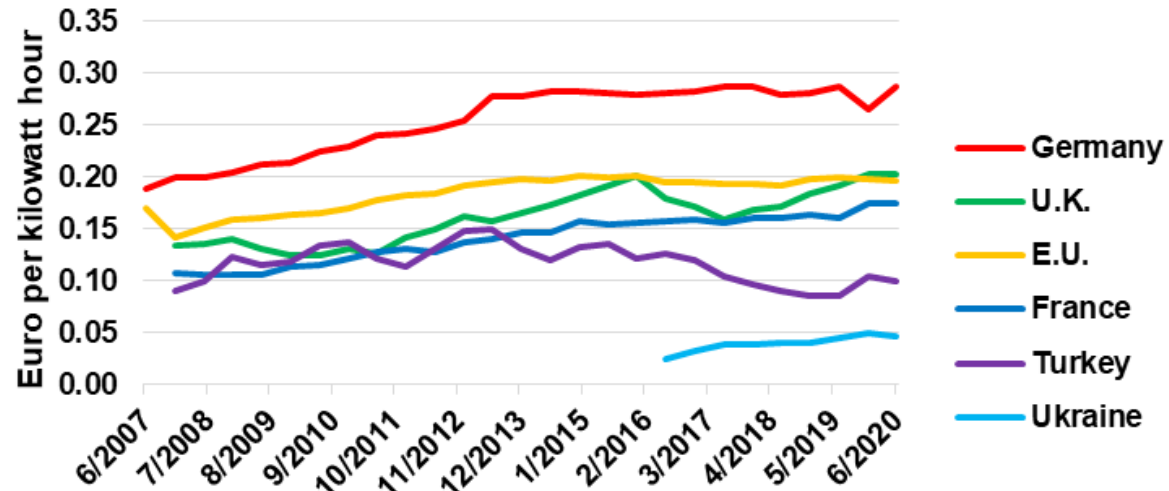


Chart of the Week #29:
Select Residential Electricity Prices
U.S. and Europe

Max Pyziur
October 7, 2021
Washington, DC

Select Residential Electricity Prices: U.S. and Europe

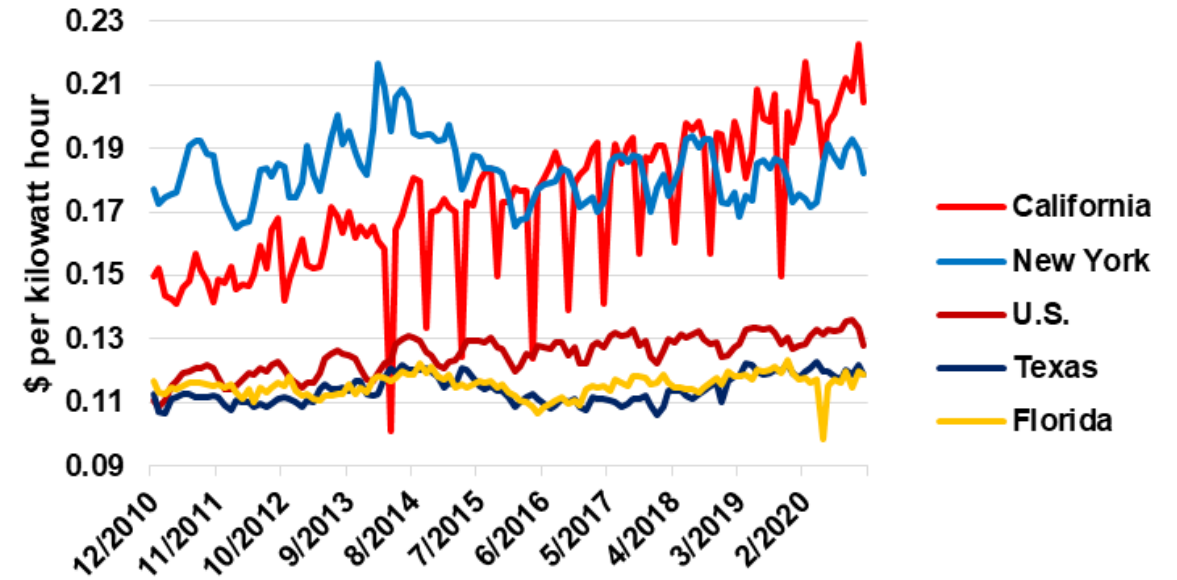
Semi-Annual European Residential Electricity Prices



