PBS Customer Forum Series – Q & A

Topic: **Tackling Climate Crisis**

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Session Links:
- SFTool - Sustainable Facilities Tool
- Building Transparency
- Fourth National Climate Assessment (NCA4)
- Impacts, Risks, and Adaptation in a Changing Climate: An Overview of NCA4
- Contact your National Customer Lead

Is the Federal vehicle fleet working towards a zero emission reality or net zero?

> *Answer -* Zero emission vehicle reality, unless you also mean calculating embodied carbon. We are talking about zero emission for operational carbon.

What is embodied carbon?

> *Answer -* The amount of energy/emissions used/produced in the creation of the materials used to construct a building, or product.

What tools are there for a customer to understand the amount of embodied carbon within the building elements?

> *Answer -* There are some tools on the market and GSA is meeting with industry on this. There are organizations such as the Athena Institute, that has calculators for embodied carbon.

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Is it possible to be zero emission if electric vehicles still get energy from a non-modernized grid?

> *Answer -* The electric vehicle (EV) can be described as zero emission, but if non-modernized means that the local grid is supplying fossil fuel generated electricity, then no, the transport provided by the EV would not have zero emissions. The federal government is trying to do both--procuring carbon pollution-free energy for operations, and providing the same energy to the fleet.

How do we measure success in tackling the climate crisis?

> *Answer -* In all of the mitigation activities, we have clear metrics. For example, GSA has a goal of carbon pollution free energy, 100 percent, 24/7 by 2035. We can also measure success in mitigation by tracking greenhouse gas reductions. Those calculations and metrics have been developed and used for more than a decade. For climate change adaptation and resilience, it's a little bit tougher. We can't predict individual storm events. We intend to use a series of private sector-developed measures for adaptation which will give us a benchmark in which to gauge where we are going with that.

When we talk about future climate risk, what time horizons are we looking at? Can we predict in any way when and what degree that climate is going to adversely affect our agency missions?

> *Answer -* The first thing we start asking is how long are your operations going to be in effect, and what kind of asset is it. For GSA for example, we build buildings that last 100 years, more or less, so we are looking at the 100 year time horizon. Analyzing flood maps and other data, we know that events will occur, we just don't know when and the degree of severity. Standard industry practice is to use forward looking climate data in models when the lifespan of the equipment, system or building is expected to be over 30 years. When designing systems with

under 30 year lifespans, we continue to use the ASHRAE practice of using the past 30 years weather data.

How can customer agencies work with GSA to plan for sustainability, resilience, adaptation, mitigation?

> ***Answer -*** GSA has the expertise and we can collaborate with agencies on project planning to ensure that proper procedures are in place to meet federal requirements. Operationally, some key things we can do is reduce our overall footprint and reduce reliance on utilities. This helps our buildings and operations make it through severe weather events with reduced impacts on your mission. It also has the added benefit of mitigating climate change now by reducing greenhouse gas emissions through less fossil fuel consumption. Additionally, we recommend reaching out to your agency's National Customer Lead who can help point you to the right resources.