

Resilience 2021: The Hidden Costs of Environmental Savings from Remote Work

February 11, 2021 | Session Overview

PANEL

Jody Holton, Assistant General Manager for Planning & Strategic Initiatives, Southeastern Pennsylvania Transportation Authority (SEPTA)

Nancy Sutley, Chief Sustainability Officer, Los Angeles Department of Water and Power

Aaron C. Smith, Chief Executive Officer, Energy & Environmental Building Alliance

Nancy Novak, Chief Innovation Officer, Compass Datacenters

MODERATOR

Roy Wright, President & Chief Executive Officer, IBHS

THE HIDDEN COSTS OF ENVIRONMENTAL SAVINGS FROM REMOTE WORK OVERVIEW

On February 11, 2021, the National Institute of Building Sciences hosted a webinar to discuss the costs of the remote work world as a result of the COVID-19 pandemic. The webinar received 471 registrants.

A panel of thought leaders from SEPTA, Los Angeles Department of Water and Power, Energy & Environmental Building Alliance, and Compass Datacenters covered everything from energy alternatives and mass transit ridership to driving sustainable change within local environments and homes.

COVID-19 lockdowns are expected to cut carbon emissions by 4-7% this year, but experts say the decrease is insignificant in the long run.

Reduced activity has the appearance of bringing the world to a standstill, but carbon emissions actually have continued almost unabated. Lockdowns do not reduce overall energy consumption; they affect only mobility.

The next webinar in the Resilience 2021 series now is being planned. Visit <https://www.nibs.org/resilience-webinar-series> for more information.

SERVING MILLIONS OF ANGELENOS

The Los Angeles Department of Water and Power serves four million people.

Nancy Sutley, Chief Sustainability Officer with LADWP, said the organization is working to decarbonize its grid. Already, LADWP has reduced greenhouse gases by about half. The group is well on its way to its goal of 60 percent renewables by 2030, Sutley said.

The ultimate goal is to reach 100 percent renewable energy by 2045.

Then along came COVID. During this time, the most important mission has been to keep the lights on and water running for customers. Equally important has been keeping LADWP employees and customers safe, while sticking with sustainability goals.

Prior to COVID, Sutley mentioned it was easy to track when energy use was up – people got up in the mornings to start their day. During COVID, LADWP has seen a shift and pattern of people continuing energy use throughout the day while at home.

“This has been a shock to the system for everybody,” Sutley said. “People will still use energy and water wherever they are. We need to provide this service.”

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COVID shutdowns have led to great financial impact on LADWP customers, particularly those with a low income. The ability to pay for water and power service has been strained.

Sutley said the city has enacted a moratorium on shutting off services for non-payment.

“It’s in place,” she said. “We don’t have a plan to remove that.”

Currently, Los Angeles is holding high-level conversations around different sectors of the economy, which helps with energy planning. Some examples: Powering Los Angeles International Airport or the Port of Los Angeles, which is looking at removing emissions from the movement of cargo.

STRENGTHENING OUR HOMES TO BE LIKE OUR OFFICES

Aaron C. Smith, Chief Executive Officer with the Energy & Environmental Building Alliance, the pandemic created a burning platform for the organization.

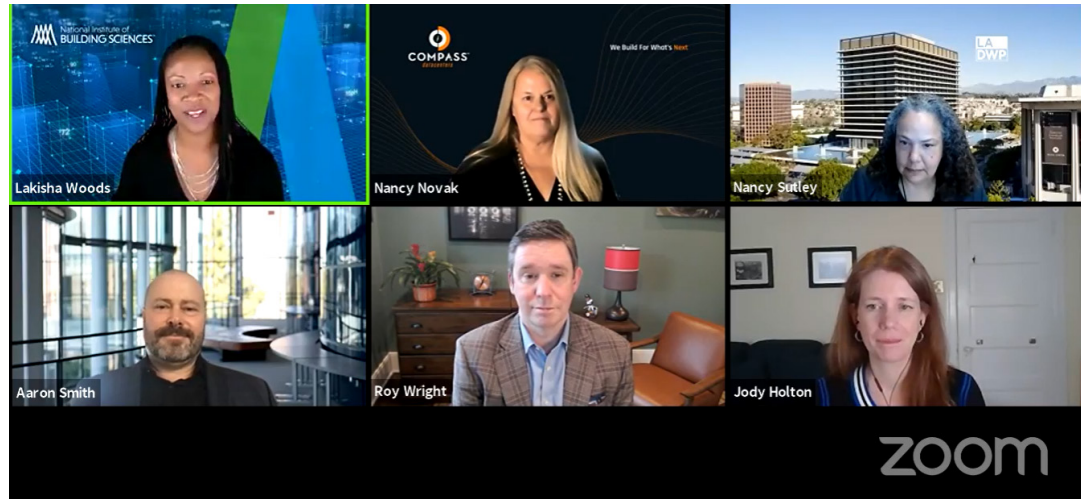
Before the pandemic, EEBA had an annual meeting and trainings that it would host in cities across North America. Like many organizations, everything pivoted to online last year.

