Planning and Regional Development Department

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Moving More, Emitting Less

Earth Day on April 22 was dedicated to appreciating the environment and recognizing the urgent need to act on climate change. Indeed, the impacts of climate change are already here. Global temperatures increased by 1.8°F between 1901 and 2016 and are projected to rise to 4.2-8.5°F by 2080-2099 under the business as usual scenario (RCP 8.5)¹. Last year closed with important scientific consensus evidence that the climate change impacts between 2.7°F and 3.6°F of warming are not linear. For example, extreme heat would be 2.6 times worse and there would be 10 times more ice-free summers². Meeting the Paris Agreement goals requires substantial reductions before 2040³. This Earth Day, there was recognition of progress, but also evidence that it is not fast enough.

Regional leaders, including governors and mayors in New York and New Jersey, and the Port Authority of New York and New Jersey⁴ are making ambitious commitments to reducing greenhouse gas (GHG) emissions. The level of CO₂ emissions in NY and NJ (274.5 million metric tons in 2016) is higher than every state except Texas and California. NY and NJ emissions represented 4.2% of national emissions, thus changes in the region have an impact at a national and global level. And some progress has been made, with U.S. emissions decreasing by 11% between 2006-2016. In that period (2006-2016) the Port Authority reduced 13% of emissions in operational control, also known as direct and indirect or scope 1-2 emissions⁵. Of the Port Authority's total 5.9 million metric tons of CO₂₀, 46% were emitted by tenants and 49% came from customers.

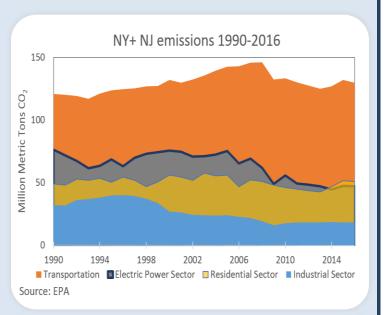
U.S. total emissions are 1.9% lower in 2016 than in 1990, but in recent years the rate of reductions is slowing. The recent decreases in national emissions are attributed to changes in electricity markets which are using more renewables and natural gas. This transition was facilitated by market trends, new technology and policy interventions like renewable portfolio standards and REGGI, a regional carbon trading market⁶.

Transportation emissions decreased by 6% nationally, and 7% regionally (NY and NJ) between 2006 and 2016 largely as a result of falling vehicle miles travelled and improved vehicle efficiency. In the same period, emissions from electricity generation decreased



Economic Variables	Current - One Year Trend						
UNITED STATES		Mar 2018 - Mar 2019					
Real GDP [Annual Rate]	Q12019	3.2%					
Unemployment Rate	Mar-19	3.8%	Indiana di				
Consumer Price Index [Annual]	Mar-19	1.9%					
Gasoline Price [Regular]	Mar-19	\$2.52					
PORT AUTHORITY REGION							
Regional Employment [NY MSA]	Mar-19	9,942					
Consumer Price Index [Annual]	Mar-19	1.6%					
Port District Exports [\$Bill]	Feb-19	\$11.86					
Port District Imports [\$Bill]	Feb-19	\$21.61	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
Case-Shiller Home Price Index	Feb-19	2.8%	Itteres				
Commercial Real Estate Asking Rent							
Midtown	Q12019	\$82.04					
Downtown	Q12019	\$67.74					

by 23% in the U.S. and 27% in NY and NJ. Transportation percentage of total emissions continues to grow as other sources decrease their contribution faster. In the U.S. transportation was 24% of emissions in 1990, 27% in 2006, and 29% in 2017. In NY and NJ transportation grew from 38% in 1990, to 46% in 2006, and 49% in 2016.



While the 96% of emissions of Port Authority emissions are not in operational control, the agency can play an active role to support and amplify industry changes that are already underway. Technological advances, investments, that shift away from non-renewables need to be part of the transition to a more sustainable or green economy.

The aviation industry, through IATA, is planning to cap net aviation emissions by 2020 and implement a reduction in net aviation CO_2 emissions of 50% by 2050 (compared to 2005)⁷. Within the Port Authority, aviation represents 55% of GHG emissions, mostly from aircraft and attracted travel. The International Maritime Organization

¹ IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. Web. www.ipcc.ch/sr15/chapter/summary-for-policy-makers/

² Ibid.

³ Ibid.

