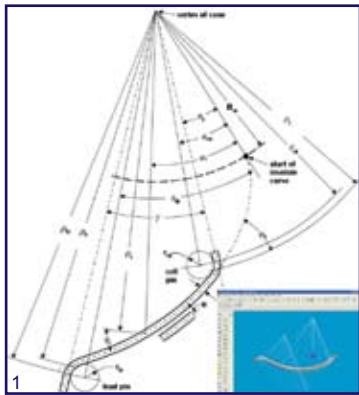




# NATIONAL ELECTRIC COIL®

**Our Experience Generates Results!**

800 King Avenue, Columbus, Ohio 43212 • 3330 East 14th Street, Brownsville, Texas 78521



## Coil Ready Package Highlights

- Complete engineering design and analysis
- Manufacture of coil tooling
- Prototype coil manufacture, complete through testing
- Verification of fit in mock stator core
- Procurement and storage of long lead items
- Documentation package of prototype coil test results, including photo documentation of tooling and coil manufacture
- Visit to NEC's High Voltage Coil Facility to witness prototype coil manufacture or testing



(1) Tooling for coil shaping and curing is developed from the engineering design using 3-D modeling. (2) Coils are installed in mock stator core, in order to verify fit and alignment. (3) Prototype coils undergo tests at various stages of manufacture.

## SES 401: Coil Ready Package

### Application

This solution may be applied to any generator type, make, model or size. It is designed to address concerns that owners may have about a stator winding approaching its end of life or about a newer winding showing poor electrical testing results. The Coil Ready Package can help owners reduce schedules and costs during a forced outage.

### NEC's Specialized Engineering Solution™

NEC developed its **Coil Ready Package** in order to reduce the overall time needed to complete emergency rewinds. It is projected that use of this package could reduce the rewind schedule for a forced outage by as much as 40 percent. As shown in the table below, reducing the schedule by 30 days could result in savings ranging from \$360,000 to over \$17,000,000, depending on unit size and market conditions.

The Coil Ready Package includes the complete engineering analysis and design for your machine, through the prototype manufacture and testing. Long lead items are ordered ahead of time and stored with the coil

manufacturing tooling until needed. If your winding fails prematurely, you have the opportunity for an immediate start of production when the order is placed.

Package program, NEC must be able to take machine data on the stator winding with the rotor out. This data is required for the engineering of the prototype design and the manufacturing of tooling. If NEC already has sufficient data on your particular machine in its files, this requirement can be waived.

During manufacture and testing of the prototypes, you are encouraged to visit our factory. You also receive a comprehensive CD with documentation of all coil tests

results, including photographs of your coils at every stage of manufacturing and testing. Coils are verified for geometry and fit in a mock stator

core at multiple times during the manufacturing process. They also undergo a battery of standard factory tests, including a final high potential test proving the design.

### Potential \$\$ Saved in One Month

Unit Size MW	@ \$10/MW-Hr	@ \$20/MW-Hr	@ \$30/MW-Hr	@ \$40/MW-Hr
50	\$360,000	\$720,000	\$1,080,000	\$1,440,000
100	\$720,000	\$1,440,000	\$2,160,000	\$2,880,000
350	\$2,520,000	\$5,040,000	\$7,560,000	\$10,080,000
600	\$4,320,000	\$8,640,000	\$12,960,000	\$17,280,000

In order to participate in the Coil Ready

### NEC Qualifications & Resources

National Electric Coil has specialized in the manufacture of generator windings for the last 90 years. These include windings for air-cooled generators, as well as inner-gas and water-cooled windings. We typically repair or rewind more than 80 generator units per year.

### Call Us Today!

If you have additional technical questions, please call or email Bill Moore at (614) 488-1151 x125, [bmoore@national-electric-coil.com](mailto:bmoore@national-electric-coil.com) or Steve Jeney at (614) 488-1151 x105, [sjeney@national-electric-coil.com](mailto:sjeney@national-electric-coil.com). NEC can help you with the initial inspections for any imminent conditions or problems and perform the necessary testing.



Specialized Engineering Solution™ 401-FL-0306