Includes all levies and taxes
Analysis Based on Eurostat Data

EPRINC

Monthly U.S. Electricity Prices



Analysis Based on EIA Data

EPRINC

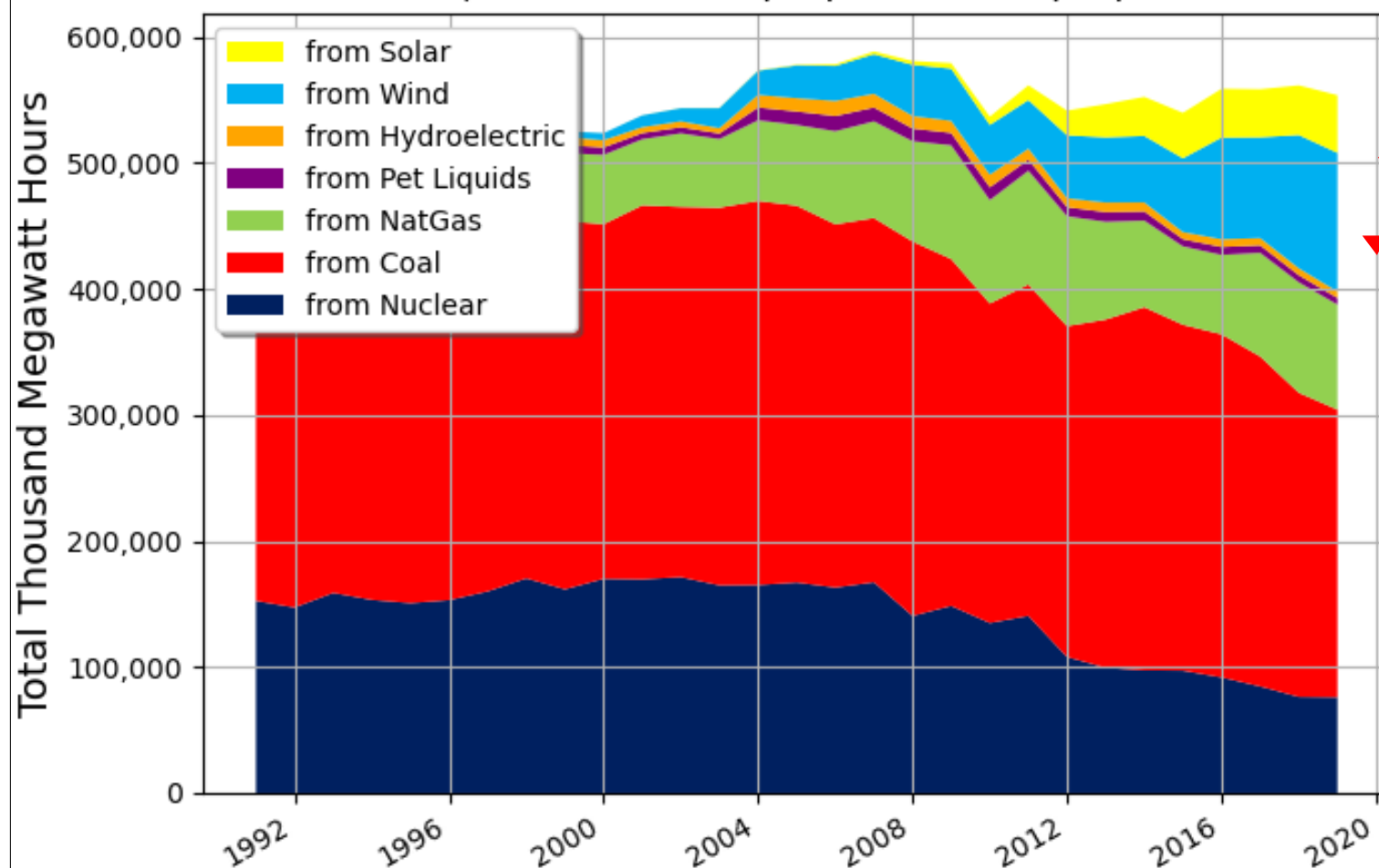
Select Residential Electricity Prices: U.S. and Europe

- EIA reports that in 2019, the average annual electricity consumption for a U.S. residential utility customer was 10,649 kilowatt hours (kwh), an average of about 877 kWh per month. Louisiana had the highest annual electricity consumption at 14,787 kwh per residential customer, and Hawaii had the lowest at 6,296 kwh per residential customer.
- U.S. states differ considerably in the levels and trends of their respective residential electricity prices. The reason for this varies. Some like California have aggressive RPS (renewable portfolio standards) combined with generous PPAs (power purchasing agreements) that benefit wind and solar sources. Others like Texas, rely on production tax credits that support its wind generation, thereby lowering the unit cost.
- European electricity prices, as collected by Eurostat, are broken down by annual usage, the application of taxes and levies, and currency. European electricity prices used here are for households consuming between 5,000 and 15,500 kilowatt hours per year, converted to euros from national currencies, and reflecting all taxes and levies.
- Developed European countries generally have higher residential electricity prices than developing ones. Also, the greater amount of solar and wind power as a proportion of the generation mix, the higher the price. The exception to this is France, continuing to rely on nuclear power for the bulk of its electricity.
- The current euro/dollar conversion rate is 1.16.
- The expanded version of this slide deck is available at: <https://eprinc.org/chart-of-the-week/>
- For more information on this chart, please contact Max Pyziur (maxp@eprinc.org)

Generation Mix in Select European Countries

Germany, France, United Kingdom, Turkey, Ukraine

Germany Electricity Production: from Nuclear, from Coal, from NatGas, from Pet Liquids, from Hydroelectric, from Wind, from Solar: 12/31/1990 to 12/31/2019

