

**U.S. Electric power companies' to save millions of dollars with In-place substation capacity increases.**



Advanced motor controller technologies have demonstrated capabilities decrease alternating current motor start-up spike increment needs and to provide in-place additional capacities for growing customer KW and KWh usage..

Energy optimizing capabilities providing decreased customer electricity needs mean additional capacity and savings from existing substations with no on-site capital investment.

**Not a new, unproven technology:**

While not known here in the U.S., these motor controller technologies have been used successfully for ten years.

**The New World of Power Company Substations**

New and existing substations benefit from reduced customer demand needs for three-phase HVAC and refrigeration applications.

Power company substations are provided with increased revenues from substation KW and KWh capacity increases.

Customer electricity savings provide installation incentives, Power company costs are negligible other than rebates.

For Power company demand management efforts, these motor controllers provide significant reduced costs per KW saved

Savings from motor controllers provide proven, ongoing KW demand reductions with reduced expenditures for Demand Response (DR) efforts possible.

Inventories by power companies electricians can provide KW and KWh usage without and with motor controllers installed and reliable templates of expected saving for each summer season..

# The New World of Power Company Substations

**Today, Power Company substations are designed and build based** upon estimated KW demand of the substation customers. Amperage estimated needs are incremented based upon three phase customer motor start-up spikes. KW estimated needs are incremented for increased summer demand for air conditioning and HVAC needs.

Higher amperage and KW needs translate into increased substation costs.

All of this has now changed.

With the "Intelligent Motor Controllers" provided by Owl Energy Technologies, these higher amperage and KW needs can be significantly reduced:

- 1) three phase motor start-up spikes can be significantly lowered
- 2) in addition to reduced summer KW demand of 25% for air conditioning and HVAC motors/compressors;  
refrigeration motors/compressors will have an annual 25% KW reduction and various industrial motors and their application equipment will have KW decreases of 12 to 18%.

Our motor controllers have worldwide ten year proven usage experience; straight forward economical installations and Return on Investment (ROI) of 14 to 20 months.

Costs for new similar sized substations will be lower.

There will be increased power company revenue as existing substations will have increased capacity.

Unexpected customer growth can be accommodated without needing new substations.

For planning and capacity assessments, KW usage readings and reduced motor start-up spikes, with and without motor controllers will provide electricity usage savings for existing and new substations

NY Con Ed offers a \$0.16 per KWh reduction as part of their custom motor rebate program.

## Power Company Substation

Supplies electricity for customers served		Homes, hospitals, business and industrial	
Design Capacity	Amperage	Based upon demand, KW, of customers served	
	Voltage	Based upon demand, KW, of customers served	
Existing design parameters	Amperage	Includes increment for three phase motor start-up spikes	
	Voltage	Includes estimated KWs needed for three phase motors; Includes summer season Demand increases for air conditioning/HVAC	
New design parameters	Amperage	Reduced minimum need for three phase motor start-up spikes accommodation	Significant decrease for Amperage accommodation allowing additional customers to be served
	Voltage	KWs needed for three phase motors decreased 14% to 25% (for refrigeration and HVAC)	Significant decrease for KW usage allowing additional customers to be served
Significant dollar savings for power companies and their customers		The dollars saving from the above represent Millions of dollar saving for power companies and their customers.	
Costs for duplicate sized substations will be lower			
Increased power company revenue from higher capacity for existing substations with capital expenditures.;			
Unexpected customer growth can be accommodate without needing new substations			

KW usage readings with and without motor controllers will provide precise electricity usage savings templates for existing and new substations and reduced summer demand needs.

# Owl Energy Technologies

## Energy optimizing Soft Start "Intelligent Motor Controllers"

These motor controllers will provide 25% electricity usage reductions and Demand reductions for three phase Refrigeration and Air Conditioning, HVAC, commercial/industrial New York State power company customers.



Size 3  
Up to 400 Amps

Size 2  
Up to 200 Amps

Size 1  
Up to 100 Amps