Findings and Next Steps: Data Center Working Group Track 3

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Key Themes and Findings

- **Significant Practices and Technologies are Available to Improve Data Center Efficiency.**
- **Current Programs on Offer Provide Means to Assess/Benchmark Data Center Opportunities**
  - ➤ **ENERGY STAR Portfolio Manager**
  - ➤ **DOE DC Profile Program**
  - ➤ **EU Data Center CoC Best Practices**
- **There is a Lack of Uptake on these Program in Legacy Data Center Operations**
  - ➤ **There is opportunity for ITI/EPA/DOE Collaboration on Education of these Opportunities**
- **There is a Need for Standard Measurement Protocols at the Equipment and System level in the Data Center**
- **Utility Incentive programs Lack Effective Data Center Incentives**
- **The Group Needs to Explore the Vision for the Data Center of the Future**
- **There is a need to find an intermediate Metric (likely integrating capacity and/or utilization) that augments PUE but does not provide a complete productivity metric.**

Information Gaps & Program Opportunities

- **Metric:**
  - ➤ **Definitions of how to measure capacity and/or utilization.**
  - ➤ **Eventually need a defined productivity metric.**

- **Integrate ENERGY STAR Data Center Portfolio Manager with/to DOE DC Profile Program to Encourage/Enable Benchmarking and Assessment**

- **Business Case/Knowledge that Enables Data Center Operators to Justify/Act on Opportunities**
  - ➤ **Understanding Barriers to Adoption**

- **What is the role of products in measuring data center performance?**

- **Uptake of Available Tools and Resources is Not Occurring**

- **There is a Disconnect Between the Size of the Data Center Energy Savings Opportunity and the Availability of Utility Incentives**

Next Steps

- **ITI and ENERGY STAR (and DOE?) Explore:**
  - **Competitions for Most Improvement in:**
    - **Individual Data Center**
    - **Data Center Portfolio**
  - **Opportunities to leverage state and local initiatives to educate data center operators regarding EE opportunities.**
  - **Opportunity to Conduct a Survey to Update ENERGY STAR DC Score system.**
  - **Engage with Utility Incentive Programs to Target Programs to Incent Opportunities.**
- **Explore Ways to Accelerate and Innovatively Apply:**
  - **Productivity/Capacity Metric(s)**
    - **Integrated or Separate?**
  - **Standard Measurement Approaches at data center hardware and system levels.**