Standards of Performance for Greenhouse Gas Emissions From New Stationary Sources: Electric Utility Generating Units

OMB Presentation

June 17, 2015

NMA
THE AMERICAN RESOURCE

Clean Air Act §111(b)

- "... a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated."

NMA
THE AMERICAN RESOURCE

Historical § 111(b) Standards

- Standards of Performance promulgated by EPA under § 111(b) are often referred to as new source performance standards (NSPS).
- To our knowledge, EPA has never proposed an NSPS where the standard had not been achieved by multiple commercial-scale facilities.

NMA
THE AMERICAN RESOURCE

Characteristics of BSER for CO_2

- Actually operating
- Producing electricity
- Demonstrated technology
- Quantifiable CO_2 Emissions

NMA
THE AMERICAN RESOURCE

John W. Turk Power Plant

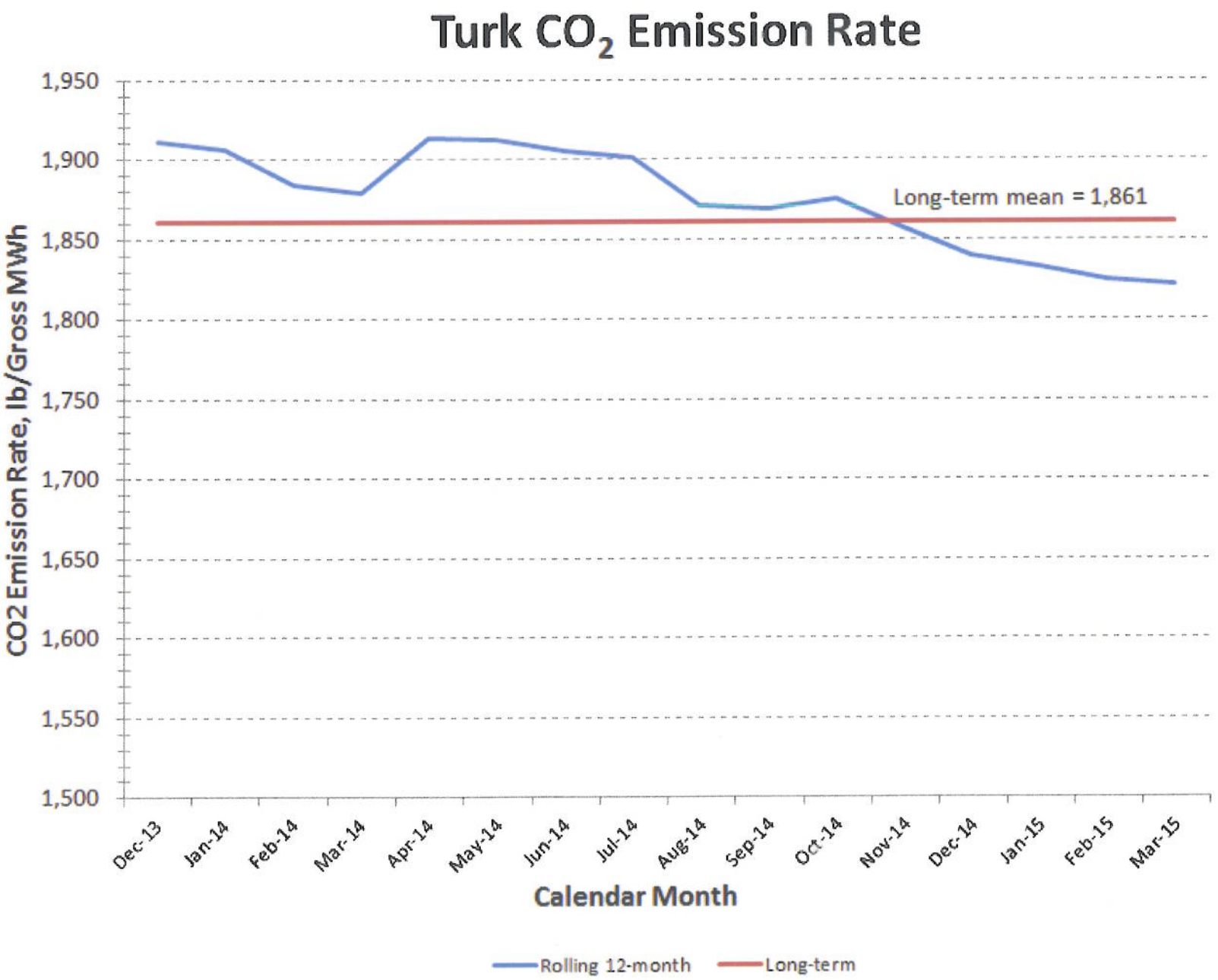
- 600 MW unit that began commercial operation in Dec. 2012.
- Air pollution controls include SCR system for NO_X; dry FGD system for SO_2, activated carbon for Hg; and fabric filter for particulate matter.
- First ultra-supercritical unit in U.S.; unit operates above supercritical pressure and at 1100°F resulting in more efficient operation.

NMA
THE AMERICAN RESOURCE

Turk CO_2 Emission Data

- Began submitting data to EPA's Clean Air Markets Division in December 15, 2012.
- Calculated CO_2 emission rate (lb/gross MWh) for all hours where load ≥ 1 MW.
- Based on 17,354 hours, mean CO_2 emission rate = 1,861 lb/gross MWh.
- 2013: 7,052 hours → CO_2 =1,912 lb/MWh
- 2014: 7,836 hours → CO_2 = 1,840 lb/MWh

NMA
THE AMERICAN RESOURCE


Turk CO_2 Emission Rate
1,950
1,900
1,850
1,800
1,750
1,700
1,650
1,600
1,550
1,500
CO2 Emission Rate, lb/Gross MWh
Long-term mean = 1,861
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Calendar Month
Rolling 12-month
Long-term