Planning and Regional Development Department

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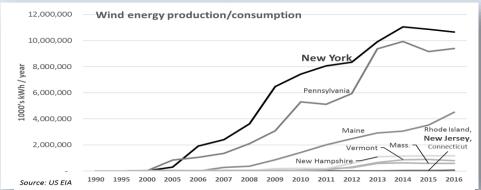
## October 2018

## Wind Power and New York: a Love Story

Greater New York is pretty green, at least relatively speaking. Regional leaders say it can and should be even greener. Lawmakers and administrators in both New York and New Jersey have tightened clean energy standards and objectives in recent months. And, in late October, the Port Authority of New York and New Jersey vowed to cut the agency's greenhouse gas emissions, in the spirit of the Paris climate change accord, otherwise known as the Paris Agreement.

These steps would continue a regional trend that began prior to the recession. The Northeast United States gets more of its energy from renewable sources than does much of the United States, including California. Its production portfolio includes significant capacity from hydropower and biomass (wood). That





portfolio has been diversifying in recent years, and regional leaders' latest stated objectives could result in increased investments in one energy source that was almost non-existent in the region as recently as 2004: wind power.

Over the past 10 or 15 years, the State of New York has witnessed a significant investment in wind power capacity. Wind now makes up a noteworthy proportion of production and consumption across the Empire State – more than the country and on par with the global consumption portfolio. New York boasted a peak-hour wind power capacity of more than 1,800 megawatts by 2016. That's more, in terms of raw power generation, than every other state in the North Atlantic and mid-Atlantic region.

That increase has coincided with a series of state-issued renewable energy standards that sought to incentivize green power. Public energy officials, after first establishing those standards in late 2004, proceeded to strengthen the program's goals over time, first in 2010 and then again in 2016. Almost two years ago, developers and public power officials started the ball rolling on what became the first major offshore wind farm in the country, a 30-megawatt installation between Long Island and Rhode Island.

New York also generates significant power from hydroelectric dams. The combination of wind and hydro energy makes the region, and in particular New York state, a national and global leader: renewables make up 12 percent of the state's total energy portfolio, a higher percentage than either the broader United States or the world.

Some US states secure a larger share of their total energy from renewables. Vermont and Maine, for example, rely heavily on hydro and biomass for their energy needs. But given New York's position as the fourth-largest US state by population and its subsequently high energy demand, the renewable slice of the region's energy portfolio punches well above its weight.

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## MONTHLY ECONOMIC INDICATORS

THE PORT AUTHORITY OF NY & NJ

Planning and Regional Development Department

October 2018									
AVIATION	Aug '18	YTD	Aug '18/'17	YTD '18/'17	PORT COMMERCE	Aug '18	YTD	Aug '18/'17	YTD '18/'17
Revenue Passengers (000's)	13,244.8	92,901.6	3.3%	4.0%	Port Trade				
John F. Kennedy International Airport (JFK)	6,144.3	41,465.7	2.3%	2.4%	Container Imports (TEUs)	333,567	2,413,228	4.0%	7.6%
LaGuardia Airport (LGA)	2,789.6	19,991.4	3.0%	2.9%	Container Exports (TEUs)	125,115	997,945	-0.2%	7.2%
Newark Liberty International Airport (EWR)	4,234.6	30,991.6	4.6%	6.7%	Containers lifted on/off Express Rail	57,744	427,009	13.0%	14.1%
Stewart International Airport (SWF)	76.3	453.0	34.8%	74.6%	TUNNELS, BRIDGES & TERMINALS	Aug '18	YTD	Aug '18/'17	YTD '18/'17
Revenue Freight (Short Tons)	192,458	1,501,246	0.0%	4.0%	Eastbound Vehicle Volumes (000's)	10,871	79,719	0.6%	0.8%
Domestic	72,082	535,024	5.3%	6.6%	George Washington Bridge	4,695	34,293	-1.1%	-0.3%
International	120,376	966,222	-3.0%	2.9%	Lincoln Tunnel	1,625	12,587	-1.5%	0.1%
Flights	128,507	987,508	-1.7%	0.7%	Holland Tunnel	1,327	9,888	2.1%	0.7%
Domestic Air Carrier	82,385	629,372	0.1%	2.1%	Bayonne Bridge	261	1,907	19.2%	26.9%
International Air Carrier	28,351	205,044	-2.2%	0.8%	Goethals Bridge	1,562	10,809	7.5%	3.5%
General Aviation	17,771	153,092	-8.7%	-4.8%	Outerbridge Crossing	1,401	10,235	-2.7%	-1.3%
Paid Parked Cars	677,950	4,579,097	-4.5%	-5.5%	Eastbound Volumes by Vehicle Type (000's)				
Revenue AirTrain Passengers	1,770,317	13,568,770	-9.8%	-2.4%	Autos	9,932	72,753	0.5%	0.7%
					Trucks	671	4,978	2.0%	2.8%
FERRY OPERATIONS	Aug '18	YTD	Aug '18/'17	YTD '18/'17	Buses	267	1,988	-0.4%	0.8%
Passengers (000's)									
New Jersey Ferries	910.6	6,249.6	-2.3%	3.7%					
PATH	Aug '18	YTD	Aug '18/'17	YTD '18/'17	U.S. TRANSPORT. SERVICES INDEX	Aug '18	Jul '18	Change	
Passengers (000's)	7,044.0	54,593.0	-8.4%	-1.1%	(Prelim., Seasonally Adj., 2000=100)				
Average Weekday	275.4	2,235.6	-7.3%	-0.9%	TSI - Combined Index	134.2	134.0	0.1%	
Average Saturday	98.0	889.4	-18.0%	-2.2%	TSI - Freight	135.3	135.2	0.1%	
Average Sunday	79.3	656.1	-16.4%	-7.8%	TSI - Passenger	131.7	131.4	0.2%	

## TRANSPORTATION FOCUS

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	NJ	NY	US	World
Coal	1%	1%	15%	30%
Natural gas	36%	36%	29%	24%
Petroleum	44%	36%	37%	33%
Renewables total	4%	12%	10%	9%
Other	16%	15%	9%	4%
Total	100%	100%	100%	100%

The Lewis County-based Maple Ridge wind installations collectively represent 322 megawatts of capacity. That's the largest single investment across the state, but that figure only represents one-sixth of New York's total wind capacity. Much of the rest is sprinkled across installations in upstate counties such as St. Lawrence and Oswego.

Producers are also eyeing the prospect of increasing the region's offshore wind power capacity; offshore installations tend to coincide with fewer bird deaths and can be less subject to arguments specific to aesthetics than onshore farms. Renewable energy has had a major hand in recent reductions in the national carbon footprint. Given interest among many, including regional leaders, in further reductions in carbon emissions, and given population density and land prices in the Northeast, expect more proposals for offshore wind to pop up in the coming years. Additionally, a renewed commitment to meet the goals contained in the Paris Climate Change Agreement will further push the energy sector towards more sustainable forms of power generation.



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