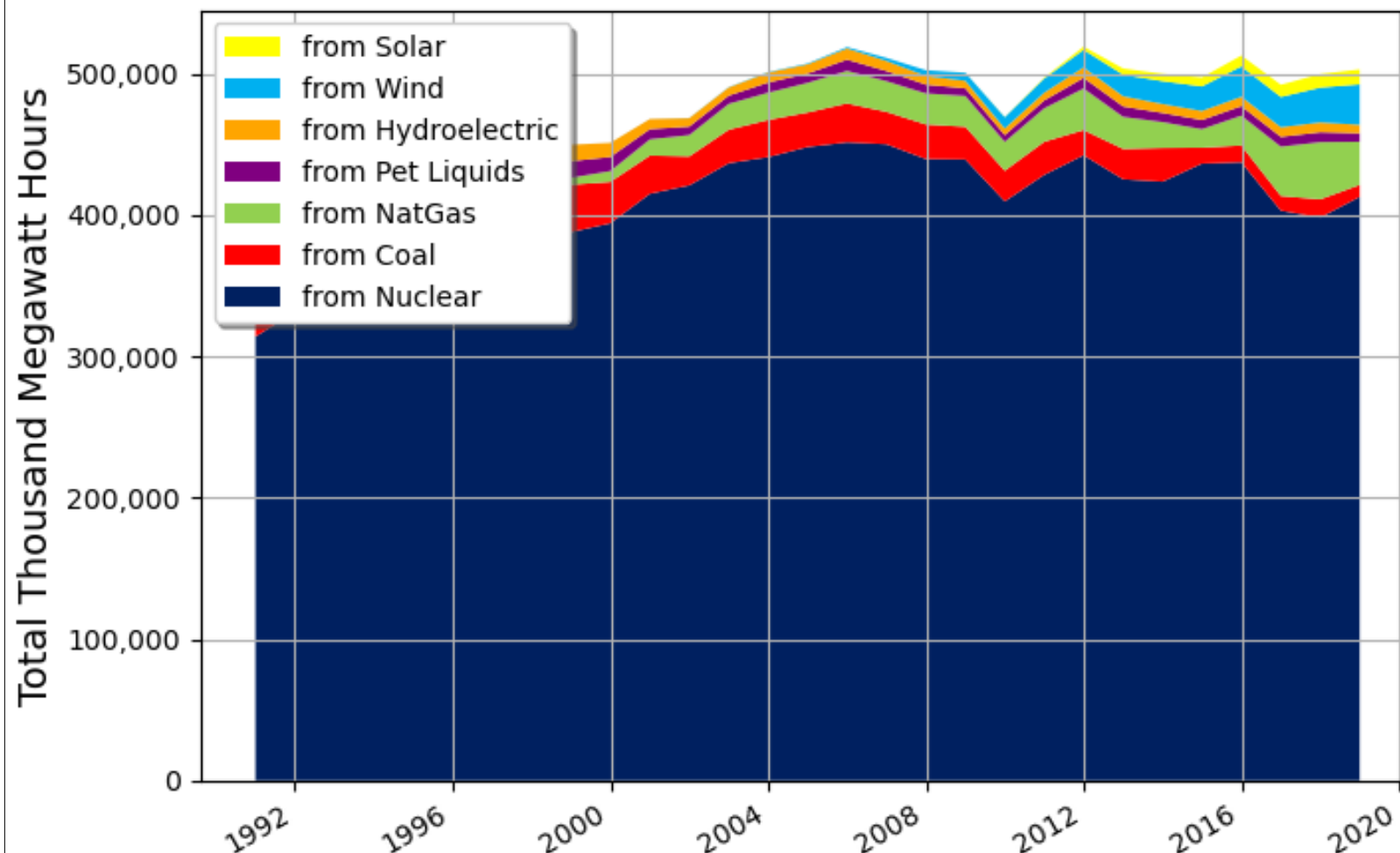


Germany has moved aggressively to increase solar and wind generation while phasing out nuclear power.

Analysis based on Annual Eurostat Data

EPRINC

France Electricity Production: from Nuclear, from Coal, from NatGas, from Pet Liquids, from Hydroelectric, from Wind, from Solar: 12/31/1990 to 12/31/2019

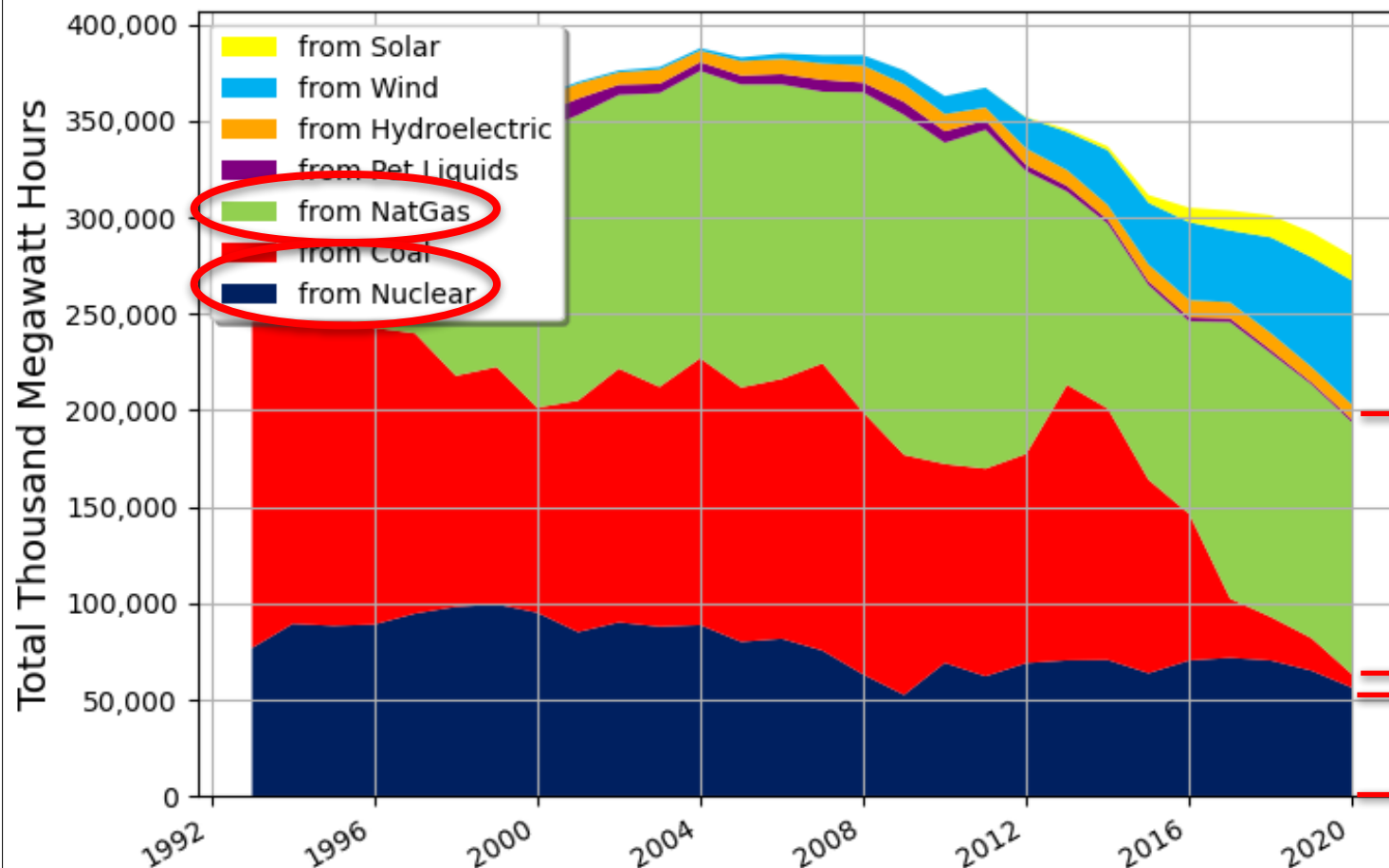


France continues to rely on nuclear power.

