

**City of Portland
Sustainability Related Questions for Hosted IT Services
2016**

Background

As the City contracts more for “hosted” IT services (e.g. software, online applications, etc.), the City recognizes that the key environmental impacts of these services is the energy use, GHG emissions, and water use associated with the data centers that run the servers behind the hosted systems. As such, the City developed a set of questions to ask providers of hosted systems about the data centers behind their service. Depending on the solicitation, not all questions are included, but rather this list serves as a place to start.

Sustainability Related Questions for Hosted IT Services

REQUIRED INFORMATION

Data Center Information

- Data Center Location (Region/State/Country):
- Data Center Facility Owner: Owned by Proposer or Contracted Third-Party?
- If Contracted Third-Party: Co-Location or Hosted/Cloud?
- Role of this Data Center for this Project:

EVALUATIVE QUESTIONS

Energy and Carbon

(Direction to Proposers)

If your data center support is through a co-location service, then answer the server equipment related questions (marked with an asterisk) just for your own equipment within the data center. If you own the data center or if your data center support is through a hosted (cloud) service, then answer the server equipment related questions (marked with an asterisk) as applied to the entire data center.

1. What was the data center’s average Power Usage Effectiveness (PUE) for calendar year **XXXX** or nearest reporting period (specify timeframe)? (Show calculation: Total Facility Energy/IT Equipment Energy)
2. *What is the typical load of a server in the data center?
3. *How is server load monitored to balance both efficiency and fluctuating demand?
4. *How many servers are in the data center?
5. *What is the average age of the servers in the data center?
6. *What is the oldest server currently used in the data center?
7. *What is the server replacement cycle at the data center?
8. What types of strategies are currently utilized at the data center to reduce energy use?
9. What types of new energy efficiency strategies are planned and budgeted for the data center over the next two years?
10. What was the data center’s average Carbon Usage Effectiveness (CUE) for calendar year **XXXX** or nearest reporting period (specify timeframe)? (Show calculation: Annual CO2 Emissions by Total Datacenter Energy/IT Equipment Energy)
11. What is the power source mix for the data center’s energy?

Power Source	Percentage of Data Center’s Power Source Mix	Off-Site or On-Site Source?
Coal		
Natural Gas		
Hydroelectric		
Petroleum		
Biomass		

Geothermal		
Wind		
Solar		
Other: (specify)		
Other: (specify)		
Other: (specify)		

12. What plans are in place to change data center’s power source mix change over the next **XX** years (*term of resulting contract*)? Are any of these plans currently budgeted?

Water

1. What was the data center’s average Water Usage Effectiveness for calendar year **XXXX** or nearest reporting period (specify timeframe)? (Show calculation: Annual Site Water Usage/IT Equipment Energy)
2. What types of strategies are currently utilized at the data center to reduce water use?
3. What types of new water use reduction strategies are planned and budgeted for the data center over the next two years?

Electronic Waste

(Direction to Proposers)

If your data center support is through a co-location service, then answer the server equipment related questions (marked with an asterisk) just for your own equipment within the data center. If you own the data center or if your data center support is through a hosted (cloud) service, then answer the server equipment related questions (marked with an asterisk) as applied to the entire data center.

1. *What is the disposal protocol for decommissioned servers and related IT and communications equipment at the data center? Do you have a responsible disposal policy for your electronic equipment and what standards does it reference?

Building

1. Is the data center a USGBC LEED Certified Building or certified to another third-party green building certification program? If yes, provide the certification details (e.g. certification name, version, year of certification, etc.)
2. If the building is not certified to any third-party certification program but otherwise incorporates green design features (e.g. eco-roofs, rainwater harvesting, etc.), provide a list of the data center’s green design features.