It also radically changed how the organization could do outreach, opening up opportunities to reach more people.

Smith said the pandemic has forced people to be thoughtful about a number of things, including energy consumption, impact, fresh delivery of air to building occupants, and views to nature.

“We’ve all transitioned to our homes,” said Smith, mentioning that he’s assessing how he will amend his 1962 Cape Cod home. “I do not have the technology in this home to deliver fresh air, and I don’t have high performance heating and cooling systems. But I’m going to add solar.”

There are rebates available from the federal government and different states.



“Let’s drive change in our local environment in our homes and hopefully make our homes as good as our office spaces,” he said.

When it comes to new homes, consumer studies have indicated that millennials and Gen Y will demand sustainable structures.

“They were brought up with sustainability,” Smith said. “They want healthy, energy efficient, zero energy homes. People don’t want just a code home, just like they don’t want older technology.”

SUSTAINABILITY AND THE DIGITAL DIVIDE

When you think about digital infrastructure and the internet, we’re at that stage when electricity was called lighting. There was a time when power was only used for this.

This is where we are with the internet, said Nancy Novak, Chief Innovation Officer with Compass Datacenters.

There’s no stopping new technologies like machine learning and artificial intelligence. Said Novak: “Data is the currency of today’s world.”

But the digital divide is great, particularly for communities that struggle to educate their children.

And when it comes to working from home vs. going into the office – Novak says there’s no crystal ball telling us the future. But it may look like a hybrid – more flexibility to work from home and also the opportunity to go to the office.

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“It’s not this or that,” she said. “It’s about making the pie bigger.”

When it comes to sustainability, datacenters use about 3 percent of the world’s energy. Novak said she doesn’t know how much more power they will need, but larger industry firms already are focused on sustainability.

For example, Compass Datacenters have waterless cooling for the data halls.

“This is better for the environment, and we’re looking at our structures and using embodied carbon technology to make them more sustainable and have less impact on the environment or the community,” Novak said.

Other things datacenters are looking at: Safe and sustainable power sources like hydrogen, fuel cells, compressed air energy storage, hydropower, micro-grids and even nuclear power some day.

“It’s about having the right kind of power,” she said. “There are a lot of great innovations, they just haven’t normalized yet.”

TRANSIT SERVICE IS ESSENTIAL

The Southeastern Pennsylvania Transportation Authority (SEPTA) is the fifth largest transit agency in the country. It typically serves one million riders each day. During the pandemic, this has gone down to 300,000.

Jody Holton, Assistant General Manager for Planning & Strategic Initiatives with SEPTA, estimates SEPTA is losing about \$1 million a day. CARES Act funding has helped save SEPTA from significant service cuts.

“We have to think about how long this ridership trend will last,” Holton said. “We did some deep research into teleworking. Thirty-six percent of riders may continue teleworking.”

The agency also predicts it will not return to its one million ridership once people return to their normal activities. Holton said SEPTA expects ridership will reach maybe 85 percent to 90 percent of its pre-COVID ridership.

How it plans to adapt involves moving toward a more lifestyle network with trips throughout the day vs. just during peak times. The organization also may look at other options, particularly redesigning its bus network.

“We’re doing everything we can think of to help support an economic recovery,” she said.

For example, SEPTA is looking closely at how it impacts different communities and looking at other transit agencies and what’s working for them. She said: “We are looking into how we can remove some inequities in our fare structuring.”

Holton pointed to Portland, which has initiated a fare restructure that allows for half-priced fare for low-income riders.