for compilation of the inventory.

Table 2: WSP Assurance Review Process

Review Tasks		Method of Verification
Boundary Setting Review		
	Appropriate organizational boundary is set	Reviewed with inventory management staff and discussed during site visit
	Appropriate operational boundary is set, company has adequate emission source identification procedure and data collection process in place	Reviewed with inventory management staff and discussed during site visit
	Company has adequate processes in place to reconcile and generate facility lists	Reviewed with inventory management staff and discussed during site visit
Data Management Process Review		
	Effective process and procedures are in place to collect accurate and complete GHG information	Reviewed with inventory management staff and discussed during site visit
Activity Data Review		
	Confirm activity data is based on appropriate sources	Reviewed with inventory management staff and delegates, and discussed during site visit
	Review processes for error checking, year on year comparisons, benchmarking	Reviewed with inventory management staff and delegates, and discussed during site visit
	Perform quality assurance of activity data	Performed spot-checking of energy utility bills with activity data used in GHG calculations
Internal Auditing Process Review		
	Evaluate the internal audit process used to identify gaps and errors in inventory management system	Reviewed with inventory management staff and discussed during site visit
Inventory Completeness Review		
	Scope 1 emissions	Compared invoices/bills/other results with GHG activity data, confirmed appropriateness of approaches used to estimate minor sources, refrigerant leakage and other direct emission source estimates. Confirmed that all common Scope 1 emissions sources are included
	Scope 2 emissions	Compared energy purchasing database with GHG activity data. Checked that all common Scope 2 emissions sources are included
	Relevant Scope 3 emissions	Scope 3 emissions were not verified
Emission Factors and Normalization Review		
	Verify that the correct emission factors are being used and that they are based on reliable, accurate, and current references	Compared GHG inventory calculation database with appropriate emission factor information
	Verify that each GHG is correctly converted to CO ₂ -equivalent using the appropriate Global Warming Potential	Compared GHG inventory calculation database with the appropriate IPCC GWPs
Estimation Review		
	Verify estimation methodologies used to fill data gaps are based on industry best practices	Reviewed estimates used in inventory calculation database

REVIEW FINDINGS

The WSP inventory and management system review consisted of a desktop review of the inventory calculation database, supporting activity data, the inventory report, and a site visit. Highlights of observations and recommendations for CenturyLink to implement to further improve its GHG inventory process are outlined in Table 2.

Table 3: Review Findings

Observation	Recommendation	Significance Potential	Remediation Action	Status
"Non-strategic" facilities are using state level eGRID emission factors from US EPA	The state level factors should be replaced with eGRID subregion factors as discussed	Medium	Required	Closed
The reported value for enthalpy of delivered steam of purchased steam calculations is low	Upon reviewing saturated steam tables the enthalpy of delivered steam, should be revised to 1,196 Btu/lb	Medium	Required	Closed
GHG inventory process for tracking emissions over time is unclear	Recommend updating process for tracking GHG emissions over time	High	Recommended Best Practice	Open
Currently using GWP's from IPCC Second Assessment Report	Recommend conversion to factors from the IPCC Fourth Assessment Report	Medium	Recommended Best Practice	Open
Detail for Scope 3 business travel emission calculations is unavailable	Recommend working with business travel emission calculation providers to provide more emissions calculation details	Medium	Recommended Best Practice	Open
Detail for Scope 3 transportation and distribution emission calculations is unavailable	Recommend working with transportation and distribution providers to provide more emissions calculation details	Medium	Recommended Best Practice	Open
The CH ₄ emission factor for natural gas is outdated	Recommend updating all natural gas emission factors to be consistent with the EPA emission factor hub, April 2014 release	Low	Recommended Best Practice	Open
The CO ₂ and CH ₄ emission factors for propane are outdated	Recommend updating all propane emission factors to be consistent with the EPA emission factor hub, April 2014 release	Low	Recommended Best Practice	Open
The mobile source emission factors for propane are outdated	Recommend updating all mobile propane emission factors to be consistent with the EPA emission factor hub, April 2014 release	Low	Recommended Best Practice	Open

Observation	Recommendation	Significance Potential	Remediation Action	Status
Emissions from FM-200 fire suppressants are not included in the inventory.	Recommend working to collect and include emissions from FM-200 fire suppression systems.	Low	Recommended Best Practice	Open