Analysis based on Annual Eurostat Data

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United Kingdom Electricity Production: from Nuclear, from Coal, from NatGas, from Pet Liquids, from Hydroelectric, from Wind, from Solar: 01/01/1992 to 12/31/2020

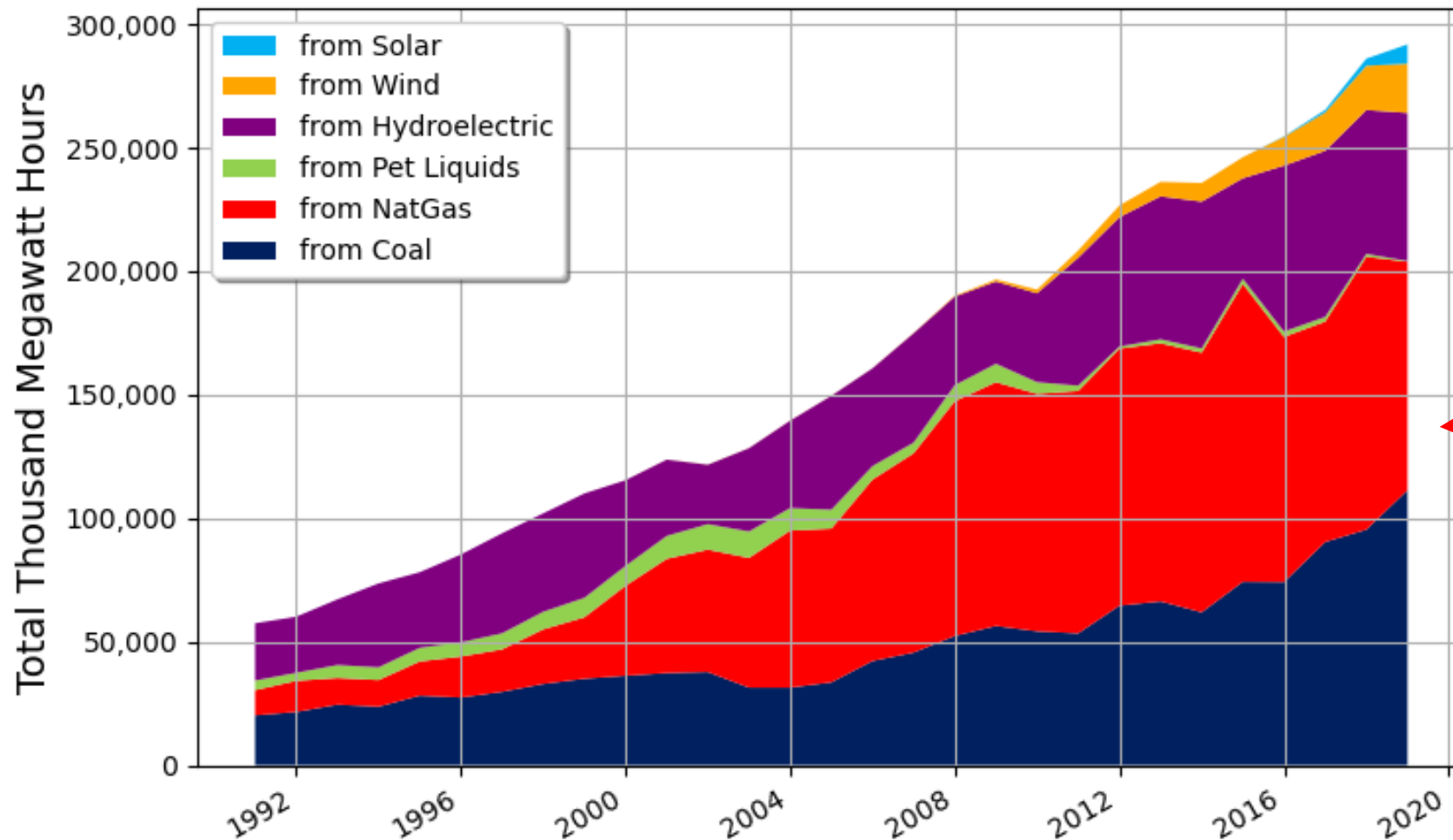


Lower utilization and retirements of coal and nuclear capacity has led to greater reliance on natural gas generation

Analysis based on Annual Eurostat Data

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Turkey Electricity Production: from Coal, from NatGas, from Pet Liquids, from Hydroelectric, from Wind, from Solar: 12/31/1990 to 12/31/2019

