

10/07/16 DRAFT

ROUGH ACCOUNTING FOR HYPOTHETICAL NJ RATE BASED PROGRAM
(IN 2030 BASED ON ACTUAL 2012 and ESTIMATES of 2030 ELECTRIC GENERATION)

- A. **ERC NEEDS** – Estimated NJ Emission Rate Credit (ERC) needs in 2030. Units are million MWhrs, which equates to million ERCs.

Boiler Units (coal, oil, gas)	1 to 4	(2.1 million at 2012 coal use; companies expect 3.0 million in 2030)
Natural Gas combined cycle units	8 to 9	(8.5 million if no CHP at regulated units; 75% capacity for under construction units; companies expect 9.2 million by 2030.)
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TOTAL 2030 ERC NEEDS ESTIMATE	9 to 13	(12 million ERCs best estimate)

- B. **ERC GENERATION** - Potential annual ERC generation amounts in 2030 (not including ERC banking between 2022 and 2030, or any bonus ERCs from Clean Energy Incentive Program)

Gas Shift ERCs	2 to 4 million	(3.8 million at 55% and 4.2 at 75% capacity for under construction units; 2.1 million covers NJ 2012 coal use amount to comply with CPP; 4.3 best estimate for 2030 GS-ERC creation. 3.5 million used for 2030 estimated coal units)
Renewable energy ERCs	0 to 11 million	(11.2 million upper end from NJ 24% RPS requirement for RE, not including 9% achieved by pre 2013 renewable projects; 2.4 million if 80% out of state REC RE not available; 0 if no REC RE can be ERC RE; 2.4 best estimate)
Energy efficiency ERCs	6 to 11 million	(Low end based on 0.5% EE added per year; upper end based on 1.0% EE added per year for 15 years; 8.4 best estimate)
Small CHP ERCs (1424 MW)	1 to 3 million	(2.1 million based on 1500 MW goal in EMP, not including about 100 MW of pre 2013 CHP progress towards that goal)
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TOTAL GENERATION ESTIMATE	9 to 29	ERCs generated in 2030 (16.4 best estimate)

- C. **ERC BALANCE:** - 3 to 16 million ERCs (based on 12 million ERC need)

+ 5 million ERC surplus best estimate

- D. **UNCERTAINTIES AND FOOTNOTES** (see page 2)

D. UNCERTAINTIES AND FOOTNOTES

1. Gas shift ERC provisions are proposed.
2. NJ RPS program depends on out of state renewables. EPA proposed trading rules may require that ERCs from mass based states be obtained with a power purchase agreement. Not all NJ RECs may qualify as ERCs, depending on final EPA trading rules. No RECs may qualify as ERCs since RECs are regulated at load serving level and CPP regulates the wholesale power plant level.
3. NJ energy efficiency program provides funding incentive; does not mandate a specific amount of EE. Accounting for EE under CPP has not been finalized by EPA.
4. Combined heat and power (CHP) progress has been slow, with about 100 MW achieved before 2013, and the full 1500 MW goal in the NJ Energy Master Plan (EMP) may not be achieved by 2030.
5. Changes in the amount of useful heat generated by facilities with CHP will change the amount of ERCs required for these facilities to comply with CHP.
6. ERC needs assumes the three NGCC facilities under construction in 2012 will operate at 75% annual capacity based on experience with one facility.
7. New facilities not regulated under 111(d) could reduce the operation of existing facilities, reducing the amount of ERCs required.
8. Shutdown of regulated facilities (5 out of 24 have announced plans to shut down) could reduce the amount of ERCs required somewhat. These 5 would reduce electric generation by less than 1 million MW hours.
9. Several other existing CPP regulated facilities expect to increase electric output over 2012 levels.
10. Shutdown of non-regulated electric generation facilities, such as the 600MW Oyster Creek Nuclear Power Plant, could increase the operation of existing facilities, increasing the amount of ERCs required.
11. Changes in imports and exports of electricity from and to other states will likely increase the amount of ERCs required. One EMP goal is to reduce imports of electricity. Net electricity imports have been reduced from 36% to 9% since 1990.
12. Increased use of electric vehicles could increase electric demand.
13. The Clean Energy Incentive Program (CEIP) could generate additional bonus ERCs in 2020 and 2021, for use in later years. This rough accounting assumes those CEIP ERC's will be used up by 2030.

Source: New Jersey Department of Environmental Protection, October 7, 2016