

Case Study

SONY Headquarters

**25 Madison Avenue
New York, NY 10016**

Facility Description

Characteristics:

- Historic Class A commercial office building in Mid-Town Manhattan, overlooking Madison Square Park
- 525,000 net sqft. (Sony portion)
- 11 floors (Sony portion)
- Built in 1929

Existing Conditions:

- Required more transformation to accommodate Sony Headquarters
- Old transformers with low operating efficiencies

Challenge

Sony intended to design and build out their portion of the building to achieve high operating efficiency of electrical equipment under the actual operating conditions. The electrical design engineer was tasked with designing an ultra-efficient power distribution system for Sony's portion of the building. However, additional capacity for growth and potentially added loads was required. Was tasked with recommending the appropriate transformers that would have extremely low excitation (no-load) losses and operate efficiently after additional loads were added. PQI was also tasked with calculating and demonstrating the financial benefits of using an ultra-efficient **e-Rated®** transformer, as opposed to a typical general purpose transformer.



Solution

PQI provided (16) **e-Rated®** ultra-efficient transformers, that are designed to operate efficiently under low load levels and anticipated higher load levels in the future. PQI performed the efficiency calculations and provided the Sony's design engineer with the calculated savings associated with using PQI **e-Rated®** ultra-efficient transformers, rather than general purpose (minimum efficiency) transformers. The savings generated by PQI's **e-Rated®** transformers more than justified the minor additional cost incurred by Sony.

Impact

- ✓ **18,112** = Annual kWh savings
- ✓ **\$4,160** = Total annual utility savings
- ✓ **\$8,528** = Additional cost
- ✓ **2.1 years** = Project Payback
- ✓ **48.9%** = Return On Investment
- ✓ **\$116,480** = Sony Lifetime net profit (30 years)