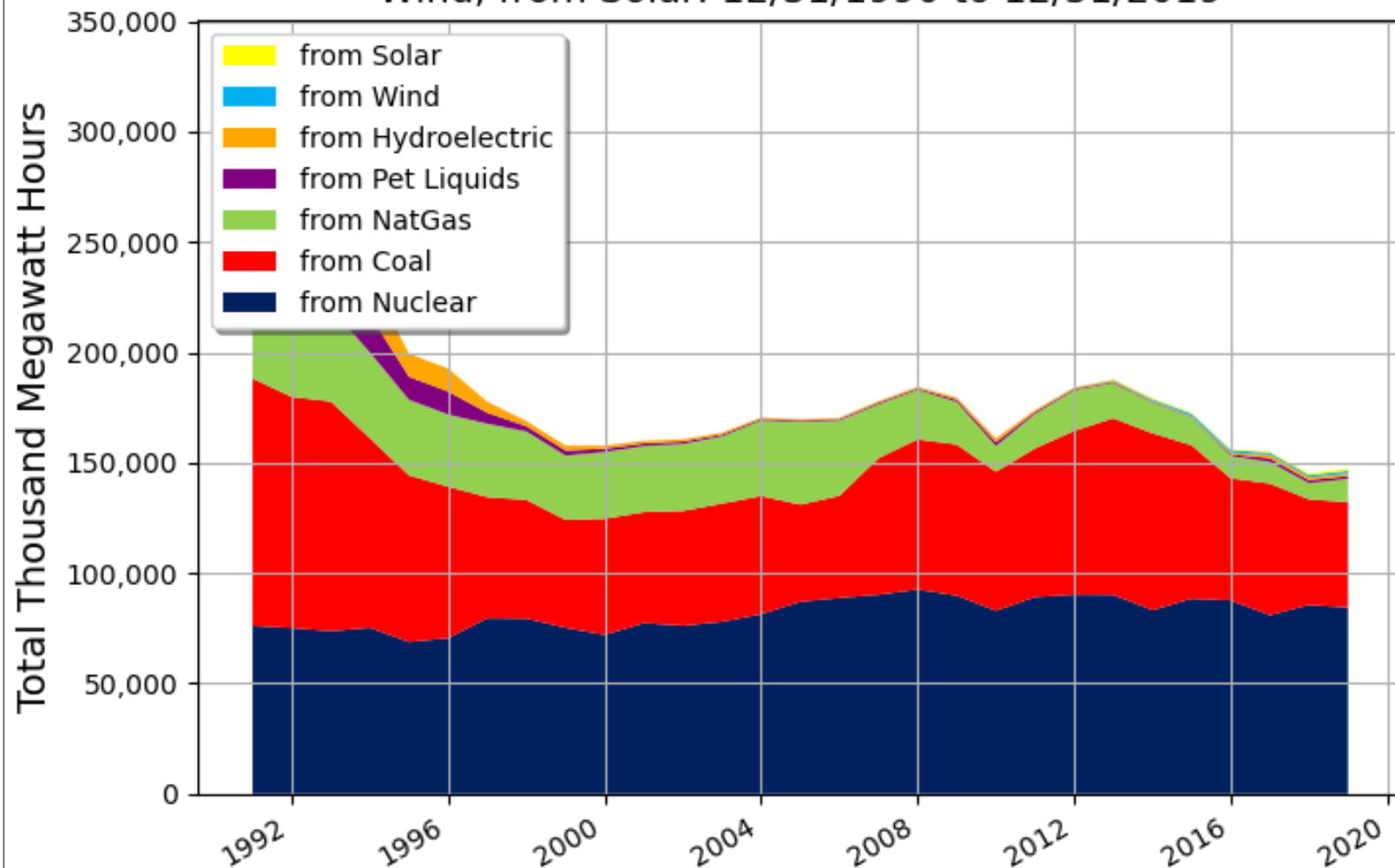


The bulk of Turkey's electricity is generated from fossil fuels and hydroelectric dams.

Analysis based on Annual Eurostat Data

EPRINC

Ukraine Electricity Production: from Nuclear, from Coal, from NatGas, from Pet Liquids, from Hydroelectric, from Wind, from Solar: 12/31/1990 to 12/31/2019



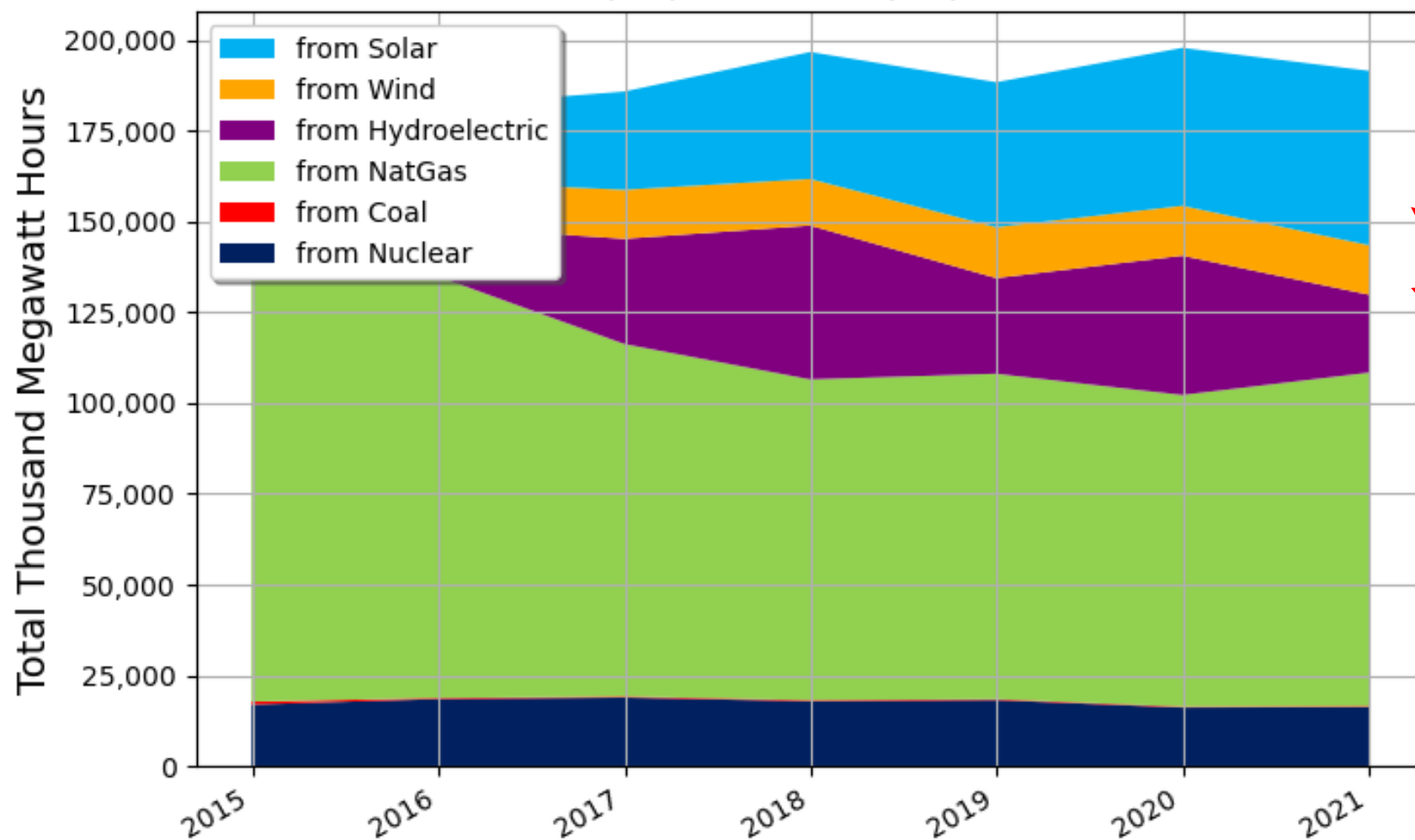
Ukraine's electricity generation is dominated by nuclear power and coal.