⁴ Press Release Number: 60-2019, www.panynj.gov/press-room/press-item.cfm?headLine_id=3111

⁵ Air Quality & Greenhouse Gas Emissions Reductions www.panynj.gov/about/air-quality-emissions-reductions.html

⁶www.panynj.gov/about/pdf/Monthly-Economic-Indicators-2018 10.pdf

https://www.iata.org/policy/environment/Pages/climate-change.aspx

MONTHLY ECONOMIC INDICATORS

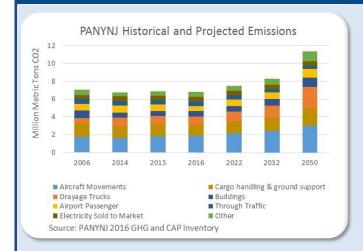
THE PORT AUTHORITY OF NY & NJ

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AVIATION	Feb '19	YTD	Feb '19/'18	YTD '19/'18	PORT	Feb '19	YTD	Feb '19/'18	YTD '19/'18
Revenue Passengers (000's)	9,305.2	19,397.0	2.5%	4.1%	Port Trade				
John F. Kennedy International Airport (JFK)	4,139.0	8,754.2	5.0%	6.8%	Container Imports (TEUs)	295,523	622,868	7.6%	6.7%
LaGuardia Airport (LGA)	2,034.1	4,113.8	1.6%	2.4%	Container Exports (TEUs)	113,358	225,191	-2.9%	-1.9%
Newark Liberty International Airport (EWR)	3,096.6	6,448.9	0.1%	1.5%	Containers lifted on/off Express Rail	49,551	104,256	4.3%	6.6%
Stewart International Airport (SWF)	35.5	80.1	-11.2%	-3.3%	TUNNELS, BRIDGES & TERMINALS	Feb '19	YTD	Feb '19/'18	YTD '19/'18
Revenue Freight (Short Tons)	163,576	338,636	-5.8%	-2.5%	Eastbound Vehicle Volumes (000's)	8,670	17,912	1.0%	1.8%
Domestic	60,427	128,461	-3.0%	0.9%	George Washington Bridge	3,678	7,599	-0.2%	0.6%
International	103,149	210,175	-7.4%	-4.5%	Lincoln Tunnel	1,357	2,795	-2.1%	-2.1%
Flights	106,299	222,631	-2.8%	0.2%	Holland Tunnel	1,128	2,338	4.2%	5.5%
Domestic Air Carrier	69,072	144,575	-1.3%	1.9%	Bayonne Bridge	192	394	-2.9%	-5.9%
International Air Carrier	21,753	46,567	-1.3%	1.9%	Goethals Bridge	1,245	2,572	8.7%	11.3%
General Aviation	15,474	31,489	-10.9%	-9.7%	Outerbridge Crossing	1,070	2,214	-1.4%	-1.2%
Paid Parked Cars	433,575	936,574	-1.5%	-3.3%	Eastbound Volumes by Vehicle Type (000's)				
Revenue AirTrain Passengers	1,228,965	2,591,897	-10.0%	-7.0%	Autos	7,904	16,303	1.1%	1.8%
					Trucks	549	1,157	0.5%	2.2%
FERRY OPERATIONS	Feb '19	YTD	Feb '19/'18	YTD '19/'18	Buses	216	451	-0.9%	0.2%
Passengers (000's)									
New Jersey Ferries	706.2	1,478.0	12.1%	15.0%					
PATH	Feb '19	YTD	Feb '19/'18	YTD '19/'18	U.S. TRANSPORT. SERVICES INDEX	Feb '19	Jan '19	Change	
Passengers (000's)	6,050.0	12,530.0	-1.4%	-0.6%	(Prelim., Seasonally Adj., 2000=100)				
Average Weekday	278.0	275.0	-0.6%	0.8%	TSI - Combined Index	134.8	135.0	-0.1%	
Average Saturday	94.4	89.4	-7.2%	-11.7%	TSI - Freight	136.9	137.6	-0.5%	
Average Sunday	69.5	66.0	-6.7%	-9.1%	TSI - Passenger	130.4	129.7	0.5%	

TRANSPORTATION FOCUS



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took bold steps by placing a sulfur cap of 0.5% on all vessels and energy efficiency requirements⁸. Port activities represent 22% of Port Authority emissions primarily from attracted travel. Tunnels bridges and terminals represent 8.8% of total Port Authority emissions. Investments in transportation efficiencies, support for increased bus and transit use, and incentives for electric vehicles may also support GHG reductions.

Beyond improving efficiency and adopting new technologies, it will take more than marginal reductions to achieve meaningful change. There is reason for optimism, but, as Nicholas Stern repeats in all his talks on climate change, "we are not moving fast enough." On this earth month, while we pause and reflect on the challenge of our generation, we need to act on a shared vision on how to move the region while also moving on climate change.



Have you listened to one of our recent podcasts?

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