Analysis based on Annual Eurostat Data

EPRINC

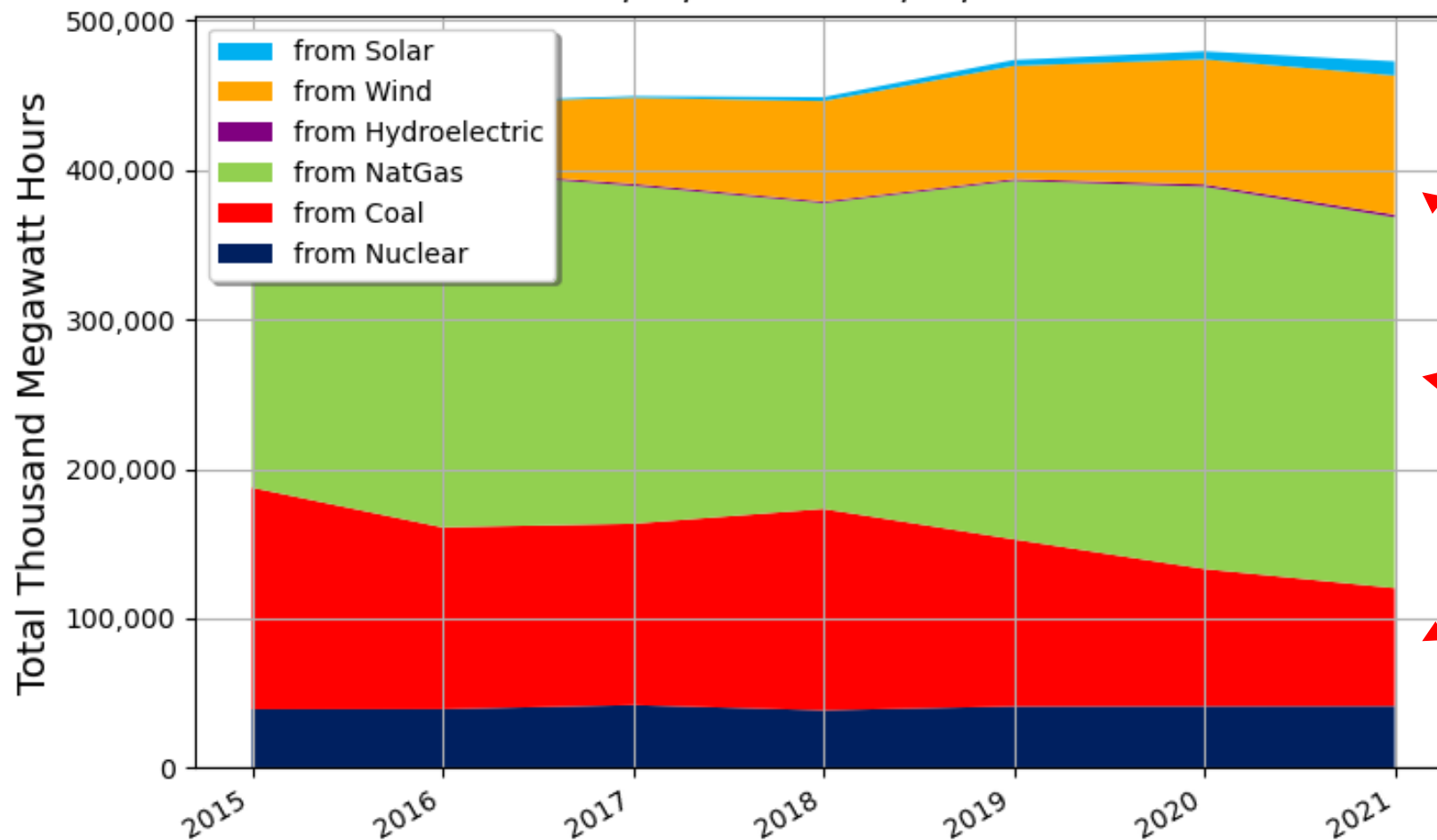
Generation Mix in Select U.S. States: California, Texas, New York, Florida

California Electricity Production: from Nuclear, from Coal, from NatGas, from Hydroelectric, from Wind, from Solar: 12/31/2014 to 12/31/2020



California has moved aggressively to increase solar and wind generation.

Texas Electricity Production: from Nuclear, from Coal, from NatGas, from Hydroelectric, from Wind, from Solar: 12/31/2014 to 12/31/2020

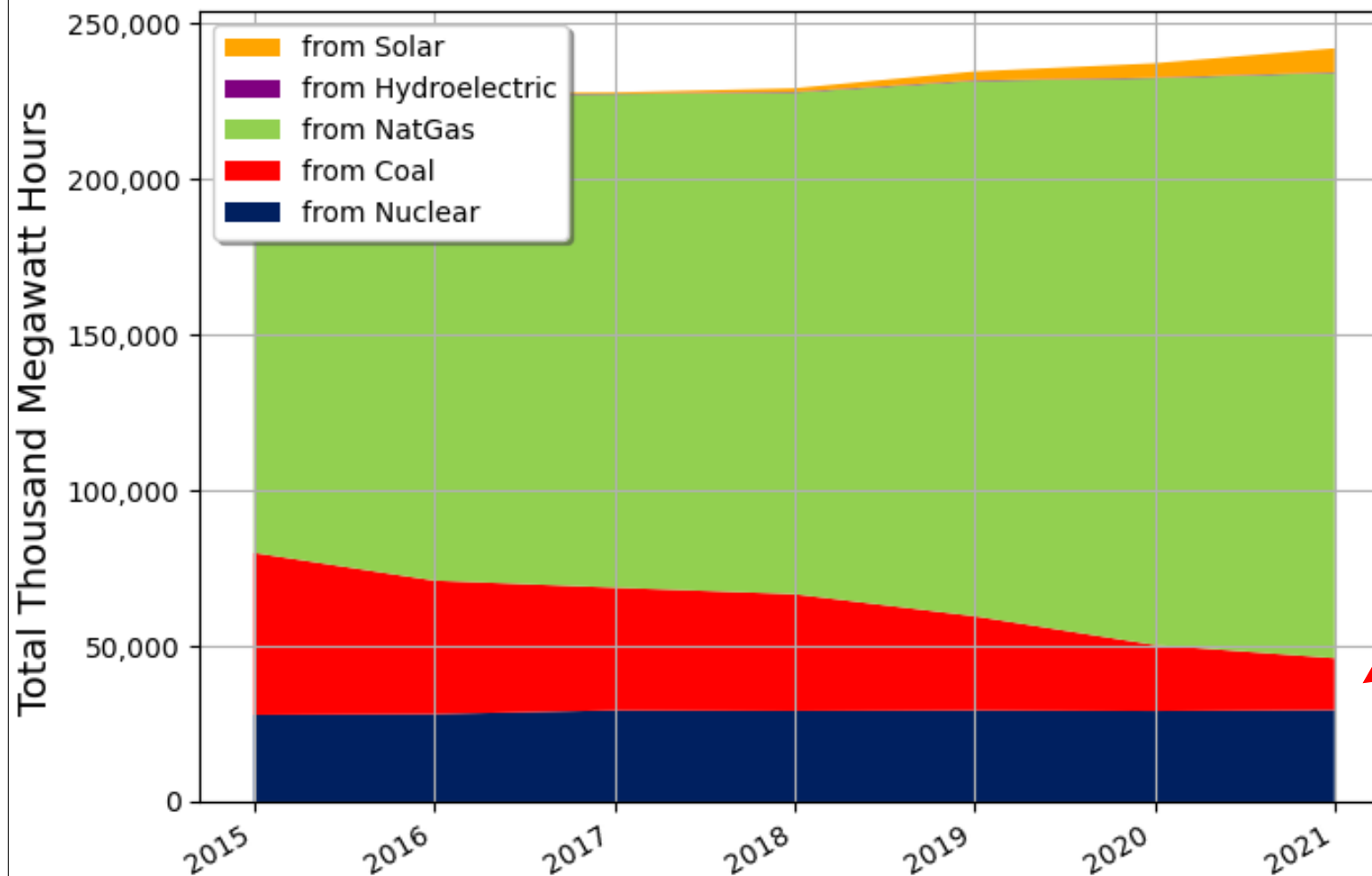


Texas has commissioned large amounts of wind and natural gas generation while phasing out coal.

Analysis based on Annual EIA Data

EPRINC

Florida Electricity Production: from Nuclear, from Coal, from NatGas, from Hydroelectric, from Solar: 12/31/2014 to 12/31/2020

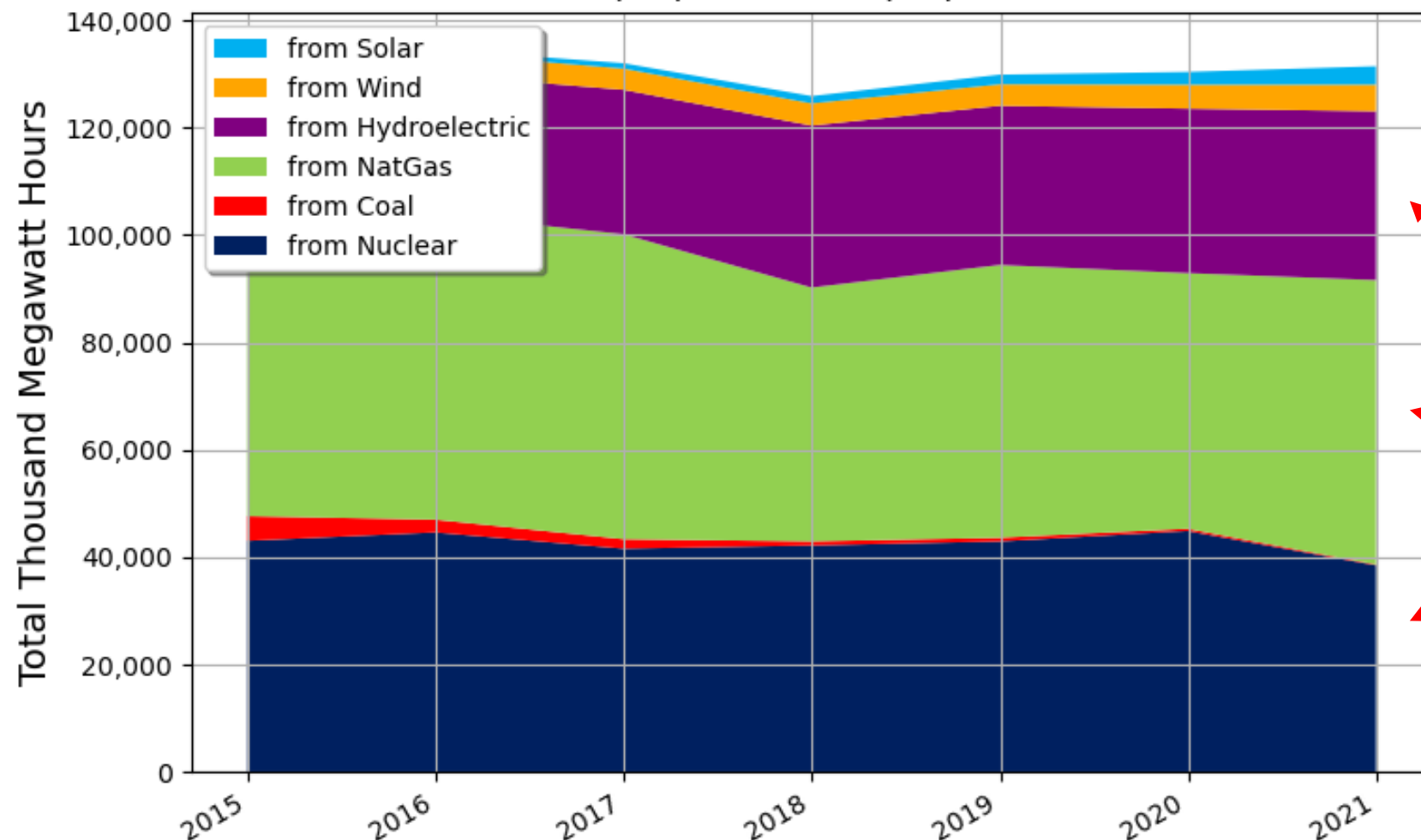


Florida is continuing to increase its reliance on natural gas while lowering its use of coal.

Analysis based on Annual EIA Data

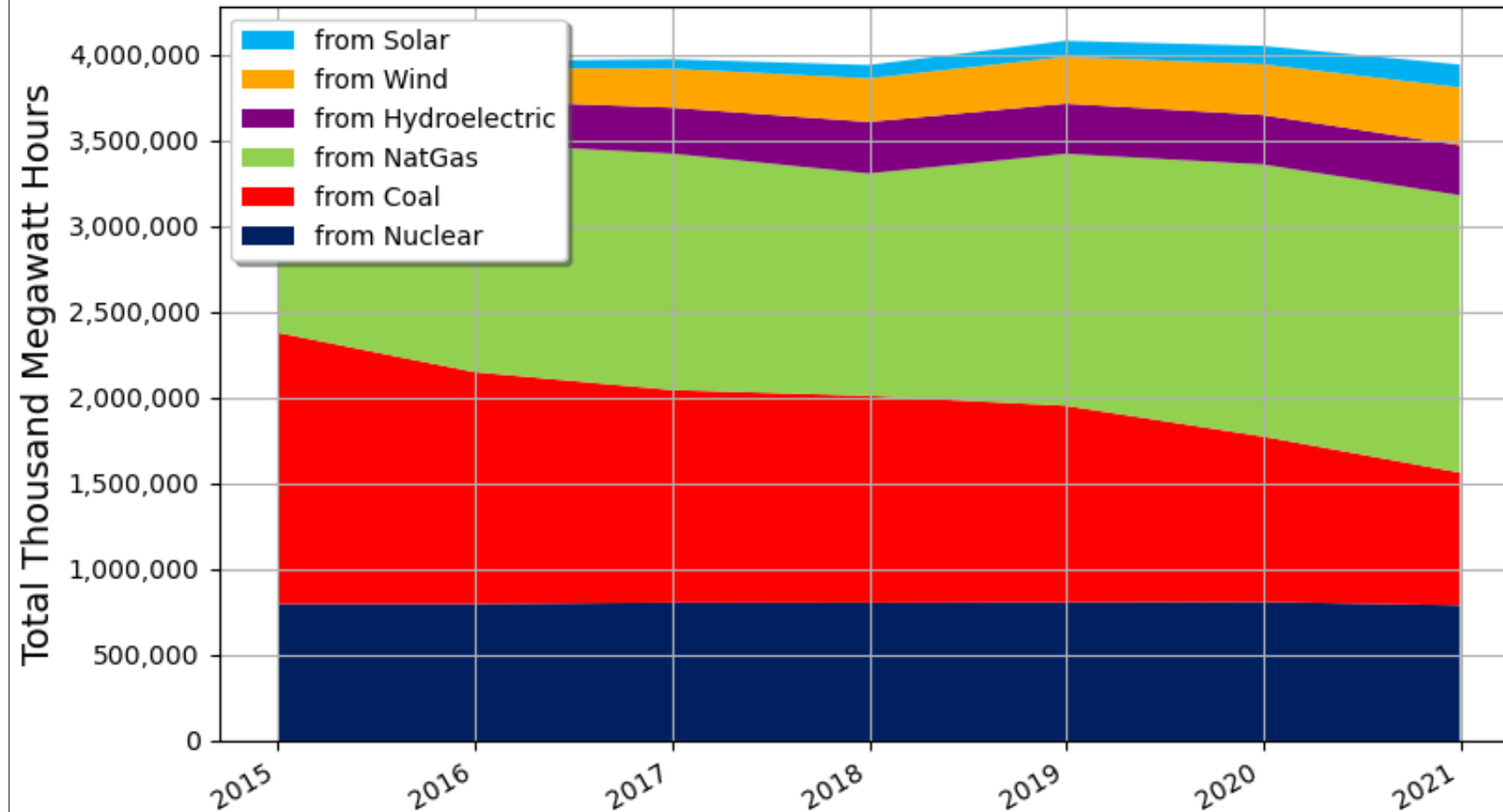
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New York Electricity Production: from Nuclear, from Coal, from NatGas, from Hydroelectric, from Wind, from Solar: 12/31/2014 to 12/31/2020



While New York State has committed to increasing the amount of solar and wind generation, nuclear, natural gas, and hydroelectric sources dominate its generation mix.

United States Electricity Production: from Nuclear, from Coal, from NatGas, from Hydroelectric, from Wind, from Solar: 12/31/2014 to 12/31/2020



Analysis based on Annual EIA Data

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